AREAWIDE WATER QUALITY MANAGEMENT PROGRAM

SURVEY

PREPARED FOR

WATER PLANNING DIVISION

ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C.

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Centaur Management Consultants, Inc.

PREFACE

This case study survey, which samples twenty areawide water quality management agencies, was prepared by Centaur Management Consultants, Inc. under EPA contract number 68-01-3577. A Preliminary Summary Report of this evaluation was published in August, 1976. CE-1/2

This is the first round of a three-year series of surveys evaluating the activities of selected areawide water quality management agencies as they progress through the planning and implementation phases of the water quality management (WQM) program.

Included in this report is a series of recommendations developed by the project staff on the basis of their extensive local interviews. In addition, detailed case studies are presented for each of the twenty agencies. The final Section of each case study (Section V) contains an evaluation (to date) of the local agency with respect to likelihood of plan completion, public involvement, current and continuing planning processes, and the significance of local elected officials' involvement.

The project staff, directed by Cheryl Dinneen and supported by Jane Nowak, Constance Castle, Ann Hoffman, Rob Arnold and Elizabeth Haskell, is grateful for the cooperation and support provided by the local WQM agencies, the EPA Regional Office staff and the EPA Water Planning Division in Washington, D.C.

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TABLE OF CONTENTS

RECOMMENDATIONS

Each of the twenty individual case studies presented in this report conclude with an analysis of the WQM planning process (Chapter V). It is from these analyses that the following recommendations are made. (A discussion of common issues affecting this sample of WQM agencies, which helped shape these recommendations, is presented in Areawide Water Quality Management Program Survey Summary, August 1976.)

WQM PROGRAM EXPECTATIONS

As WQM agencies continue their planning, their perceptions about water quality management begin to change. In part, this is due to changing Federal guidelines regarding the coordination of WQM agencies with other planning programs. WQM perceptions also are affected by the agency's sense of urgency regarding deadlines, their reassessment of their own ability to complete work within the given timeframe and their assessment of what is politically realistic.

The net result is that expectations of the WQM program vary by project area. The following recommendations are intended to help eliminate WQM agencies' uncertainties over these expectations.

1. *EPA should elaborate and clarify what allowance they will make for WQM agencies not reaching the water quality goal. In those instances where the goal will not be reached, local WQM agencies should be required to define specifically the reasons why the implemented plan will not reach the water quality goal. Reasons for not reaching the goal (under the legislative caveat of "where attainable") are expected to include conditions of natural background pollution, unreasonable use clsssifications, and economic considerations. EPA must define clearly these conditions prior to their review of the WQM plans.*

2. *EPA Regional Offices should plan to evaluate WQM plans on the basis of planning targets previously negotiated with the WQM agencies. Such targets should exhibit an understanding of the complexities of the water quality problem, institutional setting, area resources, and local goals. The case-by-case negotiation might comprise:*

   - *a milestone approach toward WQM planning and implementation with each area proceeding at its own pace;*

   - *a "contract" negotiated between EPA and local agencies on success criteria:*

- *a local commitment on the content of future continuing planning activities to undertake those planning elements not completed during the initial WQM plan.*

EPA's review process should be specified clearly and made available to the local WQM agencies.

3. *EPA reviews of WQM plan interim outputs and/or decisions should be conducted continuously throughout the planning period to both avoid surprises over the final plan's content and to lessen the burden of final reviews. Such reviews should be documented formally and tailored to the progress being made by a WQM agency on its specific work plan.*

4. *EPA should encourage areawide planning agencies to have their WQM plans incorporated into state-wide WQM plans. Since both planning efforts are proceeding concurrently, it is important to have this coordination take place continuously, otherwise the plans may not accurately reflect each others strategies. Coordination between state and local planning agencies should be monitored and reviewed by the EPA Regional Offices and inadequate or insufficient coordination should be brought to the attention of both parties.*

5. *EPA should assist local planning agencies in developing WQM plans that can accommodate changing conditions which may develop in future years during the continuing planning process. The WQM plans must not be static, inflexible instruments unable to deal with unforeseen conditions such as changing upstream discharges, new community development patterns, relationships between point and nonpoint source contributions, etc. This assistance should come about as a result of continual EPA technical plan reviews highlighting plan flexibility.*

6. *EPA should ensure that Regional WQM project officers are well-trained in all aspects of WQM planning including related programs such as air quality and solid waste planning. Such broad training will be required to meet the daily technical assistance needs of local WQM agencies as well as to review final WQM plans. The training will be especially valuable in reviewing a local WQM agency's assessment of the plan's environmental impacts. National and Regional training seminars exclusively for WQM project officers should become part of their continuing training programs.*

PUBLIC INVOLVEMENT

All WQM agencies recognize EPA's requirement to include public involvement in their programs. Many also have state or local requirements for public participation. However, the character of public involvement programs and the WQM agencies' commitment to them vary considerably, depending on the public's perception of its water quality problems, the extent of public involvement in other planning programs in the area, the WQM agency's own

experience with public involvement activities, as well as economic, geographic and political factors which characterize the WQM area.

The following recommendations made on the basis of the case studies emphasize the need to concentrate public involvement efforts toward elected officials and to consider public involvement beyond the planning phase into the continuing planning and implementation phases.

1. *EPA should encourage areawide agencies to continue their public involvement efforts toward local elected officials. Efforts to reach the elected officials should be undertaken even at the sacrifice of reaching the general public since the elected officials are representative of the public. Furthermore, local agencies should de-emphasize expensive efforts to reach public interest groups. These groups will get involved by the WQM process without prompting.*

   National efforts toward encouraging and assisting public involvement efforts should also concentrate on methods to maintain ongoing contact with local and state legislators. Such encouragement and assistance should focus on WQM program objectives, progress, and potential for future legislative activity. The need for legislative contacts should not be viewed as predicated on specific needs for legislative authorities but, rather, as aiding the legislative assessment of related efforts such as budget requests for water quality activities.

2. *EPA should encourage WQM agencies to develop planning alternatives for public review as soon as possible. The planning period is too short and restrictive to accommodate major plan revisions in the final stages. Early public involvement can avoid major controversies during the plan approval phase. EPA's continuing review of the local agency's planning schedule should pay particular attention to this in terms of well-defined public involvement milestones.*

3. *EPA should encourage WQM agencies to include a public involvement mechanism in their WQM plan for the continuing planning process and implementation phases. These mechanisms should be reviewed by EPA in their analysis of management agencies and institutional arrangements as proposed in the WQM plan.*

4. *EPA should encourage WQM agencies to translate their technical jargon into lay terms to enable the public to understand the WQM process. Particular attention should be given to the relevance of each plan element to the overall WQM plan. The language used in WQM reports should be checked continuously during EPA reviews of interim outputs.*

PLAN IMPLEMENTATION

Although most WQM programs are in the early phases of the planning period, some groundwork for the ultimate aim of the program -- plan approval and implementation -- has already been laid. Current expectations regarding plan approval and implementation are highly speculative and depend on the

final outcome of the plan, continuing funding and the extent of political support. Accordingly, local elected officials and others involved in WQM are reserving judgment on the WQM process in a spirit of "watchful waiting" for the final plan. Generally acknowledging the present low visibility of water quality issues, WQM planning agencies are taking incremental steps towards plan implementation.

The recommendations for plan implementation are intended to facilitate the continuing planning and implementation phase of the WQM program. Two of the case studies, i.e., Ohio-Kentucky-Indiana and Miami Valley (Ohio) afforded an opportunity to study agencies nearing completion of their WQM plan.

1. *EPA review of state water quality actions (e.g., priority lists for construction grants, NPDES permits, water quality standards, use classification) should emphasize compatibility with areawide WQM plans. EPA review of state annual program plans, 305(b) reports and state-wide WQM plans also should emphasize the required coordination between these reports and the areawide WQM plans throughout the state, EPA Regional Offices must be encouraged to view all of these separate water program activities under the overall strategy of WQM plans.*

2. *EPA should advise the organizations with A-95 review authority to take the WQM plan into consideration during clearinghouse review on local Federally-funded activities.*

3. *EPA should encourage the Federal Regional Councils to coordinate their activities with areawide and state-wide WQM plans to assure the consistency, compatibility and coordination of Federal efforts within the Region.*

4. *EPA should encourage other Federal agencies to provide continuing assistance to the WQM program beyond just the planning phase. Such assistance may prove necessary in meeting the requirements of implementation and continuing planning phases.*

5. *EPA should clarify the situation with regard to continuing funding beyond the two year planning period. This clarification must consider the transition phases between completing the plan, getting it approved and embarking on plan implementation. Local agencies require advice when allocating their funds for these critical times, especially since coordination and possible plan revisions may require the continuing services of the planning staff.*

6. *EPA should encourage both local agencies and other Federal agencies to coordinate or consolidate water sampling programs conducted by various agencies in the area (e.g., SCS, USGS, state agencies, local agencies) to maximize their potential in support of ongoing data gathering and analysis efforts. This encouragement should be particularly useful in identifying resources for the continuing planning process.*

PROJECT DESCRIPTION

As part of the EPA Water Planning Division's continuing evaluation of the water quality management program, Centaur is conducting a review of twenty selected areawide water quality management agencies. With the help of Regional Offices, these agencies were selected to become part of a three-year study. Each WQM agency was visited by a member of the Centaur staff for an initial series of interviews. The initial interviews covered a wide range of topics including: water quality problems, planning strategy and results to date, local expectations, varying perspectives of the WQM program, and an analysis and conclusions. Subsequent interviews by telephone, mail or in person will cover a variety of topics depending on the needs of EPA Headquarters and the Regional Offices. The Centaur staff will continue to talk with WQM planning staffs, consultants, state agencies, members of advisory committees, local elected officials, and citizens of the areas.

The objective of this project is to conduct an ongoing review that can be used by EPA Headquarters and the EPA Regional Offices to document achievements and program elements most directly related to success and to highlight potential sources of problems so that they can be corrected and eliminated to the greatest extent possible.

The continuing review will attempt to define and measure the successes and constraints of the areawide water quality management process in attaining and maintaining the 1983 water quality goals and in meeting the requirements of the Act. The WQM program has multiple objectives that include implementation of a management system as well as establishment of an ongoing planning process. The review, therefore, is designed to study such issues as the planning process, implementation schemes, plan approval process, start-up of management agencies and implementation of areawide management plans. The review also is designed to examine the extent of intermedia, intergovernmental, intersource, and interfunctional coordination as well as the degree to which WQM areawide planning supports the control of other pollutants and their standards.

The selection criteria for the twenty agencies were based upon agency characteristics found to have significant variations among the WQM agencies. The selection criteria were:

1. Geography - at least one from each Region;
2. Coastal area;
3. Significant amount of WQL segments;
4. Pristine/preservation area;
5. Significant groundwater problem;
6. A recreation/tourism area with seasonal population problems;
7. Significant NPS problems - agriculture, mining, forestry, urban runoff;

8. An energy area;

9. An area experiencing rapid growth;

10. An area with a large amount of land under federal management;

11. An urban, highly populated area;

12. An agency created specifically to do WQM planning;

13. A very experienced planning agency with multi-functional responsibilities;

14. An agency that also did a 303(e) plan;

15. An area where no 3c or 303(e) plan has been done;

16. An agency with a high amount of State involvement;

17. Two areas that received WQM grants in 1974 (one in Nov. - Dec., one in June); and

18. Two non-COG agencies (e.g., state, county government, municipal government, sewer district).

The list on the following page is the final sample of WQM agencies in the survey. Table I contains a categorization of interviews conducted on each site visit.

Region	Agency	Criteria
I - Boston	Martha's Vineyard, Mass. Augusta, Maine	Coastal/Recreation High degree of State Involvement
II - New York	Nassau-Suffolk, N.Y. Middlesex County, N.J.	Groundwater Problem Urban-Industrial Area
III - Philadelphia	Philadelphia, Penn. Sussex County, Del.	Large Urban Area Non-COG
IV - Atlanta	Sarasota Ft. Meyers, Fla. Chattanooga, Tenn.	Coastal/Recreation Institutional Approach
V - Chicago	Dayton, Ohio Milwaukee, Wisc. Cincinnati, Ohio	Early Designation Urban Area Tri-State
VI - Dallas	Houston, Texas Lower Rio Grande, Texas	Industrial Agricultural Problems
VII - Kansas City	Kansas City, Mo. St. Louis, Mo.	Bi-State Urban/Industrial
VIII - Denver	Teton, Wyoming Southeast, Montana	New Agency Energy Area
IX - San Francisco	Ventura County, Calif.	Non-COG
X - Seattle	Seattle, Wash. Salem, Oregon	Urban, Long History of Water-Related Experience Agricultural Problems

Table I

Categorization of Interviews Conducted
June - August, 1976

	WQM Director	Other Staff[1]	Exec. Dir.[2]	Local Elected Officials[3]	Citizens	State Water Quality Agency[4]	State Legislators[5]	Appointed[6]	Other	Total[7]
Martha's Vineyard, Mass.	1	1	1	2	2	1	1	1		11
Augusta, Maine	1	1		2	3	1	2	1		10
Middlesex County, New Jersey	1	2	1	2	3	1	1	1		12
Nassau/Suffolk Counties, New York	1	2		1	1	1		1	1 Governor's Staff Member	9
Philadelphia, Pennsylvania	1	2	1	1	3	2	1	1		11
Sussex County, Delaware	1	2		2	3			1	2 County Administrator and Treatment Plant Operator	11
Chattanooga, Tennessee	1	2	1	1		2	1	1	1 TVA engineer	10
Ft. Meyers, Florida	1		1	2	1	2		2	1 Director County Planning	10
Cincinnati, Ohio	1	3	1		3	(1)	(2)		2 Planning Commission and Comm. Dev. Dir.	13
Dayton, Ohio	1	3	1	2	3			1		14
Milwaukee, Wisconsin	1	4	1	3	1			3		13
St. Louis, Missouri	1	7	1	1	3	3	1	1		18
Kansas City, Missouri	1	2	1	2	2	2	1	1		12
Houston, Texas	1	3	1	2	4	(3)	(1)	1		17
McAllen, Texas	1	2	1	2	3			1	2 Navigation District and Legislature Staff Member	16
Broadus, Montana	1	2		2	1	2	1	1	3 County Planners and Proj. Dir. for Indian Res.	13
Jackson, Wyoming	1			2	3	2	2		1 Town Administrator	9
Ventura County, Calif.	1	1	1	2	3	1	1	1		11
Seattle, Washington	1	1	1	1	3	1	2	1		11
Salem, Oregon	1	1	1	2	1	1	2	1		10
TOTAL	20	41	15	35	46	24	18	21	13	230

1. Other staff members interviewed were most often engineers (8), community involvement persons (13), or planners (10).
2. In three cases the Executive Director of the parent agency was the same as the Director of the WQM program. In two cases, the designated agency was a County so the County Administrator was interviewed.
3. Local elected officials included county commissioners and supervisors (14), town councilmen (11), and mayors (6).
4. One agency was bi-state. Two states each had two agencies in the sample. Thus a total of 24 interviews in 16 states were made. Parentheses in the chart indicate when a State interview covered more than one project.
5. See note 4. A total of 19 interviews were made with legislators from 15 States.
6. Appointed officials were those concerned with facility planning. These included City and county engineers (10), and Directors of sewer agencies, public works departments and water quality boards (7).
7. Agency totals include state interviews shared at the state level. Overall total does not double count these.

AGENCY: CHATTANOOGA AREA REGIONAL COUNCIL OF GOVERNMENTS/
SOUTHEAST TENNESSEE DEVELOPMENT DISTRICT (CARCOG/SETDD)

REGION: IV - (Atlanta)

GRANT AMOUNT: $949,000

GRANT RECEIPT: June 4, 1975

STARTING DATE: October, 1975

STATUS AT TIME OF INTERVIEWS: Were awaiting approval of work plan from States of Georgia and Tennessee and from Region IV. Approval expected shortly.

REASON FOR INCLUSION IN SAMPLE: This is a bi-state area. With six counties and a number of competing authorities in the area, there is a very complex institutional setting.

I. BACKGROUND[1]

A. Area Description

The area encompasses much of the population of the SMSA of Chattanooga. This includes three counties in the State of Tennesses (Marion, Sequatchie, Hamilton) and three counties in Georgia (Catoosa, Walker, Dade). The total population of the area is 370,010 with most of this being in Hamilton County (254,230).

The area had recently experienced a chemical spill that shut off the water system for two days, and there have been a couple of fish kills in recent years. Although this brought increased concern for water quality, the WQM effort could not immediately capitalize on these dramatic situations because the work plan was not approved.

Hydrologically the area is unified, but politically it is split. Besides being split between two states and six counties, there are a number of organizations in the area with overlapping authority which makes for a complex institutional setting. For example, CARCOG/SETDD, the designated agency, is a joing COG and Development District for ten Tennessee counties. The three Georgia counties are in the COG but belong to the Coosa Valley Planning and Development Commission of Georgia. The SMSA comprises all 13 counties, but the WQM area includes only six of these, three each in Georgia and Tennessee. While CARCOG/SETDD provides areawide planning assistance to the entire area, a number of agencies provide local planning assistance. These are:

- For Hamilton County, by the Chattanooga-Hamilton County Regional Planning Commission;
- For Marion and Sequatchie Counties, by the Southeast Tennessee section of the Tennessee State Planning Office; and
- For Catoosa, Dade and Water Counties, by the Coosa Valley Area Planning and Development Commission.

In addition to these, TVA has conducted regional planning in the area for a number of years. There are three TVA-sponsored Tributary Area Development Organizations concerned with natural resource and economic development in their respective areas.

B. Water Quality Problem

Based on review of River Basin plans from each State and based on interviews with Federal and State agencies concerned with water quality, four problems

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[1] Information for this Chapter was taken from designation package from CARCOG/SETDD Overall Program Design, 1977-70; from 208 Newsletters; from numerous mimeographs from CARCOG and WQM files; and from interviews.

were identified for consideration during the initial planning phase. The first is an analysis of urban runoff. Such analysis has never been made in this area. Septic tank malfunctions will be studies under this project element. Streams of high concern for runoff include Lookout Creek, Chattanooga Creek, Citico Creek, South and West Chickamauga Creeks, Black Creek and Stringers Branch.

The second priority problem involves water quality outside the metropolitan area and includes agriculture, construction and mining-related pollution. These problems are often seasonal in nature, but they have recently resulted in some fish kills which have dramatized their importance. Impacted streams include the Sequatchie River, North, South and West Chickamauga Creeks, Chattanooga Creek, and Woftever Creek.

The third problem to be considered is that of solid wastes, including both leaching garbarge dumps and industrial and municipal sludges. Impacted streams include Chattanooga Creek, Lookout Creek, Citico Creek and a number of minor tributaries which drain illegal dump areas.

The fourth problem to be considered is that of municipal and industrial point sources. Affected streams include Wolftever Creek, Rock Creek, Waconda Bay, Chattanooga Creek, Citico Creek, South, West and North Chickamauga and Lookout Creek.

A large number of water and sewer studies relevant to the WQM effort have been conducted in this area. These have been done by the State, TVA, the Soil Conservation Service and by CARCOG. Furthermore, much of the area is covered by one or mroe comprehensive land use plans prepared by a variety of State, areawide and local agencies. A Tennessee River Basin Plan has been prepared for the area by the Tennessee Water Quality Control Board and the Tennessee Department of Public Health which includes a physical description of the basin and an evaluation of social and economic conditions. Further, it defines water uses, discharge limitations and projections through the year 2020. Finally, the basin plan establishes a State permit system to be used in addition to the NPDES.

Currently, a 201 Facilities Plan is being prepared for the Chattanooga metropolitan area. Although smaller, the 201 boundary overlaps much of the area of the WQM study, so the two will be closely coordinated. A second relevant study currently ongoing is the low flow study of point sources being conducted by TVA. Both the 201 and the TVA study were started ahead of the WQM study, and their data should be available for use by the WQM agency.

C. Designated Agency

The designated agency is both a regional council of governments and a development district. First incorporated as a COG in 1967 under the laws of Tennessee, it has grown both in authority and in area jurisdiction. Three Georgia counties were included, one from the onset and two others subsequently. The Development District was created in 1969, and to avoid complications of adding a fifth planning staff in the area, the COG and development districts were joined. A third staff responsible for health planning in Georgia and Tennessee was

also merged. In 1974 the organizations adopted joint by-laws and established a single policy board under an interlocal cooperation agreement.

CARCOG/SETDD presently conducts a number of planning activities including: interstate mass transit, solid waste collection and disposal, interstate air pollution control, interstate health services, housing, and interstate land use. An Overall Program Design coordinates the various planning activities with the intention of eliminating duplication between projects and assessing inter-program impacts.

There are two key advisory committees. The Areawide Planning Advisory Commiteee is composed of elected officials and is headed by the Chairman of CARCOG/SETDD. The Regional Water Quality Task Force includes technicians and staff of other agencies, and it is chaired by the Executive Director of CARCOG/SETDD.

The staff consists of a Project Director, Project Engineer, Planner Advisory Draftsman. In addition, the services of an IPA from the Soil Conservation Service have been procured for a 15-month period. Finally, four staff members of the CARCOG/SETDD are also working part-time on the WQM study.

Three consulting firms have been hired to complete elements of the plan. An engineering firm will prepare the Point Source Sub-plan, Management System Sub-plan (with others), and a Solid Waste Residuals Sub-plan. An environmental consultant will prepare the Urban Nonpoint Source Sub-plan and will conduct the Enviornmental Assessment. The management consultant will prepare the Management System Sub-plan. In addition to these private firms, TVA will work on the WQM Nonpoint Source Sub-plan; the Soil Conservation Service will prepare the Rural Nonpoint Source Sub-plan and Coosa Valley APDC will design and carry out the public participation program.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

In its initial preparation of a multi-year program, CARCOG/SETDD surveyed local elected officials in ten counties regarding their priorities for fifteen functional planning activities. It is interesting to note that "Water Supply and Sewage" and "Refuse Collection" received first and second ranking, respectively.

Organizationally, the WQM planning effort falls with the Regional Planning and Development Program. The main goals of this element are to provide a comprehensive planning and community development guide to development and use of the area's resources. A second goal seeks to eliminate duplication of planning efforts and to address program needs in the most cost-effective manner possible. The program seeks to develop a common data base, to provide assistance to member governments in seeking Federal funds, and to implement capital improvement planning and budget processes for all local governments in the region. Each element -- land use, transportation, housing and water quality -- has its own objectives. For water quality there are two:

- Establishment of a continuing water quality planning and management process; and
- Completion of the initial areawide water quality management plan.

B. Technical Component

The WQM project is divided into three parts. The first two relate to treatment and control of point and nonpoint source pollution problems. The third involves creation of an overall management system.

Basic inventory work for point sources will come from the ongoing 201 planning effort effective for most of the area, from Tennessee and NPDES permit systems, from the basin plan, and from the TVA Assimilative Capacity Study. The inventory for nonpoint sources will be concerned primarily with urban stormwater runoff, hydrographic modification, residual waste disposal, agriculture, mining, silviculture and construction activities. After inventories of point and nonpoint sources are made, schedules for detailed examination of control possibilities will be made, leading to the preparation of two subplans.

A series of projections of residential, commercial and industrial wastes will be made. Wasteload allocations for stream segments targeted at both point and nonpoint loadings will be devised to achieve desired use standards and 1983 goals. The work plan anticipates development of a simulation model to test alternatives.

It is anticipated that a substantial amount of point source corrections will be needed in Marion and Sequatchie Counties. For much of the other areas, the 201 planning is expected to address issues of waste loads and wastewater flows, including corrective measures where necessary. Some of the technical point source issues expected to receive special attention are the multitude of package treatment plants, the possibilities for joint municipal-industrial facilities, and storm water discharges.

In preparing the nonpoint source sub-plan, the work plan indicates that emphasis will be placed on those sources with highest priority. Land use measures are expected as part of the control strategy, but only within the limits of viability and cost effectiveness.

C. Management Planning

Management planning will begin with analysis of existing Georgia and Tennessee laws and local administrative arrangements and with identification of legally authorized management options. Concurrently, an analysis will be made of existing institutional and staffing capacity, and analysis will be made of present financial commitments and obligations of local governments. These analyses will determine the need for necessary statutory refinements and the ability of governments to undertake a new management arrangement. Working memoranda will be prepared in each case.

Building upon the analysis discussed above, the next step will be to prepare a management plan which addresses facility design, construction, operation and maintenance; administration and financing; and implementation of a regulatory program. The work plan emphasizes use of existing institutional capabilities, particularly those respecting the differences between the two States. The Project Manager, however, indicated a definite possibility of creating a new regional authority.

D. Public Involvement Program

A Public Participation Plan for the WQM effort is currently being prepared by contract to the Coosa Valley Area Regional Planning Council. This plan will define the use of newsletters, questionnaires, exhibits, mailings and news media contacts. Appropriate links to the Advisory Committee and project staff will be recommended along with a schedule for necessary meetings. A number of public hearings will be held throughout the planning period.

E. State and Federal Involvement

The Tennessee Public Health Office has been very helpful in the project thus far and is becoming increasingly involved. The Tennessee coordination system in general, is good. The Project Director felt that Georgia is "anti-WQM", but they have been building a good relationship. It has been important to make sure that Georgia is involved in all meetings, a step sometimes forgotten by EPA. The WQM agency has given $37,000 to the States for coordination.

The Project Director described a friendly relationship with the EPA Regional Office, but one sometimes marked by lack of communication. He noted that the Regional Office is severely understaffed and they must sometimes compete with other WQM agencies for attention. He also felt that the Region may be becoming too involved in management through PERT charts, approvals take too long and other things are neglected. The biggest problem has been that the work plan is still not approved and permission to proceed not received. The Project Director perceives an attitude on the part of EPA Headquarters and the Regional Office that WQM is not a high priority, but he feels that this may be changing. Given the regional staffing situation, the Project Director preferred not to have to keep asking for EPA permission to do things. He definitely did not want guidance subject to change because that becomes a disruptive factor in the work program.

F. Scheduled Outputs

Scheduled outputs for the WQM plan have been closely coordinated with anticipated outputs from the 201 Facilities Plan. Data collection will, for the most part, be completed within the first six months. At that time, land use plans and policies will be analyzed for the following six to eight months.

Projections will be completed within six months and wasteload allocations will be completed within the following eight months. The Point Source Sub-plan will be prepared between the fifth and thirteenth months; while the Nonpoint Source Plan will be prepared between months 14 and 19. Management task elements will be conducted throughout most of the planning period. A combined set of alternaitve plans will be prepared during months 18 through 21, followed by committee and public review.

Each of the four plan elements will have a number of outputs. These will include a series of working memoranda to local officials delineating the implications of water quality management upon other plans and policies. Each element -- analysis of land use plans and policies, point and nonpoint source sub-plans, and the management plan -- will be combined to form a series of alternative final plans, testing feasible combinations and options.

The State has requested that three tasks be added to the work plan: an examination of D.O. levels in Chickamauga Dam, analysis of pump storage on Raccoon Mountain, and evaluation of thermal effects of the Sequoia Nuclear Plant. Although the WQM agency did not really want to take on these added tasks, it now appears that they will, although details are unclear.

G. Achievements to Date

The Project Director described five accomplishments to date. The first involves creation of a relatively good data base. For the first time, environmental data for the whole area is mapped on a common scale. The second accomplishment listed was that all existing land use information for the area has been pulled together. The third accomplishment is the establishment of a policy-making group made up of elected officials. This group has had three major meetings and has made important decisions at each meeting. The fourth and

fifth accomplishments are institutional in nature. An SCS employee hired as a 15-month IPA has been concentrating his efforts on achieving cooperation across state lines.

The Project Director felt that one of the greatest accomplishments is that they have already entered a management mode. Through the A-95 review process, they have forced some changed in 201 plans. They have succeeded in convincing the State to consider accommodations of future population in review of the 201 plan and have urged the State to be more involved in NPS work. Finally, they have supported a city ordinance which, if adopted, would provide for pre-treatment by industry and cost recovery in the municipal system.

So far, the staff has been hired and communittees formed. The Project Director has spent much of his time trying to get the work plan approved. In the meantime, other staff members have been collecting environmental, population and land use data. Much of it has been mapped on a common scale, a capacity not formerly available in the area.

There have been some start-up problems. The COG is very coordination-oriented and less geared to problem-solving. Although the WQM was staffed prior to last September, the COG was re-organized in December, which inevitably affected staffing patterns. Finally, the WQM staff identified some problems in coordinating the three area planning agencies. Data was at three different levels of detail and had to be transposed to a common base. Scheduling was somewhat of a problem and the planning agencies' workloads did not always fit when the WQM staff needed the data. Similarly, although river basin plans were completed for the area by both Georgia and Tennessee, and of much assistance, some parts are already out of date. Further, each State used a different model and different delineation techniques, which complicates the water quality analysis.

Coordination with other agencies is a major accomplishment. TVA, SCS and other planning agencies have been contracted with for elements of the plan. Agreements have been made for coordination with the HUD 701 Program and the 201 study. A State Coordination System allows the designated agencies in Tennessee to have a regular exchange of information. The Project Director has taken steps to involve both States in design of the work program.

The Policy Board composed of 31 elected officials has been formed for over a year. They have elected a Chairman and a Vice-Chairman, approved the work program and milestones, and set a budget. The local Engineering Task Force met to help advise in the consultant selection process.

Consultant selection has been complete for several months, but no work has been done by consultants pending approval of the work plan by the EPA Regional Office. Selection followed a multi-stage process. First, qualification statements were obtained from seventy firms. These were narrowed down to three to five for each proposed contract and each firm was asked to submit a proposal. The Engineering Task Force then ranked their several choices. Unfortunately, in one case the Task Force's recommendation

was not followed, and the firm that has historically done 201 work in the area was selected. This situation led to criticism by the Task Force members and considerable unfavorable publicity in the media.

The IPA from Soil Conservation Service is developing a series of best management practices for agricultural, mining and construction activities for the two-state area. So far, he has collected soil, water and vegetation data from SCS, Districts and the Forest Service, and he is surveying technical guides for controlling rural water quality programs. The Project Director has worked closely with the Technology Transfer Office of EPA in Cincinnati on agriculture and silviculture pollution problems.[1] The Project Director also was on the panel for Technology Transfer seminars in Framingham, Massachusetts and in Atlanta, Georgia.

The staff is just beginning to work with the Coosa Valley Area Regional Planning Council who has been contracted with for the public participation program. However, a number of presentations have been made to service clubs and agencies. Two public hearings were held in May to elicit participation in the process of delineating water quality problems. Three issues of the newsletter have been mailed.

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[1] This was written up in one of the EPA newsletters.

III. EXPECTATIONS

A. Water Quality

The general consensus was that the water quality will be improved, but that the 1983 goal will not be met in all streams. Both the COG Director and the Director of the local Public Works Department felt that they would come close to meeting the 1983 goal, but the nature of the area's industry (chemical plants) would make this difficult and there would always be spills. A local elected official felt that the extent to which they meet the 1983 goal will depend upon the availability of national funding. The Project Director, who felt that quality of waters would be improved, questioned the standards and the definition of "swimmable".

The Georgia water quality staff member thought the 1983 goal would definitely be met in the major streams; the Tennessee Public Health staff member, however, did not expect the goal to be met in all cases because of the need for additional municipal facilities grants, and because there is a time lag before effects can be seen. He definitely expected eventual improvements in all areas where problems were being tackled.

B. Plan Approval and Implementation

Both the Project Director and one of the State water quality persons pointed out that approval and implementation are inseparable. The Project Director felt that based on the experience in getting an Air Pollution Board approved, likelihood was between four and six on a ten point scale. He felt it was possible, but unexpected things can always happen. The most essential persons would be the elected officials on the Policy Board. He felt that implementation could be fully achieved within three years. The COG Director, who is in fairly close touch with local elected officials, felt that the Mayor of Chattanooga, who is a former Public Works Commissioner, would be most essential because the plant is owned by the City.

The TVA Engineer felt approval was nearly certain and guessed that chances for implementation were 7.5 out of 10, but that some parts would definitely be implemented. He said that, so far, elected official support has been fair, in the future it would be essential to show them something in the plan is to be implemented. The elected official interviewed felt that approval is likely (7-8), but implementation is less certain (3-4), although he added that it is too early to know yet. The State legislator said that they would have a success if full implementation is achieved in twenty years, so long as, in the meantime, they are always working toward that goal.

A Georgia State water quality staff member felt that the plan would be approved with a lot of conditions. His Tennessee counterpart felt that the likelihood of approval at the State level is eight, and at the local level is six because of the fragmented nature of municipalities.

There were a variety of opinions about the need for legislative changes and local ordinances, but everyone agreed that nothing had yet been done to obtain what is needed. The Project Director felt that they would need local ordinances to control urban stormwater and soil erosion problems. He felt that state laws were most appropriate for controlling highway construction, mining, and municipal and industrial wastes. The elected official felt that current laws are adequate.

The Tennessee water quality staff member said that all regulations (e.g., street sweeping, guidelines for agricultural and silviculture practices on steep slopes, and controls over unauthorized dumping) should be local. He felt that WQM is the most difficult and controversial program ever in the field of water quality, and that, at some point, WQM and land use will run into each other and law suits will result. In an urban setting, he does not think that there is always legal precedent for all that WQM has to do. The Georgia water quality person felt that the State laws, particularly the model Erosion and Sedimentation Act were adequate.

The Tennessee State Legislator interviewed is on the COG Board. He felt that the climate for environmental issues was weak, that they have "gone too far on too many screwball issues". He felt that it is time for making reasonable tradeoffs, but added that the State water quality agency is usually successful in getting what is needed. He felt that the laws on the books should probably be updated, but that this usually does not happen until there is a crisis. This legislator felt that the most pressing need is some kind of land use law to save farming.

The local elected official felt that whatever management system was decided upon, they should have the power to make it work; not just serve to advise. He feels that if it is put to a referendum, however, it would fail. The COG Director felt that a management system could be paid for through a user charge. He said that this power is already available through the Local Cooperation Act and it has already been used to create a two county water district and a transportation district.

C. Continuing Planning

Most interviewees felt that continuing planning would be a shared State and local responsibility with the local agency updating the plan and the State overseeing it. Both States held this view. The Tennessee representative felt that the local role would widen particularly in the area of land use. He added that if the City fails to pass the pre-treatment ordinance, the WQM will have to become involved in that issue.

The Project Director felt that continuing planning will continue to "pull the pieces together". Either the planning agency or the managemeng agency would "sharpen the focus on facilities priorities" and would become more involved in other community programs such as capital improvements, HUD community development, and EPA action plans. The TVA Engineer expected continuing planning to involve updating the plan and serving as a clearinghouse for development projects. The elected officials were less clear about what continuing planning would involve, but were certain of one thing -- it must be accountable to elected officials.

The Project Director estimated that continuing planning would cost $150,000 to $200,000 annually, and did not expect 100 percent Federal funding. He said that the Policy Board understands that they must pay, but they have made no commitments yet. This view seems consistent with attitudes expressed by the elected officials. The COG Director said that the costs could be paid for by sewer and water charges. The TVA Engineer predicted that it would be paid for by a combination of Federal funding, sewer tax revenues, and the local CARCOG assessment.

D. Relation to Other Water Quality Programs

The Project Director said that looking at a regional system is a priority item of the work program. He feels that the WQM plan will control the location, size, type and design of future facilities. He felt that assisting in passing the pre-treatment ordinance and current hearings on whether to expand the existing plant or to build a new one are two ways the WQM can impact ongoing 201 work. The work plan describes a relationship of coordination and communication to achieve maximum consistency without letting the WQM effort "unduly delay" the facilities planning already in progress.

Neither of the State Liaisons felt that the WQM program would have too much impact on the 201 study, but both agreed that it would eventually be the "guiding influence". The Public Works Director, who is an elected official, felt that in the future the WQM agency will do Step I plans. The TVA Engineer feels that they are putting the "cart before the horse". He said that the WQM plan should overrule the 201, but they should certainly be compatible.

There were a variety of opinions regarding the impact that WQM planning will have on permitting and vice versa. The Project Director said that there would be no impact -- it is a State responsibility. The TVA Engineer said that the WQM agency should review all applications. The Georgia representative said he did not know about impacts. The Tennessee representative said they have discussed having the WQM agencies do permitting but was not sure whether the federal law allows it. He feels that the ideal arrangement would be a cooperative one where the WQM agency provided technical support for field work and inspection and the State does review and sign-off. He hopes that WQM will recommend combining the EPA and State permits into a single permit procedure.

E. Local Definition of Success

Everyone had a slightly different view of what would constitute a success. These included:

- Project Director - if some group or agency is clearly defined as a regional management authority with planning capacity, monitoring ability and its own source of continuing funding.

- COG Director - if they get their plans off the ground and can manage things regardless of who owns them.

- Local Elected Official - a management system with enough authority to regulate and finance itself.

- Public Works Director - a regional treatment system.

- TVA Engineer - if they get rid of all the package treatment plants. If water quality problems are put on a priority list with associated costs. If a management system is set up.

- State Legislator - if the plan is implemented over 20 years. If river banks are zoned.

- Georgia State Water Quality Representative -- if they create a management system with local backing to control critical areas. Further, if an authority keeps an inventory of industrial raw materials and by-products and lists who needs to dispose of what wastes. Ultimately, a "detoxification unit" for industrial residuals.

IV. VARYING PERSPECTIVES

A. WQM Staff

The CARCOG staff members working on the WQM have a consistent viewpoint about what they are and should be doing. There is some concern that the work plan has not been approved yet, and therefore, they are not officially proceeding. In the meantime, they have collected much of the data that will be needed and they have organized approaches to the various work elements. Major differences in views are, for the most part, a matter of perspective reflecting the respondent's position in the organization.

The COG Director takes a more comprehensive and long-range look at the project. He sees it as a long-range element of the COG's overall program and adds that the WQM plan is his agency's first priority, in part because of the short time frame. In general, he feels they are further ahead than most other projects in Tennessee "because we have all the pieces together". Here, he is speaking of getting the several related agencies involved in the project. He acknowledges that there are possible fights based on previous antagonisms. The COG staff itself has undergone a recent reorganization in response to internal and external criticisms. The COG Director's greatest interest is in helping educate the local elected officials about the program. He feels that, in the long run, they are taking the best approach for all communities, although right now he feels that everyone does not see it that way. He hopes to be able to show local officials that WQM planning is in their best interest and that everyone will pay equally. He is convinced that the area is closer to a regional approach to solving a number of problems than anyone now realizes.

The Project Director takes a public administration approach. He sees WQM as an experiment in regional management and the way communities set priorities in looking for grants (although he is not sure that EPA is ready to accept this). In the past, each locality raised its own funds. A logical starting point is merging air pollution and water quality interests. He is particularly interested in seeing the Federal Regional Council become stronger.

The Project Director said that setting up the WQM project and monitoring the several contractors is a "major headache". The COG had to be reorganized to create the kind of accounting and staffing system needed to manage WQM planning. At times, the WQM position within the COG can be frustrating. For example, they must clear all Policy Board meetings through the Executive Director. In general, however, because they account for over half the COG budget, they have access to most of the agency's resources, staff and financial data. He feels that they have played a major role in the COG in pulling together a data base, land use plans and a mapping system. He hopes that they will also lead the way toward improved capital improvements and municipal budgeting processes.

The shortened planning period (because work plan was late in being approved) puts them in an uncertain position as to whether the project can be completed on time. Any delays, such as needing EPA approvals, can jeopardize meeting their deadline. The Project Director sees the staff role as coordinator, and the other agencies and consultants as technical planners. The staff will ultimately be responsible for selling the plan to the local governments.

Other staff members interviewed were an Engineer and a Planner. Most often, their concerns centered around technical matters. For example, existing land use plans are often not up to date and what data does exist is in different scales. The staff feels that they are correcting these problems. Because they have collected so much of the data, they feel that they are in an excellent position to monitor the consultant work. The staff agrees that the biggest strength of the project is that it provides a focal point for all water related agencies to get together. This is a fairly new arrangement, particularly in that it enables the States to participate at the local level. The greatest weakness noted is that it takes so long to get things done because of all the "channels".

B. Citizens

Because no public participation program has been designed for this area, no citizens were identified to be interviewed. Views of an Engineer from TVA who was on the Consultant Selection Task Force will be reported under Appointed Official (Section IV D), because he more appropriately represents an agency view.

C. Local Elected Officials

Two local elected officials were interviewed: the Public Works Commissioner for the City of Chattanooga and a Walker County (Georgia) Commissioner.

The Public Works Commissioner said that he has been briefed on the WQM study and even attended one of their meetings, but he is unaware of details. He was under the "general impression that it's for a management system". Two members of this man's staff, who are more involved with the WQM study, present at the interview. The Commissioner also relies heavily on his chief 201 consultant, who is also a major consultant for the WQM. In general, the attitudes expressed were cautious with regard to CARCOG. He feels that people are often unhappy with actions they have taken, and particularly with the fact that Chattanooga has only one vote on the Council. The Commissioner said that he would be opposed to any management system that is not answerable to elected officials. He felt that his department should be consulted more often for their input into the plan. In general, he said he was "committed to the 1983 goal" and as evidence, cites that his agency is now pursuing an ordinance for pre-treatment and cost recovery.

The County Commissioner has been quite active in planning, and he is Chairman of the Policy Board. He said that he became interested in WQM because he saw the management system crossing county and State lines, and he wanted to be sure to have input. He felt that those elected officials involved in the planning do not see a problem in crossing lines, but some of those not involved, do. The Commissioner is pleased with the way his input has been received, despite the "minor" problem in selecting consultants. Although the Commissioner feels that there is only medium support for a regional management system and only weak support for funding one, he felt it is essential that the system have enforcement authority if it is to work and not be merely advisory.

D. Appointed Officials

The official in charge of the area sewage treatment plant is elected, and has been discussed in the previous section. The official whose views are discussed in this section is an Engineer for TVA.

The Engineer saw his role as providing technical expertise. TVA worked on the River Basin Plan (303e) and his historically been involved in the area's water studies. Up to this point, TVA's role has been to provide the WQM agency with data on background levels and pollution rates. Now TVA is "zeroing in on combined sewer overflow". The Engineer hopes that they will be able to prove that it is not a problem. The TVA monitoring network will be extensively used as guidance on nonpoint source problems and they will do additional sampling for areas with a particular problem such as in a community located beside an industrial plant. The Engineer served on the consultant selection task force and is fully familiar with the WQM work plan. He believes that EPA is not sufficiently familiar with the local area and therefore is opposed to studies of certain activity-specific problems and wants additional studies where TVA does not believe there is a problem (for example, agricultural runoff).

The Engineer says that the hardest problem for the WQM staff will be fighting the lack of confidence in CARCOG. He feels that people see it as a bureaucratic money waster, but is hopeful that WQM can improve that image. He predicts that there will be some trouble when they start offering management alternatives, but he believes that a regional concept could work here. Opposition is particularly strong in the smaller communities which distrust one of the consultants, believing him to be partial to the City's interests and not looking after their own. Nevertheless, he sees a great potential for solving a lot of local problems. He feels that the best way to improve support is by getting the professional organizations involved.

E. State Legislators

The State Legislator interviewed is a recent appointee to the CARCOG Board. Although he has not been involved in the WQM study, he has heard one of their presentations. Although he is "suspicious of any federal program", he believes it should be more than just a plan. This Senator first became involved with CARCOG because of his opposition to an industrial park about to be built near a clean stream. He hopes WQM will carry on this and similar battles.

F. State Water Quality Personnel

The Tennessee Liaison is in the local field office and was involved with problem definition, identification of monitoring points, review of the work plan and consultant selection. The State was instrumental in adding at least three tasks to the work plan. He felt one of the problems so far has been that the designated agency is not a water quality agency, so they had a lot to learn. He sees his role as helping them learn, and therefore move faster. He expects to be on the Technical Advisory Committee, although it has not yet been appointed. A State strategy has not been written yet, so it is unclear how it will incorporate the WQM study. But this person sees a significant role for WQM in the permit program. Specifically, he would like to see the WQM agency conduct field work and draft initial applications. He feels that permitting and other water regulations are best done at the local level because they take more pride in their work. The danger, he feels, is that if mismanaged, a local regulation program can more easily become ineffective.

The Georgia Liaison has been involved in problem appraisal, designation and work plan approval. He hopes to be a member of the Technical Advisory Committee. This staff person has serious doubts as to whether the plan can be completed on time, in part because of the difficulty in managing a program that crosses State lines. In general, he is satisfied with his involvement with the exception of the situation where the consultant selection committee's recommendation was not followed. As in Tennessee, the Georgia State plan is still being written, and he feels that, given the very recent designation of three areas in Georgia, it will be some time before the State decides upon the appropriate role for each agency.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The plan probably will be completed although possibly in a somewhat scaled down version. The fact that the work plan was not approved made everyone anxious about meeting the deadline. In the meantime, they have accomplished a lot of data gathering, mapping and task definition refinement which, over the long run, will make the planning run smoother once it is underway. The consultants are selected and ready to start as soon as approval is received. The State of Tennessee has added three major work tasks, but it is difficult to see how these can be done without cutting back on some of the original tasks.

Emphasizing coordination with other agencies -- TVA, the City, and other planning agencies -- was a wide strategy for helping to achieve plan completion, approval and implementation. It was necessary to rely on other planning agencies for population, economic and land use data, and projections. In addition, these planning agencies are experienced in working with the rural areas. TVA has shared much of the load for technical water quality work elements. They are also experienced in this kind of work and in working with the local agencies.

Support from the City of Chattanooga is likely, but by no means definite. The Mayor, a former Public Works Commissioner, is on one of the Committees and is fairly well versed on the subject. The current Commissioner is less involved, although he does send representatives to meetings. The 201 Facilities Plan being performed for his department will have a large impact on alternatives available to the WQM in the area of point sources.

There may be some problem in gaining support for implementation from the rural towns. There is an historic antagonism between them and the central city, and this is compounded by the choice of the City's facilities consultant as one of the WQM consultants, (made over the objections of the Consultant Selection Task Force). A Policy Committee which is made up of elected officials has been formed, and seems to have become a knowledgeable and effective decision-making group.

Unfortunately, the COG has a poor reputation with some people and this could harm chances for implementation. On the other hand, they are working hard to change these opinions and the WQM staff has done several things to begin management, even during the planning period. For example, they participate in A-95 review and are supporting the pre-treatment ordinance. This has made the group known publicly and has started people thinking about water quality.

There are many signs that this area could achieve a regional management system. There have been past regional authorities for a transportation district and two water districts. The COC, WQM staff and consultant are experienced with the institutional setting and have thought about their needs. The most difficult obstacles to regionalism is that the area covers parts of two States. Many were skeptical that a workable framework could be created, or if one was, that it would be manageable within the dual restrictions of two States.

B. Public Involvement

So far, public involvement has been limited to local elected officials and to staffs from other public agencies. There have been articles in the local newspaper about the WQM project; unfortunately, many stemming from the consultant selection controversy. There also have been presentations to service clubs and three issues of a newsletter. Finally, two public hearings were held when problems were being defined. It is unclear how successful these efforts have been.

The WQM agency seems to have made a diplomatically wise move in asking Coosa Valley Area Planning Council to design and carry out the public involvement program. First, it ensures their involvement. CVAPC itself had originally applied for designation as a WQM agency, but were turned down. This arrangement brings them into the process. Second, CVAPC is located in Georgia and among the more rural parts of the designated area. Their sponsorship should help overcome the distrust of Chattanooga by the rural towns. Third, it means the public involvement program can draw upon the contacts and experiences of at least two agencies.

C. Current Planning Process

The work plan encompasses a very large scope. Fortunately, the work is shared among other agencies with many years experience (e.g., TVA, SCS). The work program intends to cover point and nonpoint sources, while management planning will go on throughout the work period. Alternative plans will combine all three elements.

Whereas these tasks are somewhat general, the tasks added by the State are very specific. It is, therefore, difficult to see exactly how they fit into the work program, except as supplementary reports. Similarly, they do not really fit into the staff and consultant structure as it existed at the time of the interview. The new tasks are:

- Examination of dissolved oxygen levels in Chickamauga Dam;
- Analysis of pump storage on Racoon Mountain; and
- Evaluation of thermal effects of Sequoia Nuclear Plant.

Other comments about the planning process would be premature at this time, except to re-emphasize that the staff has accomplished a considerable amount while waiting for work plan approval. This is testimony to their commitment and ability to perform the required planning.

D. Continuing Planning Process

The Project Director has several ideas about what could be done in continuing planning. These include ways to become more involved in capital improvements, budgeting and community development programs. More likely, continuing planning will include plan update and clearinghouse activities for water related issues. If the WQM pushes others to look at processes for development and community involvement, however, that will be aconsidered useful.

In this area, both staff and elected officials seem to have done more thinking about how planning (and implementation) would be paid for, than some of the other areas examined. They thought about funding implies an assumption that planning will continue.

E. Significance of Local Elected Officials Involvement

The Policy Board, which consists of 31 elected officials, seems to have evolved into an effective decision-making group. Support of the Mayor of Chattanooga must be maintained, both because the City owns the treatment plant and, therefore, has influence over certain point sources, and because of the City's dominance within the region. As in other areas, elected officials are particularly concerned that WQM maintain political accountability.

The rural elected officials are least knowledgeable about WQM, yet their support is essential if a regional system is to be achieved. A Commissioner from a rural Georgia County is Chairman of the Policy Board. This should set an example in other rural areas which have to gain from cooperation. This Commissioner is strongly in favor of a management system with enforcement rather than advisory authority.

AGENCY: DELAWARE VALLEY REGIONAL PLANNING COMMISSION (DVRPC)

REGION: II - (New York) and III - (Philadelphia)

GRANT AMOUNT: $3,852,032 plus $935,140 from State of Pennsylvania

GRANT RECEIPT: June 30, 1975

STARTING DATE: July, 1975

STATUS AT TIME OF INTERVIEWS: Problem definition and data gathering were completed under the Pennsylvania COWAMP program prior to receipt of the grant.

REASON FOR INCLUSION IN SAMPLE: This is a complex urban-industrial area. The designated agency is simultaneously carrying out three WQM planning projects.

I. BACKGROUND[1]

A. Area Description

The designated area of the Delaware Valley Regional Planning Commission (DVRPC) includes five counties in southeastern Pennsylvania - Bucks, Chester, Delaware, Montgomery and Philadelphia. The area is part of the Piladelphia SMSA, fourth largest in the United States. The 1970 population of the area was 3,865,810. Although 87 percent of this is in the metropolitan Philadelphia area, there is a range of attitudes and needs, with the most rural found in the northern counties. Both staff and other participants agreed that this diversity must be reflected in the planning process if the Pennsylvania 208/COWAMP (water quality management) plan is to be implemented.

The Philadelphia area is a leading manufacturing, distribution and transportation center. Over half of the industrial establishments will require pre-treatment in order to establish compatibility with municipal wastewater. More than one-half of the area's direct industrial dischargers (101 of 181) are classified as having serious water quality impact. The designated WQM area is included in the State Water Quality Management Study Area #1, although the State program (COWAMP) also includes Berks and Schuylkill counties. The five-county area is included in an EPA Air Quality Maintenance area, although the AQM area also includes parts of New Jersey. Finally, the area is part of a regional planning area for which DVRPC conducts HUD-701 comprehensive planning and DOT comprehensive transportation planning.

The DVRPC is simultaneously conducting WQM planning for three separate areas in its nine-county planning area. Besides the Philadelphia area for which $3,852,032 was received, grants totaling $1,264,800 have been received for the tri-county New Jersey area, and for $974,145 Mercer County, New Jersey. Together, these areas comprise the main-stem Delaware River estuary. Planning for the three areas is being closely coordinated, but remains separated because of special funding arrangements and differences in status of water quality planning between the two States.

B. Water Quality Problem

There are sixteen watersheds in the WQM designated area. All but one has been designated as water quality limited by the Pennsylvania Department of Environmental Regulation (DER). DER has established

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[1] Information for this Chapter was taken from the DVRPC Dssignation Application; the DVRPC Project Control plan; State literature on COWAMP; and from interviews.

uses for each of the streams and has promulgated criteria and standards for these uses.

There was consistent agreement that the major water quality problems in the area is the Delaware River estuary. Sources of this pollution are municipal and industrial dischargers, stormwater, and benthic sludge deposits (up to 15 feet in places). Tributaries of greatest concern are the Schuylkill River (dissolved oxygen problems) and Perkiomen Creek (nitrate and phosphate from agriculture runoff).

The three Philadelphia treatment plants treat the majority of both City and suburban flows. However, there are over 77 other plants operated by over 50 governmental units and sewer authorities, and an additional 125 non-municipal plants (e.g., commercial packing plants). Nearly one-half million residents use on-site septic systems which become the source of both BOD and suspended solids pollution.

There is a considerable urban storm drainage problem. Over 75% of the area is unserved by either combined sewers or a separate storm sewer system. In Philadelphia, where the need for a system is greatest, a combined sewer system is in use which discharges into the Delaware and Schuylkill Rivers. Cost for separating the system has been set at .8 to 1.6 billion dollars, which is considered a prohibitive expense. Other nonpoint source problems include landfill runoff and leachate, lagoon spillage, and agricultural and construction runoff.

C. Designated Agency

The DVRPC was established by interstate contract between the states of Pennsylvania and New Jersey in 1967. The geographical jurisdiction covers five counties in Pennsylvania and four in New Jersey. In addition to water quality, the agency is responsible for land use, water supply, transportation, parks and recreation, housing and open space planning, and has A-95 authority. DVRPC is currently updating its comprehensive plan under the Year 2000 project. The 208/COWAMP plan will comprise the Water Quality Chapter of that effort.

DVRPC has prepared a regional water supply pollution control plan for HUD which has served as regional policy for review of over 200 facility construction grant applications. Storm drainage plans for the region have recently been completed. The Commission is under contract to the Philadelphia DER to prepare a coastal zone management plan for the Delaware River estuary.

The WQM planning project is a joint effort with the statewide Comprehensive Water Quality Management Planning (COWAMP) program administered by the DER. COWAMP was well underway before WQM was initiated and DER had contracted with DVRPC for technical and public participation services.

When the Federal WQM program was introduced, it became reasonable to merge it with COWAMP because they are compatible in scope and philosophy, and a merger would avoid costly duplication of effort. COWAMP was altered slightly to include additional work on nonpoint sources and institutions, and the WQM study area was expanded (with an additional $975,000 in State money) to include Berks and Schuylkill counties. The consultant under contract to DER was retained by DVRPC. It was agreed that the completed project will become a major section of the Pennsylvania State Water Plan which is concerned with both water quality and overall water supply.

At the staff level, 18 persons are assigned to WQM planning, although many of these work on all three WQM projects. In addition, many DVRPC staff persons spend part time on WQM planning. The major consultant has received nearly half the funding. This is used in part by a consortium of subcontractors in five study areas: legal, social/economic, groundwater, mathematical modeling, and biological/ecological. In addition, contacts have been let with:

- The University City Science Center, for stormwater modeling;
- All counties, for public participation assistance;
- The State, for printing and administrative assistance;
- The Philadelphia Water Department, for stormwater data collection; and
- The Delaware River Basin Commission for estuary work.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

Problems, goals, needs and objectives were defined by staff and circulated through committees. The final determination was the result of a five month committee on Plan Selection Criteria. Many of the issues had been identified in previous reports. Specific objectives for the immediate planning period include cleaning up the gross pollution of the estuary -- defining problems and recommending remedial action or additional study. Other objectives included conducting an analysis of institutional management, regulatory and financial issues. The issue of antidegradation was addressed in Alternative Futures Workshops.

The WQM goals and objectives are clearly part of a larger set of regional plans currently being developed under the Year 2000 peoject. In fact, WQM planning served as a major impetus toward getting that effort under way. The planning process for Year 2000 is cost-shared by WQM, DOT and HUD. It is outlined in the Study Design and addresses the following:

- Determination of regional issues, goals and policies;
- Development and screening of 8-12 scenarios for regional development;
- Preparation of three alternative sketch plans for regional growth; and
- Preparation of detailed functional plans.

When citizens and elected officials were asked how WQM fits into the overall objectives of the region, there seemed to be a consensus that it was consistent and that the improvement of water quality is a priority objective. Local areas obviously differed in their attitudes toward growth, depending on the extent of present growth. No area of the WQM expected to contradict local desires. In Chester County, for example, it is believed that WQM will complement and enhance local goals of preservation of agricultural land, protection of open spaces and orderly development. There was some concern that 208/COWAMP and Year 2000 projects represented a duplication of effort.

B. Technical Component

Data from existing sources will be identified and used for both defining problems and fashioning alternative solutions. Monitoring of low flow conditions and dischargers will be conducted on seven tributaries to help calibrate models. Analysis and evaluation will depend heavily on modeling.

A new model for the Delaware estuary is being developed at a cost of $732,000 plus $150,000 in-kind services (mostly lab work) from the City of Philadelphia and computer time from the EPA in Annapolis.

The stormwater model is being developed by the University City Science Center. Again, the Philadelphia Water Department if helping with data collection so this model can be calibrated and verified. Stormwater monitoring will be conducted in both urban and rural areas. The WQM Chief Planner said he would have liked to have handled more nonpoint source work under the program, particularly to have made gross allotments of stormwater, agriculture, construction and landfill pollutants. He felt collecting more data would have been helpful, but that NPS analysis was most hampered by the poor state-of-the-art for NPS modeling.

C. Management Planning

Management planning was just getting underway. Responsible staff members were beginning to compile an inventory of existing agencies and authorities. It was believed that, given the large number of local agencies and the complexity of institutional authorities, the "management" portions will be a major element of the study.

The agency's approach is to conduct management planning simultaneously with technical planning so that each is analyzed in terms of feasibility for the other. Because of the tremendous volume of water quality inventories needed, management planning fell four months behind schedule. It is expected that the institutional inventory and analysis will be finished by the time technical sketch plans are prepared.

D. Public Involvement Program

The key to the public participation program is the committee structure. The Policy Advisory (PAC) is composed of representatives of eight counties, and designees of municipal government and the general public. The PAC provides policy guidance to Pennsylvania DER and to DVRPC. The Technical Advisory Committee (TAC) consists of 29 members from regulatory agencies, county and regional planning commissions, Federal agencies, county health departments and the Philadelphia Water Department. The TAC provides technical review and assistance to the PAC and the consultant. The Study Advisory Committee (SAC) consists of two representatives of each SAC subcommittee and delegates of county public participation programs. The SAC's purpose is to provide policy guidance from a local perspective. Four subcommittees are associated with SAC: Industrial Dischargers, Municipal Dischargers, Agricultural, and Environmental/Conservation/Public. Membership on these subcommittees is open and flexible. All committees and subcommittees meet bimonthly. Committees are active, but in all cases are more advisory than participatory. In addition to the committee structure, the public participation program consists of a bimonthly newsletter, slide presentations.

and quarterly advisory meetings at the county level. So far, five rounds of county meetings have been held, the most recent meetings were on the subject of "Alternative Futures".

The Section Chief seemed well aware of weaknesses and criticisms in the public participation program. She described at least five sources of dissatisfaction:

- The commission has a variety of other committees which compete for some of the same people's time;
- The watershed associations want funding;
- There needs to be better effect in getting the local elected officials to participate;
- More money should be spent on public information and less on committees;
- Some committees are unsure of the role they should play.

There was a sense that the public participation effort was as effective as could be expected at this time. When it was time for more decisions to be made, people would be more actively involved. The three citizens interviewed were all very knowledgeable about and active in the WQM project. They had been involved for over six months and had formed a number of opinions about WQM -- from both a local and a national perspective.

E. State and Federal Involvement

Because they are understaffed, EPA's guidance has been minimal, with little or no technical guidance. The EPA Project Officer is involved by telephone on almost a daily basis and visits are made between EPA and DVRPC 2-4 times per month.[1] DVRPC feels greater coordination is needed with air, water, solid waste and residuals management. Earlier, they would have liked to know what the plans would include, but feel such advice now would put them back on first base trying to fit their work into another formula. Finally, the Chief Planner felt he would like greater sympathy from EPA regarding timeframe and budget constraints. He felt he needed greater flexibility to make trade-offs. The relationship with Pennsylvania was described as excellent and friendly.[2] The man who had been involved most deeply was very recently promoted, but they expected a similar relationship with the new appointee who had also been involved from an early stage.

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[1] This has not been true of Region II where telephone contact is biweekly and less than 2 visits total have been made.

[2] Relations with New Jersey for those portions of the plan were described as hostile, with the State providing no useful input and almost total interference. This is the situation as described by DVRPC and as it was not part of the study sample.

F. Scheduled Outputs

The PCP described how the five interim outputs and the sixteen WQM outputs required by EPA will be completed. These tasks and outputs are keyed according to the five-digit COWAMP Integrated Work Plan system for consistency. The schedule for meeting these outputs, (see Exhibit I) is taken from the PCP.

According to the WQM Chief Planner, final outputs are expected to be a 13-chapter report with extensive data, an Executive Summary of approximately 100 pages, and a capsulized popular brochure for massive distribution.

Interim outputs were considered useful and essential outputs for planning, but the imposed deadline was a hindrance and consequently was ignored to fit a more appropriate work schedule.

G. Achievements to Date

The WQM Chief Planner listed three major achievements to date. First, they have completed the first round of the estuary program despite overwhelming logistics. Second, a complex computerized data management system has been established. Third, a reasonable public participation effort is underway. The Regional Development Guide is expected to be ready in September or October, 1976 and the estuary model is also scheduled for completion in the fall. The staff seemed to feel that they were on schedule only because they had a one year head start in the COWAMP program.[1] The staff director did not feel keeping to the proposed schedule was important, so long as the final two year schedule is met.

The State COWAMP Program Manager also felt that the WQM agency might not be meeting the PCP schedules, but agreed that this was to be expected and not a matter for concern. Among the reasons cited were:

- There are always unanticipated technical problems;
- The sheer volume of information available slows the project down;
- People have questions that need answers and they need time to react;
- A six week review time is insufficient; and
- Integration with the Year 2000 program has slowed Philadelphia down.

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[1] Although not the subject of this study, the New Jersey portions of the study were considered far behind. Consultants were not even hired and thus tasks and budgets could all be expected to change. It was also believed that the New Jersey portions were underfunded by as much as a half million dollars and it was hoped that some of the "NARC money" might be made available.

Exhibit I

PROJECT MILESTONES
DVRPC

Quarter	Event	Activity
January-March 1976	Refined PCP submitted	11000, 12000
	All data inventories completed	various
	Water quality surveys designed	32000
April-June 1976	Water quality models selected	61000
	Water quality surveys initiated	32000
	Data management system designed	21000
July-September 1976	*Present/projected population and employment	24000, 51000
	*Preliminary revised wasteload allocations	61000
	*Present/projected land use	24000, 51000
	*Delineation of proposed service areas	75000
	*Wasteload and flow projections	55000
	Plan selection criteria finished	65000
October-December 1976	Water quality surveys completed	32000
	Water quality models calibrated	61000
	(b) Water quality assessment and segment classification	32000, 56000
	(d) NPS problem assessment	32000
	(e) Water quality standards and revisions	32000, 56000
	(f) Total maximum daily loads and gross allocations (except Delaware Estuary)	61000
January-March 1977	Delaware Estuary Model Completed	67000
	Total maximum daily loads and gross allotments for Delaware Estuary	67000
	Alternative plans developed and evaluated	94000
	Interim Report released	17000
	(a) Planning boundaries delineated plan selection process initiated	95000
April-June 1977	Plan selection completed	95000
	(c) Inventory and ranking of point sources	various
	(g) Point source allocations	101000
	(h) Municipal waste treatment systems needs	101000
	(i) Industrial waste treatment systems needs	101000
	(j) NPS control needs (BMP)	101000, 102000
	(k) Residual waste control/land disposal needs	101000, 102000
	(l) Urban and industrial stormwater systems needs	101000, 102000

Quarter	Event	Activity
	(m) Target abatement dates	101000, 102000
	(n) Regulatory programs to implement the plan	102000
	(o) Management agencies to carry out plan	102000
July-September 1977	(p) Environmental, social, economic impact assessment	103000
	Recommended Plan submitted to Governor, EPA for preliminary review	19000
October-December 1977	Public hearings on Recommended Plan	19000
	Review by local elected officials	19000
	Final submission to Governor for review and certification	19000

Source: DVRPC, Areawide Wastetreatment Management Plan, 1976.

The State sees its role as helping to keep the schedule, but more importantly, to assure the technical quality. The State holds regular progress meetings, keeps a log of obligations, and meets regularly over scheduling and methodology problems between DER, DVRPC and the consultant. The State COWAMP Program Manager and WQM Chief Planner each felt that the regulations and guidelines are extremely ambitious, particularly in the area of NPS analysis. They also felt there was not enough time to do everything within the required timeframe, even if they had the money. These constraints had been incorporated into the PCP, so there was no need to revise the work plan.

III. EXPECTATIONS

A. Water Quality

There was a general feeling that water quality has improved and will continue to do so. Many felt that the Philadelphia region was far ahead of the rest of the country. WQM planning is expected to provide valuable information for identifying major sources and assuring the most results for the money spent. Stormwater problems were not expected to improve. Along with other programs such as permitting, the WQM project is expected to have a definite effect on water quality in the region. Persons interviewed felt a greater emphasis is now needed on enforcement, to make sure that there is an improvement. Several persons emphasized that this was only a plan, that improvements would be gradual and phased over time. WQM plan was seen as a guide and a policy framework towards achieving improved water quality. The WQM Chief Planner mentioned that the expected immediate reductions in sedimentation and that the leachate problem would be cleaned-up. He expected state water quality standards to be re-examined, and in some cases lowered.

There was general agreement that the 1983 goal would be met where attainable. That is, not in all water bodies because it would be unrealistic. Three examples cited of where it was unreasonable are:

- The upper headwaters where there is no technology available to solve the substantial nonpoint source problems;
- Where stormwater enters the estuary and cannot be treated without unreasonable expense; and
- In the port area where contact recreation is an appropriate goal.

For many areas, the fishable goal was expected to be reached, but not the swimmable goal. Several persons doubted that the goal would be reached by 1983. In part, this is because it simply takes so much time to "flush out" the system.

B. Plan Approval and Implementation

Each person was asked to rank the likelihood of plan approval on a scale of one (lowest) to ten (highest) at the local level and at the State level. There was unanimous agreement that there would be approval by the State (10), in part because that State was so involved and would have no choice but to approve. For the local level, there were a variety of answers. Half felt approval was likely because most problems were being solved as they came along. One citizen answered "zero or ten depending on whether they do it right", but said approval was

probable. One citizen felt the term local approval was inapplicable and acceptance was more appropriate. Several respondents felt that local approval was a fifty-fifty possibility, expecting a possible power play depending on how the final plan was written.

Each person was also asked to rank the likelihood of plan implementation. One citizen and one local official felt they could not answer until they better know the outcome of the plan. The Commission Director felt it was very good (8 or 9), but that the extent of implementation would depend on finances. All others questioned felt likelihood of implementation to be around 5 or 6. Specific limits to implementation mentioned include:

- If the plan is written as guidelines, it will be more readily accepted;
- If it is too detialed and does not allow for flexibility in growth and development, it will have problems;
- If they are successful in obtaining public input, people are educated to the aims and benefits of the project, and people truly feel involved, it will meet with greater success; and
- Although everyone assumes there will be regulation, there is opposition to this being done at the State and federal levels.

There was general agreement that the people essential to plan implementation included the public, the local sewer authorities, and political persons from the counties. Many such people were being actively involved through the SAC, TAC, and PAC committees as well as the DVRPC Board.

It is DVRPC's position that creating new management agencies is not feasible and would jeopardize implementation. The State legislator also felt that citizens, local officials and the legislature would all be opposed to creating new institutions. Regardless of what management structure is finally selected, additional funding would be needed to increase enforcement, for more collectors and for solving the problems of water quality and water supply. It was suggested that much of these costs would be greater than what could legally be called a service fee, particularly if NPS and groundwater improvements are included. There seemed to be a consensus that new State laws would not be needed to implement the plans. The WQM Chief Planner specifically stated that he expected to steer away from the kind of recommendation. There was agreement that the Pennsylvania DER had most of the implementation

authority needed through the Environmental Amendment[1] and the Clean Streams Act. Because Pennsylvania cannot delegate its regulatory authority under the Act, the DER was expected to keep these perogatives with no additional delegation of authority needed. The local official interviewed hoped there would be no new State laws because he felt they were over-regulated already.

The State legislator and State COWAMP Project Manager felt it was possible that new state laws and/or local ordinances might be needed for urban stormwater controls. The legislature also hoped to see new land use laws to protect agriculture, but did not feel these would necessarily come about only because of WQM.

C. Continuing Planning Process

All persons were asked about their expectations concerning the WQM project, and given a list of possibilities. Only two, a citizen and a local official, said it would go away after two years; all others said it would not. One citizen felt the entire timetable of PL 92-500 would be set back. The same citizen felt DVRPC was getting too powerful and beginning to go beyond its authority. He felt that the Delaware River Basin Commission (DRBC) had the necessary authority and was more properly the lead agency. No one felt that the State would solely take over water quality planning; rather, it would remain a shared function with both the State and DVRPC playing important roles. Most felt that WQM would have an impact on future land use and development decisions, and some felt new policy would be generated in those areas. Because it is generating a good data bank, it is expected that WQM will be useful not only for land use planning but also as a basis for making permit and construction grant decisions. Most said they expected WQM would be completed within two years, but the State COWAMP program manager pointed out that WQM should never be considered completed because it must be treated as an ongoing function.

Continuing planning was seen as a constant update of the WQM plan. Because of the size of the City, the Philadelphia Commissioner of Water expected the City to continue to be a major influence in both management and planning. He expected stormwater to eventually be studied, but not for many years. The WQM Chief Planner saw his role

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[1] The COWAMP program originated with the 1970 amendments to the Pennsylvania Clean Streams Law, and EPA Regulation 18 CRF 601 (later incorporated in PL 92-500). Further State commitment came in the form of the Pennsylvania Environmental Amendment (adopted in 1971) which states that "People have the right to clean air, pure water and to the esthetic values of the environment". Although similar to NEPA in objective, the Amendment requires environmental evaluation throughout planning and a testing of alternative environmental choices.

in continuing planning to be one of monitoring compliance (institutional, financial and water quality) and plan update. He expected a five year transition period. The State legislator expected that by the time the plan is finished, everything will have changed and it will all have to be done over.

There was considerable uncertainty as to how continuing planning would be funded. One citizen and the Commission Executive Director felt State and Federal assistance would be a necessity. The State legislator felt the State would continue to support water quality with funding, although there was some opposition because of dissatisfaction with the slowness of permitting procedures. A Pennsylvania House Select Committee to Investigate the COWAMP program will soon recommend a full investigation of State spending for water quality, a reflection that some feel there has been waste. The local official felt water quality should be paid for at the local level because there was less chance for waste. He further felt that the existing study area was too large and, in the future, WQM should be conducted on a watershed basis. This view was not shared by others. Both the State COWAMP Program Manager and the WQM Chief Planner estimated the cost of continuing planning to be a half million dollars per year. The Commission Executive Director felt that this cost would fluctuate, but that they were currently staffed at the appropriate level for continuing planning. Although funding for continuing planning had not been discussed at the policy level, the DVRPC Board is aware of the need and is interested in the issue. The WQM Chief Planner speculated that some possible funding sources might inlcude charging for A-95 review, block grants, State subsidy, county funds, shift of 106 funds, and/or retaining a percentage of permit fees.

D. Relation to Other Water Quality Programs

There was general agreement that WQM would be used as a guideline to help determine size, location and discharge of municipal plants. Most felt that 201 plans would have to be consistent with WQM. The WQM Chief Planner believed WQM would have no impact on work already underway (beyong Step II). The State COWAMP Program Manager expected both 201 planning and WQM would need constant revisions. Currently the state has a backlog of Step I applications. If granted, these would foreclose a lot of WQM planning. The State is attempting to solve both short-term local needs and the longer range regional needs.

A range of expectations regarding the relationship between NPDES and the WQM program was expressed. One member of the Industrial DIS Subcommittee believed WQM would have little effect on permitting, although it might possibly affect future permitting for plant locations. A second citizen felt the WQM should simply adopt the existing State

permit procedures because they are adequate. The WQM Chief Planner felt that WQM nonpoint source analysis might indicate the needs for a reduction in point source allocations. The State COWAMP Program Manager felt WQM would provide segment-by-segment maximum daily leads from which allocations could be derived. Currently, EPA operates the permit program, but it is expected that the State will probably take it over. WQM data will probably not be ready for second round permitting.

E. Local Definition of Success

All persons were asked what they would consider a successful WQM effort. Several mentioned that success would be achieved if a WQM plan is adopted and implemented by all governments, while the WQM Chief Planner noted it would be successful if implemented with 4-5 years (rather than immediately). Several noted that in the final analysis, upgraded water would be the measure of success, both the State legislator noted that this must not be at the cost of "bringing everything else to a screeching halt". One person felt WQM would be a success if it solved small problems in various areas.

No one defined success in terms of a document. One citizen specifically mentioned that WQM must not be a detailed plan, but rather a concise guideline. Several persons saw success in terms of establishing a particular approach or process. To the COG Director, success would be creating a preventive versus a mitigating approach. To the State Water Quality Liaison, success would be establishing a process with greater efficiency, accountability and support. To one citizen, WQM success would be creating guidelines that could be used by a range of groups such as the State for permitting, and local agencies for planning and zoning. Another citizen felt WQM would be a success if it educated people and expanded their thinking about land use in the direction of a metropolitan urban/suburban approach. The State Liaison felt success would be achieved if there was greater dialogue among various levels of government.

Everyone expected water quality benefits from the WQM plan, but felt these benefits would be small and incremental because of Philadelphia's relatively good water conditions. Greatest benefits were expected to be in the area of providing reasonable input to land use planning and more orderly growth. The State legislator saw WQM providing more clout to the goal of preserving agricultural lands. One citizen mentioned WQM would serve as a training ground for achieving better local cooperation at a regional level for all issues. One interviewee felt the greatest benefactors would be small communities; the cities were well studied and are relatively self-suffcient. Technicians generally agreed that a proper mathematical model would result.

Everyone expected WQM costs to be paid by the taxpayer (rather than industry or through a users fee), and probably at the local level. One citizen expected reduced costs because of decreasing emphasis on the environment; another citizen felt it would cost more but this was a small expense campured to the saving. Cost for continuing planning has not been officially discussed at a policy level.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM staff felt they had adequate support and resources from the Commission to adequately run their project. Planning programs within the Commission are linked through the Regional Development Guide (Year 2000) program, which over the long run, will improve consistency and compatibility, but over the short-term tends to slow down the WQM schedule. There was a general sentiment that the work previously completed under the State COWAMP was useful, had given them excellent experience and put the project ahead of where they otherwise would be.[1]

The Commission's Executive Director felt the biggest problems with WQM was communications with the many small member governments. He also felt that coordination with the State was complicated because the program had formerly been State managed. He also felt that, for the same reason, there was a greater capability within the program and it seemed closer to policy.

B. Citizens

The first citizen interviewed was on the Industrial Dischargers Committee and SAC. He felt that WQM was a mammouth undertaking and difficult to manage because of all the data. He was concerned that there was a tendency to get to "solutions" too fast. He felt they should make sure all the facts and information were there, that motivatious for various input should be weighed and that solutions should not be rushed. As a committee member, he felt that the consultant was not a good choice. In one instance, he felt the consultant had inadequately responded to Committee comments on chapters.

The second citizen interviewed was on SAC and PAC and has been extremely active in other citizen efforts for Montgomery County. He felt that citizen involvement is an ingredient to implementing and enforcing the plans, yet there was not enough flexibility within time constraints. He felt the staff was receptive to input, but it was usually too late have much impact. Advisory groups need adequate time to review, process and report on work. This topic has been widely discussed in committee meetings and sentiment is that, if input is not used, there will be no future public participation. A working draft paper on this issue is currently being written by a subcommittee.

The third citizen interviewed is Chairman of the Environmental/Conservation/Public Subcommittee. He repeated the concerns about use of

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[1] This was not the case for the New Jersey projects. 303(e) planning there is underway, and data is available, but it is not useful. The New Jersey models do not work.

Committee input and added some additional concerns: committees do not understand their charge; individuals are asked to go to too many meetings - this is a particular burden for unpaid persons and inevitably leads to a division of public input. This citizen also felt that early problems with attendence were improving, but not solved. Finally, he was critical that committees do not reach the general public where there was widespread ignorance of what WQM is all about, and no one knows how to inform them.

Citizens and local officials seemed to feel that greatest problem with WQM was deciding what to do. They felt they had a list of problems, but were still not sure what they are supposed to come up with. There was also some feeling that jargon and constantly changing scenarios often got in the way of understanding and full participation by the public. Finally, there was some feeling by citizens that the project was being rushed to meet EPQ imposed schedules resulting in insufficient time for adequate public input and review. There was a sense that WQM represents a very large scope of work and there was a tendency to try to find solutions too fast. Citizens and local officials repeatedly preferred to go slower, making time for their input. They also clearly saw the connection between having their input properly received and ultimate plan approval and implementation.

The Public Participation Section Chief felt a variety of interest groups (such as recreation and sportmens clubs, civic associations, farmers groups, SCS, realtors, environmentalists) were represented through the committee structure. She felt that labor educators and land developers should be more involved. There are ten elected officials on the PAC, although some usually send a delegate (e.g., a Director of Planning), the Section Chief further noted that with over 352 municipalities in the area, there was a wide range in sophistication; thus, public participation was more successful in some areas than in others.

C. Local Elected Officials

A Chester County Commissioner was interviewed by telephone. He formerly participated in the Bradywine Valley Watershed Association and on a COWAMP citizen subcommittee. He was concerned about possible duplication of effort by COWAMP, WQM and Year 2000. As a County Commissioner, he helped create a Water Resources Authority to represent county interests.

This official's view of WQM was that the area was much too large. He felt that water quality problems were best approached on a watershed basis, solving one small problem and then applying the solution elsewhere. He also felt this kind of work should be paid for at the local level so there would be less waste. He was definitely opposed to additional State laws and regulatory agencies and felt policy-making should be only at the local level.

The WQM Chief Planner felt that input from local elected officials thus far had been minor - they "haven't been able to drag them (elected officials) out of the bushes". He felt the officials most essential to implementation were the eight counties, four cities and two States. All are represented on the PAC and on the Commission Board.

D. Appointed Official

The official interviewed is the Water Commissioner for the City of Philadelphia. He is Chairman of the PAC for the 208/COWAMP program. Because his official role as head of an operating sewer agency requires him to be initimately familiar with PL 92-500, he sees participation in WQM as a continuation of those responsibilities. He expects to continue to be responsible for treating the wastewaters of Philadelphia and over 20 surrounding communities, and feels the size of Philadelphia alone dictates that he must play a key role in any planning program.

The Commissioner felt that, in the future, 201 will work through WQM, although there must be a mechanism for continually updating WQM plans. He said that the area would complete high secondary by 1982 and that this capacity should last until 2000. His own agency's biggest problem seemed to be compliance with the requirement aht he discontinue sludge disposal at sea.

E. State Legislators

The State Representative from Chester County was interviewed. He has attended DVRPC Year 2000 meetings and his wife is on the Conservation Subcommittee of Year 2000, but he has had no direct contact with the WQM program. This Representative is on a House Select Committee to investigate the COWAMP program. The Committee was originally formed in 1974 because of opposition to DER estimates for agricultural consumptive water use in Chester County. In 1975 the Committee mandate was extended to investigate all water planning in the State (including COWAMP and the two joint 208/COWAMP projects). Hearings before the Committee illustrated the problem areas listed below.

- Putting Philadelphia in the same data base as the surrounding communities makes a great difference in the statistical results.

- Much of the data is out of date.

- Although the concept is good, costs are out of hand. There is a great deal of duplication in data gathering. There was some sentiment that contractors are charging as if this was new data, when it is really old data.

The committee will continue its investigation next year, and is suggesting that the Federal government investigate their part of the expenditures.

The legislator felt that the State would continue to financially support water quality and other conservation measures. He sensed growing opposition to DER because of slow permit approval procedures, a loss in priority for environmental issues (e.g., a floodplain law had recently been defeated), and an opposition towards creating new institutional arrangements. He did feel, however that existing laws such as Clean Streams and existing powers such as those held by the River Basin Commission would enable them to meet the 1983 goal. He expected the greatest results would be in respect to helping achieve some shared goals relating to land use planning.

F. State Water Quality Personnel

The State Department of Environmental Resources has been intimately involved in the project since the early stages of writing the designation package. Because the WQM is so closely connected to the COWAMP program, they have remained closely involved in all parts. The COWAMP Program Manager attends PAC meetings and other Department staff attend TAC and SAC meetings. The State clearly feels its role also includes helping to keep the project on schedule through regular progress meetings and joining consultant/state/DVRPC policy meetings. The State, however, sees its primary role as assuring quality technical planning. The State believes that there are always unanticipated technical prolbmes, and that needs for public participation and other program coordination may further slow things down, but that technical quality must be maintained above meeting time deadlines. In general, the State DER seems satisfied with the role they are playing. They did mention that they would like to participate more on a national level (they had helped work on revision of the regulations). The State COWAMP Program Manager felt the biggest problems with WQM to be assuring public participation, assuring statewide consistency and acquiring competent staff and consultants.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

Because there seems to have been a considerable amount of data collected in past studies and an even greater amount of start-up organization accomplished under the Pennsylvania Comprehensive Water Quality Management Planning (COWAMP) program, Philadelphia has an excellent chance for plan approval and implementation. Their work program is well thought out and generally understood by all those interviewed. The one exception to this statement might be in the public participation program where citizens seemed to be struggling with what role they should play.

The citizens involved have participated in a number of other planning programs including the DVRPC's Year 2000 project currently underway. The broader planning context encourages citizens to assess the WQM process' comprehensive approach to regional problems. On the other hand, the broadscale effort promotes citizen concern that the process slow down to allow for adequate time for review and comment. On this point, the State had agreed that greater time was needed for meaningful citizen input. Further, citizens felt that time constraints allowed only superficial study. The State also cited the time problem and underscored the State's preference for a quality product to a punctually completed plan.

The joint WQM/COWAMP effort is probably the greatest factor in whatever accomplishments result. The goals and objectives of the conjunctive effort, consultant selection, and design of the public participation program were all thought out before WQM planning officially started, which affords DVRPC at least 2 one year head start. Moreover, State participation is so extensive in DVRPC WQM activities that the State is essentially an integral part of the process and will aid greatly in obtaining State approval. State laws gives DER broad responsibilities, many which DER may not delegate.

Because local elected officials are not extensively involved, interviewees rated the likelihood of plan implementation at around fifty-fifty. DVRPC expects to rely on existing agencies and authorities for implementation, which should enhance the prospects for implementation. In addition, the State has broad implementing authority which promises support for implementation.

For the most part, implementation problems may arise in making existing management structures work. DVRPC does not intend to create new management agencies. The management/institutional analysis will focus on identifying those areas where no authorities exist and allocating necessary authority to existing agencies. It would seem that utilizing

existing agencies promotes plan implementability, although depending upon DVRPC's success in achieving workable management arrangements.

Existing management agencies include EPA which has permit authority; State DER with broad planning regulatory powers; DVRPC and Delaware River Basin Commission at the regional tier; the counties which have planning and advisory powers; municipalities which have zoning authority; and sewer treatment agencies at the county level and primarily in MCD's. One potential area of conflict is the role of the Basin Commission. The Commission is competitive with DVRPC for certain management responsibilities. Although there is some concern that, because of its make-up, the Commission is less accountable, there are those who believe the Commission possesses the necessary implementing authority and is the most logical WQM agency. The conflict between the two regional bodies will not be readily resolved and potentially could increase in the course of the WQM planning process. Overall, there seems to be a growing sense that many problems must be approached regionally and that WQM is somewhat of a testing ground for that concept.

B. Public Involvement

The public involvement program is well developed and has a full-time, experienced staff. The public participation effort has the support of the entire agency and the commitment of the full staff towards achieveing true involvement. The staff felt that they have a relatively successful program, although they are still looking for ways to improve it. The advisory committee membership represents a range of interest groups and many of those involved could be termed "professional citizens".

To the extent that the public participation program emphasizes the committee structure, it falls down to some extent in efforts to inform and educate the general public. The quarterly rounds of county meetings seem an honest attempt to involve citizens in the planning process for decisions needing the broadest input. For example, the most recent attempt presented "Alternative Futures", for public comment and was considered one of the more successful outreach programs. However, it was still felt that citizens are not used to being involved in the early stages of planning and it is easier to gain involvement when alternatives have been formulated and can be reacted to, and when decisions must be made.

C. Current Planning Process

The planning process is at a point of continual feedback. Goals and objectives were identified in preparing the WQM/COWAMP program, but dissatisfaction by the citizens committee can be seen, in part, as a re-examination of those goals in relating them to more local goals. Also, because the WQM is part of a larger set of regional goals (in the Year 2000 effort), goals are being constantly re-examined as they relate to other goals. One effect of WQM has been to force just this kind of regional examination of objectives, particularly for land use and growth policies for the different parts of the region.

Data gathering was completed mostly by the State, however, additional data is being collected and modeling completed in the area of storm-water pollution. Data collection of existing management, regulatory and financial institutions and authorities has only recently begun. Once this is completed, technical and institutional planning will continue in formulating alternatives that are both compatible and feasible. Feasibility will be determined, in part, by reaction of local elected officials and the public (through committees). Because alternatives have not been formulated, impact assessment has not begun. DVRPC expects to do considerable analysis of air quality impacts, and this analysis will provide continual feedback in reformulating alternatives.[1] Finally, plan approval and implementation will depend upon the degree of success in these earlier planning stages in achieving consensus of objectives, and in involving a wide range of interests.

D. Continuing Planning Process

There is such high commitment to this program by both the State and DVRPC that it is extremely likely that continuing planning will occur here. There is wide support by citizens for obtaining cleaner water. However, there is great hesitation about finding new sources of money to do this. It is not believed possible through DVRPC resources (which come from member governments), although a scaled down version would be possible. If this were the case, DVRPC role would be as an overseer of implementation. DVRPC does not have the legal authority for regulation and does not anticipate seeking it. The State does have such authority and is committed to using it.

E. Significance of Local Elected Officials' Involvement

Local elected officials are involved to a variety of degrees. The Water Commissioner, who represents the Mayor of Philadelphia on such matters, is actively involved in coordinating WQM with his department's 201 activities. The eight counties are on PAC and they are generally also on the DVRPC Board. Most of time send delegates, usually the Planning Board Director. The minor civil divisions (MCD's) are not considered essential to plan implementation. In general, local elected officials have not been very involved, despite efforts by the staff. It is believed that involvement will increase as time for more decisions comes closer.

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[1] There is some dissatisfaction that Region II has not approved similar air quality impact assessment for those parts of the program.

AGENCY: EAST WEST GATEWAY COORDINATING COUNCIL (EWGCC)

REGION: VII- (Kansas City, Missouri)

GRANT AMOUNT: $2,243,000

GRANT RECEIPT: May 23, 1975

STARTING DATA: January, 1976

STATUS AT TIME OF INTERVIEWS: The planning effort began in January, 1976, upon completion and acceptance of the work plan. The program is currently in the data collection phase.

REASON FOR INCLUSION IN SAMPLE: The area is representative of an urban-industrial environment.

I. BACKGROUND[1]

A. Area Description

The East-West Gateway Coordinating Council (EWGCC) is the designated regional planning organization for the Missouri portion of the St. Louis SMSA. The area covers 2,713 square miles. This includes the City of St. Louis, Missouri and the four surrounding counties of Jefferson, St. Louis, St. Charles and Franklin. The Illinois portion of the SMSA contains a contiguous WQM planning effort which is being undertaken by the Southwestern Illinois Metropolitan and Regional Planning Commission (SIMAPC). The Missouri study area contains approximately 65 percent of the SMSA land area and 77 percent of the SMSA population. St Louis is the eleventh largest SMSA in the country. The 1970 study area population is 1,827,635.

St. Louis City and County represent 86 percent of the population of the study area. The City of St. Louis is the only jurisdiction experiencing a decline (-17%) in its growth rate. Franklin, Jefferson and St. Charles Counties are predominately agricultural in land use, however, they are experiencing significant growth in industry and population. The area is characterized by a complex institutional setting with 244 general purpose units of government. The majority (152) of these jurisdictions are located in St. Louis county.

Population projections for the region indicate that approximately a 20 percent increase in growth is expected by 1995. If present trends continue, the majority of this growth will occur in Franklin and Jefferson counties.

Water quality is not a high priority issue in the St. Louis region. The Merimac River is exceptional, however, because there is a high level of citizen interest in its preservation for recreational uses. Rivers are a strong political issue with a high level of concern over institutional arrangements in developed area, and over the acquisition of services in rural areas.

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1 Information for this Chapter was taken from Water Uses in the St. Louis Region, EWGCC, 1976; Regional Water Quality Profile, EWGCC, 1976; and various interviews.

B. Water Quality Problem

The St. Louis region is located at the confluence of the Mississippi and Missouri Rivers. The Merimac River runs through the southern portion of the region before emptying into the Mississippi.

Water uses in the St. Louis region are varied. A primary water use is transportation, a large number of St. Louis industries utilize barges for shipping and receiving commodities. Recreation is a less frequent water use and is generally centered on the Merimac River. The use of water for recreational purposes has been steadily decreasing over the past 30 years. This is partially attributed to a worsening of the water quality. Other contributing factors cited were improved access to outlying areas, the disappearance of beaches and the absence of large lakes for motorboating. The primary industrial use of water in the study area is for cooling or condensing purposes. Sixty-six percent of wastewater discharged from industry is cooling water.

Both surface and groundwater are sources of water supply in the region. The St. Louis area has a growing water supply problem. Low flow periods currently jeopardize the present supply. Additionally, many of the undeveloped areas use septic systems on unsuitable soils. This constitutes a health hazard in many cases and is a threat to the preservation of the quality of the groundwater.

In addition to five water quality limited tributaries, there are a number of water quality limited segments on the Merimac River and Coldwater Creek. Standards violations for ammonia, dissolved oxygen and phenol occur. Non-point sources of pollution (agricultural and urban runoff, and combined severe overflow) threaten the 1983 goal achievement. A complex institutional setting adds to the burden of the water clean-up effort with over 400 existing sewage treatment facilities.

C. Designated Agency

The East-West Gateway Coordinating Council is a bi-state regional planning council established in 1965 for the St. Louis SMSA. The EWGCC has a membership of 128 general purpose units of government. Two WQM studies are being undertaken in the separate States. EWGCC is doing the Missouri portion and Southwestern Illinois Metropolitan and Regional Planning Commission is doing the Illionois portion.

EWGWCC is experienced in water quality planning. Major studies include:

- St. Louis County, Water Pollution Control, Phase II Areas Tributary to the Merimac River, (1972);

- 1995 Water Facilities Plan, (1974;
- Sub-regional Water and Sewage Planning, (1972); and
- 3(c) Water Quality Management Planning Study.

Programs at EWGCC which share a data base with WQM planning are HUD 701 and transportation planning. No coordination has yet occurred with Air Quality Planning because Illinois and Missouri have not decided how air quality planning is to be administered. EWGCC conducts other programs including solid waste, mass transit, health, A-95 review and air pollution. EWGCC also has a contractual relationship with the Corps of Engineers concerning data gathering in the Urban Studies Program. There is no comprehensive plan for the region. Program coordination and prevention of duplication are the responsibility of individual program directors.

The WQM staff consists of 11 professionals: the Project Director, the Project Coordinator, 3 Engineers, 2 Management Specialists, 3 public participation/information specialists, and 1 A-95 coordinator. One of the engineers is a part time consultant, whose major function at this time is liaison with Regional EPA.

There are three committees associated with the WQM effort. The Policy Committee is composed of the chief elected officials, water associated industry representatives and citizens (25%). This Committee is delegated major review and approval functions in the planning process. The Citizen Advisory Committee is delegated a review function. The staff stated that considerable and successful efforts were made to attract a varied representation of business, industry and environmental interests. The Technical Committee, assembled for previous work with the Corps of Engineers, is playing an advisory role in the WQM planning effort.

Two consultants, have been contracted for the duration of the planning period. They are involved in every aspect of the process. One firm is primarily responsible for nonpoint source, residual waste and municipal and industrial point source work. The other is primarily responsible for the management/institutional aspects of the study. The EWGCC functions include public involvement, project coordination, monitoring and facilities coordination. The State of Missouri has contracted for review and technical assistance.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

EWGCC is currently undertaking a water clean-up planning effort which emphasizes citizen input. A public information program and workshops are being actively used to educate the public and obtain local input on water goals, uses, problems and solutions. One priority of the study is to define alternative management systems which consolidate some of the 400 operating agencies in the region. Another priority of the study is to clean up the Merimac River for recreational purposes.

B. Technical Component

Consultants have been employed to do the technical aspects of the study. This includes point and nonpoint sources work and residual waste planning, however, the State of Missouri will be doing the nonpoint agricultural work in the study.

EWGCC is providing the land use and population data from previous studies. The primary addition by WQM planning will be aggregating the data on a watershed bases. The study places emphasis on the lower Merimac Valley because of its recreational value. The state data was reported to be somewhat helpful, but in need of refinement, especially the location of point sources of pollution. EWGCC is also doing some 201 Step I work for local areas in need of technical assistance. This element was written into the plan before EPA guidelines made 201 work ineligible.

C. Management Planning

EWGCC is presently conducting an inventory of approximately 25 existing management agencies. The size of the sample may be expanded depending upon the information gathered in the initial effort. Factors inventoried include: type of agency, facilities, capacity, operating characteristics, and institutional, fiscal, and legal arrangements. An additional survey of local ordinances and codes is also being conducted.

An unusual aspect of the St. Louis operating agency structure is the existance of private treatment companies. The Private companies are significant in both number and area served, and it has become difficult to coordinate the public and private roles in regional waste water management systems. There seemed to be a consensus that the role of the private companies would be diminishing, given the new emphasis on planning and coordinating wastewater treatment on a regional basis, and the increasingly active role of all levels of government in the wastewater treatment process.

The following alternatives are being considered in the management analysis: a bi-state system, various degrees of regionalization, the expansion of the role of St. Louis MSD, and individual county systems.

D. Public Involvement Program

EWGCC places great emphasis on an active public in the WQM planning process. The staff has designed a program to both educate and obtain input from the public. The public information and education program includes presentations (on request), newsletters, exhibits, technical reports, radio and television programs, and newspaper releases and articles. One publication, a citizens glossary of water quality terms, is published jointly by EWGCC and SIMAPC (East St. Louis WQM). Public input is obtained through committee meetings and workships. The citizens committee meetings have been well attended and the source of active input from a concerned group. In addition to the Citizens Committee, there is a Policy Committee, whose membership is 25 percent citizens. Seventy-five percent of this committee consists of local elected officials. Each county in the study area and the City of St. Louis is represented. Points for Committee approval are clearly indicated in the planning process. The EWGCC Board approval is scheduled for the end of the process because a portion of the Board is not involved in the study area.

The work plan schedules one workshop for public input on each phase of the planning process. The phase one workshop was held May 15, 1976. The purpose of the workshop was to gain input on water goals, uses and problems. The costs of alternatives were presented and public preferences were then tabulated. The workshop received a 10 percent acceptance rate on a mailing list of 3,500, however attendance was somewhat lower. The staff performed a careful analysis of the workshop for input into the planning process and refinement of the design of the next workshop. The second workshop is scheduled for mid-November and the third for mid-June. EWGCC also intends to employ a "town meeting" approach using television, in which people are encouraged to call in to ask questions and express ideas about water quality.

E. State and Federal Involvement

The State of Missouri presently has a locally based Liaison in a state regional office for the St. Louis WQM effort. The State office is presently understaffed, placing time constraints on the present Liaison. The state is looking for an additional full-time employee to fill the WQM Liaison position. The present Liaison spends approximately 15

percent of their time per week with WQM planning efforts.

Both the State and EWGCC agree that State input has been moderate to date. The State Liaison attends meetings frequently and keeps informed on progress of the planning effort. Other functions performed are reviewing contracts and reports, and providing technical advice. The State Liaison expects the State to take a more active role as the process continues.

Relations between EWGCC and the State of Missouri are friendly and supportive, and each is satisfied with the others activities to date. The WQM Director said, however, that more information about State water quality activities would be helpful to the local efforts. He also said that the State had been a good source of technical information, when available.

The Federal relationship, on the other hand, has been characterized by tension. The Executive Director and staff felt that there is a lack in overall program direction and little understanding of what EPA's final expectations will be. Additionally, there have been differing opinions on staffing and contracts. The staffing issue was that EPA wanted a more technically experienced staff. The contracts issue was caused by different approaches to the scope of service and consultant selection. The staff felt that EPA had caused significant and unnecessary delays in the process. These delays have created a discouraging work environment. The hiring of an experienced water pollution engineer, whose duties are to act as liaison with Regional EPA, has apparently contributed to smoother relations.

F. Scheduled Outputs

The EWGCC has a four-phased WQM planning schedule which begain in January, 1976. Phase I has been completed and consisted of defining the scope of work, preparing and letting contracts, holding workshop and preparing the Phase II work plan.

Phase II extends from June of 1976 to January of 1977. EWGCC is presently in this phase. Ten weeks have been allotted for preliminary data collection[1] and analysis and twelve weeks for developing a water quality model. Twelve weeks are then allotted for the development of our products scheduled for completion by mid-November, 1976. These are:

- Municipal and Industrial Alternatives,
- Nonpoint Source Alternative Analysis,

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[1] Water quality, waste systems, land use, environmental, demographic, economic and institutional data are collected.

- Residual Waste Disposal Alternative Analysis, and
- Institutional Alternative.

A recommendations report which compiles the above alternative analyses is the subject of discussion in the Phase II workshop, scheduled in November. The workshop will produce a final alternative selection report. The results of Phase II are then fed into a detailed Phase III work plan.

Phase III begins in January, 1976. Four weeks are allotted for final data collection which refines and augments the preliminary effort. Twelve weeks are then set aside for the analysis and development of final alternatives. This effort produces three final technical reports:

- Municipal and Industrial Report,
- Non-Point Source Report, and
- Residual Waste Residual Report.

These three reports are then compiled into a final report which is to be discussed in the phase III workshop. Plan selection is based upon workshop results and Policy Committee approval. Additionally, an environmental assessment will be prepared in the month of August. Phase IV, commensing in September, 1977, consists of four months for local, state and Federal plan and approval and the development of detailed monitoring and implementation procedures.

The staff of EWGCC stated that the planning effort was approximately four months behind schedule at the time of the site visit primarily because of delays in EPA approval. The staff was confident that much of the work could be made up during the planning period, however, an extension or deletion may prove necessary.

G. Achievements to Date

The WQM Director stated that the workshop approach is an innovative method for involving the public in the planning process. There was a high level of confidence that this approach was effective in terms of gaining public input and increasing the awareness and support for water quality issues. A thorough analysis of the workshop was performed which highlighted successes and improvements to be made in the format for the two remaining workshops. The staff also expects that the environmental impact matrix being developed for the environmental assessment will be a particularly useful product of WQM planning.

III. EXPECTATIONS

A. Water Quality

The major expectation for water quality clean-up in the region was in the recreational areas of the Merimac River. No one interviewed expected or wanted the quality of Mississippi or Missouri Rivers to improve as a result of WQM.

The EWGCC staff expected a water quality improvement in selected areas, and was placing a high priority on the technical work in the Merimac. The one local elected official interviewed was looking for a clean-up in the local streams in his small town area. The local appointed official felt that the Mississippi and the Missouri were clean enough and that the application of secondary treatment would not result in measurable improvement. This official concurred that the cleaning up of the Merimac was a top priority of the area. The citizens had a variety of expectations: one was looking for an insured water supply, another for the preservation of recreational waters, and a third for improved water quality resulting from stormwater controls. The State expected that improvements in facilities and treatment will result in improved regional water quality.

Most interviews did not expect to achieve the 1983 goals for a variety of reasons. The State liaison felt that the amount of available time was too short and that there was not enough money to solve existing problems. The Executive Director thought that the goals were unachievable in certain areas and that water quality decisions should be made on a balance of environmental and economic factors. The WQM Director thought the goals were undesirable for each stream, particularly the Mississippi and Missouri Rivers. These Rivers would only be swimmable and fishable at a prohibitive cost. One citizen did not comment, and the other two thought that the goals were achievable if the standards were not raised.

B. Plan Approval and Implementation

All interviewees seemed moderately optimistic about plan approval and implementation. Most thought that State approval would be easier to obtain than local approval. The local appointed official felt that if the WQM plan contained land use controls, it would have extreme difficulty passing in some counties. Comments on plan implementation included:

- EWGCC would not develop a plan that could not be implemented (208 Director),
- If EPA is forceful, the plans will be implemented (Executive Director), and

- Implementation depends on more money (citizen).

The local elected official, a citizen, and the State Liaison felt it was too early to comment.

The staff is presently conducting an inventory of 25 exisiting management agencies. It was considered to early to discuss the management alternatives; however, the role of MSD will be a crucial aspect of management planning. The staff expected some difficulties in working out acceptable arrangements with the private sewer companies. A few new State laws and local ordinances were anticipated for stormwater and erosion controls. The Merimac was considered a target area for controls because of the high level of interest in improving the water quality. No work has been undertaken to secure this legislation. It was considered too early to comment on the magnitude of funding needed to implement the WQM plan.

C. Continuing Planning Process

The WQM Director expected the continuing planning process to outline the impacts of future water quality decisions and to collect more data on which to support these decisions. He saw EWGCC as the likely body to do this planning. No estimates were given as to the cost of continuing planning; however, EPA was seen as the likely source of these funds.

D. Relation to Other Water Quality Programs

The staff at EWGCC, the State Liaison and the local an appointed official expected WQM to guide and set priorities for 201 planning in the future. For others, it was considered too early to judge what the effects of the increasing importance of WQM will be on 201.

In speaking of the relation of NPDES to WQM, the State Liaison expected a reduction in the number of permits because of the regionalization and enlargement of facilities. He considered it too early to discuss how NPDES would be coordinated with WQM. The WQM Director expected WQM to have a significant impact on permitting and thought the State would be revising permits based on input from WQM planning.

E. Local Definition of Success

A variety of definitions of success emerged ranging from making water quality a more visible issue to effective growth control. Both the State Liaison and the EWGCC staff included aspects of the plan in their definitions of success. The Executive Director looked for an approved plan that provided a basis for upgrading existing facilities. The WQM Director added that success would entail looking at these improvements

on a regional scale. He also expects more effectively functioning institutions and considers the fact that people will be thinking and talking about water quality to be a success.

The local appointed official hoped that WQM would develop controls for growth where growth is not practical. A local elected official also considered water clean-up for recreational purposes a success for WQM.

The preservation of potable and contact waters, and getting people to work together to solve water quality problems constituted a success for two citizens. Another citizen hoped for a mechanism for achieving control of point and nonpoint sources of water pollution that is both cost effective and environmentally sound. Benefits expected from WQM planning include improving recreational opportunities on the Merimac bringing water quality decision-making to the local level, and better local services for water quality control.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM staff was confident of their ability to innovatively and successfully achieve WQM goals for the St. Louis region. The staff viewed themselves as dedicated, politically astitute, and ready shape and improve existing institutional arrangements. There is a strong sense of the need for including a wide range of public participation in the decision-making process, and this is reflected in their study, design and the variety techniques for public involvement. The optimism for a successful effort seems partially due to the feeling that the political situation is ripe for the kinds of changes and improvements that WQM will be proposing. This is particularly true in regard to the issue of regionalization of wastewater facilities. The area is characterized by institutions which are not regional; however, most feel that a new sentiment for cooperative arrangements makes this an opportune time for WQM planning.

B. Citizens

Three citizens were interviewed. All were numbers of the Citizen's Advisory Committee and two were also on the Policy Committee. Two interviewees were members of the League of Women Voters in separate counties; one individual was an active environmentalist, while the other's interest centered on preserving the county water supply. The remaining citizen was an attorney who was interested in improving the environment and increasing public awareness of water quality issues.

All citizens were pleased with their input and the receptivity of EWGCC to date; but all stressed the importance of keeping the citizens involved in every step of the process. One interviewee discussed the importance of going beyond Committee input and developing imaginative ways to include the general public. He views the committee members as representatives of the citizenry because members eventually become so involved in the process that they loose sight of their roles as citizens. He felt a need for strong citizen education programs, preferably television and radio, that would begin to communicate water issues to the general public.

Another citizen was a resident of a rural county and wanted to insure that the county was included in the decision-making process of the region. Rational control of growth was a primary concern. She felt that the county had been fighting zoning, planning and regionalism for too long, and that the absence of controls was resulting in a depletion of natural resources and undesirable development. In her county, there is a group actively oppossing to WQM called the Citizens for Better Government. This group was vocal at WQM meetings, and had gained some momentum. She was optimistic, however, that WQM could make progress despite some of the opposition in the county.

A citizen from the City of St. Louis was concerned about local opposition to land use controls and thought that was a major obstacle to be overcome before plan implementation. She felt alternatives had to prove that it was cost effective to engage in WQM. She said that local elected officials were suspicious of WQM, but were involved to see what they could get out of it. If alternatives are convincingly presented with benefits and costs relative to WQM objectives, she hoped that the strong feelings for local autonomy would subside.

C. Local Elected Officials

The local elected official interviewed was the mayor of a small rural town - seven blocks in area. He had only recently learned of WQM planning, and had attended two meetings. His primary interests were cleaning up the streams of the area for swimming and obtaining sewers and services for his town. Presently, the city has open trenches which are served by a private sewer company.

The mayor was very pleased with the assistance from EWGCC, and hoped that WQM would lay out water quality alternatives for the city. He was currently not very familiar with WQM, but expected to become more involved in the near future.

D. Appointed Officials

The General Council for the St. Louis Metropolitan Sewer District (MSD) was interviewed for opinions on WQM. He had participated in consultant selection and had acted as a liaison with the Regional Office when problems arose. He sees regionalization and the expanding role of MSD as logical outgrowths of WQM planning, and feels the political sentiment is heading in the same direction. His role has been providing local elected officials with the implications of water quality decisions in their jurisdicitions. He feels the logic and benefits of the regionalization of wastewater facilities should win over the previous preference for local wastewater facilities. He hopes WQM will clearly delineate the water quality implications of growth and provide an impetus for accepting land use controls.

E. State Legislators

The State Legislator interviewed was not familiar with WQM, and stated that environmental issues are not a priority in the legislature. This was evidenced by the fact that the legislature's Environmental Committee was eliminated in 1973. He did think that WQM would have a difficult time getting land use control to pass in various counties because of strong opposition to such controls.

F. State Water Quality Personnel

The State of Missouri's St. Louis Regional Office provides the WQM Liaison for EWGCC. The Liaison and the Director of the Environmental Division of DNR were interviewed for opinions on WQM. The State's Regional Office is presently looking for a full time person for the Liaison position. The present Liaison is overburdened and spends 15% of his time on WQM. His functions include reviewing contracts and reports, attending meetings, and monitoring the planning effort. He saw WQM as a stepping stone for an ongoing institutionalized water quality planning process. The State input has only been moderate to date; however, the Liaison expected a considerable increase in the State role as the process continues and when the additional position is filled.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

There is little doubt among the staff that the plan will be completed. Although the planning effort is presently four months behind schedule due to delays in contract approval, the staff is confident that the work can be made up. However, the WQM Director indicated that an extension of time or compression of work elements may be necessary. The work plan also has built-in flexibility by allowing for refinement of the approach at the end of each phase. At this time, however, no major revisions are expected.

Although there is a high degree of optimism about plan approval, no one portends that it will be an easy task at the local level. The general feeling is that the political situation is opening up to regional concepts, although a plethora of locally based institutions are still in place. Difficulty can be expected in obtaining plan approval if land use controls are included in the plan. Most interviewees felt that the locals are not yet amenable to such controls. The staff intends to try pilot solutions to make sure they are effective before advocating region-wide land use controls. A careful reading of the local political barometers at the frequent points designated for input should provide sufficient indicators of what will be locally acceptable. The amount of optimism concerning plan approval may be justified with the program's heavy emphasis on public involvement. No problems are expected in obtaining State and Federal approval at this time.

Less difficulty was expected with plan implementation than plan approval. Most thought that EPA roles will become a crucial aspect of plan implementation. Both financing and sanctions (requiring 201 to conform) were considered necessary aids for successful plan implementation.

B. Public Involvement

The EWGCC has placed a strong emphasis on public involvement in WQM planning. This is reflected in both the number of staff (3) allocated for public involvement and the design of the work plan. The public involvement program has various components aimed at attracting the interest and input of a variety of groups.

The committee structure includes citizens on two committees. The Citizens Advisory Committee (CAC) is composed of representatives of a range of community interests. The Policy Advisory Committee (PAC), is composed primarily of local elected officials, and is delegated a major review and

approval function at key points in the planning process. Twenty-five percent of the PAC is composed of representatives of the CAC. In addition to what was reported to be active committee participation, there are three workshops designed to gather input from a large cross section of the general public. One workshop is scheduled at the end of each of the three phases for product review. The Phase I workshop was held May 15th, 1976. Although the attendance rate was not as high as the acceptance rate, the staff was, for the most part, pleased with the process and the results. A careful analysis of the workshop produced suggestions for refining the procedure in Phase II. The citizens who were interviewed displayed a working awareness of WQM which speaks well for public involvement efforts to date.

C. Current Planning Process

The EWGCC staff has clearly prioritized elements of WQM resulting in a realistic planning strategy for the two year period. Additionally, the work plan has a flexible design which includes ample allotment of time for defining, refining and evaluating alternatives. The Merimac River, a priority area, has been chosen for collecting technical data and defining pollution control strategies. All interviewees expressed a strong preference for upgrading the Merimac's water quality for recreational uses.

The staff's high level of confidence in their ability to tackle both political and technical problems, and the cooperative spirit evidenced in interviews, speak well for the planning effort. The staff's interest is further evidenced in weekly sessions held to discuss "what is WQM going to look like". The willingness to work toward institutional change and trying innovative solutions for existing water quality problems is a significant factor in the development of a plan that both meets its objectives and is responsive to concerns in the region.

The staff reported that considerable difficulty and delays had been experienced with the regional EPA since the beginning of the program. These difficulties were in the areas of contract approval and staff selection. The situation has improved somewhat with the hiring of a water pollution engineer who has been able to improve communications with the Regional Office. These early experiences have made this relationship particularly sensitive, however, and this factor could affect productivity as the planning process continues.

D. Continuing Planning Process

Little thought had been given to continuing planning at this stage in the planning process. Most persons felt the necessity to institute ongoing efforts, but had little notion of what these efforts would entail. The WQM Director did mention two functions: 1) to outline the impacts of future water quality decisions and 2) to collect data on which to base these decision. Additionally, EPA was seen as the likely source of funds for ongoing planning.

E. Significance of Local Elected Officials' Involvement

The site visit for the St. Louis WQM effort coincided with election week, resulting in unavailability of local elected officials for comment on WQM. One local elected official was contacted and was anxious to be involved in the WQM process. Unfortunately he had only recently become involved in WQM activities. Consequently, the involvement of local elected officials could not be assessed. Its importance, however, was recognized in interviews with the staff, and in the program design.

AGENCY: HOUSTON-GALVESTON AREA COUNCIL (H-GAC)

REGION: VI - (Dallas)

GRANT AMOUNT: $1,798,300

GRANT RECEIPT: June 6, 1975

STARTING DATE: April, 1976

STATUS AT TIME OF INTERVIEWS: Negotiating fine points of contracts; completed population projections.

REASON FOR INCLUSION IN SAMPLE: The Greater Houston Area is an intense and rapidly growing complex of urban and industrial activity. Operating within a pro-growth area traditionally opposed to planning and land use controls, the H-GAC's approach to WQM planning is particularly interesting.

I. BACKGROUND[1]

A. Area

The Houston-Galveston Area Council (H-GAC) was designated on April 22, 1975 as the WQM planning agency for the Greater Houston Area. The designated WQM area consists of Harris County and parts of five contiguous counties. The area is about one-fifth of the 13-county region serviced by the H-GAC, but has approximately 90 percent of the area's population. The City of Houston comprises between 60 and 70 percent of the WQM area, with the extra-territorial boundaries of the city nearly coterminous with the WQM planning area. The Greater Houston area is rapidly growing and the current population is estimated at 1.9 million people. The area is known as the nation's energy capital, with the world's largest petro-chemical complex, and the third largest port. Although a sprawling urban-industrial center, the area also supports agricultural activities such as rice farming.

All interviewees generally agreed that the prevalent attitude in the Greater Houston Area is pro-growth and cited the fact that the area traditionally has had no comprehensive land use controls. Two citizens noted the area's lack of any publicly stated intent regarding growth policy.

B. Water Quality Problem

Water quality issues are framed in terms of the area's intense urban-industrial complexion. Three hundred industries discharge directly into the receiving waters of the WQM planning area and 7,000 industries discharge to municipal systems. The H-GAC Environmental Manager indicated that there is a proliferation of small domestic wastewater treatment plants, with 300 to 350 active water districts authorized to build sewer systems. He also noted that the area's unsequential growth has precluded the feasibility of regional facilities. However, the Gulf Coast Waste Disposal Authority (GCWDA), created by state legislation, has taken over a number of small treatment plants in Harris, Chambers and Galveston counties. The GCWDA also has the authority to service contiguous counties.

Intense industrial activity is located along the Houston Ship Channel, which also receives Houston's domestic discharges and drainage from an area contain- about 50 percent of the Greater Houston Area population. Most interviewees believed that the WQM project's focus on the Ship Channel was due to its impact on Galveston Bay. The Ship Channel feeds into the Bay, which supports shrimp hatcheries, sport fishing and other recreational activities. Galveston Bay, however, is not included in the designated WQM area due to its

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[1] Information in this Chapter was taken from the Project Design Report, April, 1976; and interviews.

extensive study under other funding sources. Two WQM advisory committee members (a Houston City Councilman and an industrial engineer) stated that examining the Ship Channel was pointless, as its transportation use and location among heavy indistry rendered "fishable, swimmable" goals undesirable. The H-GAC Executive Director generally agreed with this statement and strongly recommended the Channel's reclassification.

In addition to the Houston Ship Channel, the WQM project will investigate the problems of Lake Houston and the potential impact of future development in the rapidly urbanizing Lake area. The Lake is a major potable water supply for Houston as well as a major recreational center, attractive to new suburban development. The WQM staff noted that a study of excessive Lake algae, growth and eutrophication was not completed due to insufficient funds.

The area's nonpoint source problems involve drainage into the Ship Channel, Lake Houston, Clear Creek, Spring Creek, Cypress Creek, the lower San Jacinto River, eight bayous and several receiving waters. Pollutant sources include urban runoff, septic tanks, bottom deposits, injection wells, shipping and dredging, brine disposal, salt water intrusion, construction and solid waste disposal. In addition, the study will analyze agricultural contributions from irrigation return flows, plant nutrients, sediment and confined feeding.

Interviewees cited three problems related to the water quality issue: sludge, subsidence and water supply. Two engineers believed sludge, or residual wastes from wastewater treatment plants, had direct and sizeable cost implications for alternative disposal methods. As area soils are not suitable for land disposal, a GCWDA engineer noted that sludge disposal comprised 60 percent of GCWDA operating costs. Subsidence, or the lowering of land surface elevation by groundwater withdrawal, is a phenomenon occurring in the area. Subsidence potentially causes damage and flooding of sewerage systems and salt water intrusion. Water supply in the Houston area is limited, and, as the Texas Water Quality Board (TWQB) Planning Chief noted, affects the area's growth potential. An engineer who served as the WQM Technical Advisory Committee (TAC) Chairman, felt that the water supply/water quality relationship was generally not recognized or sufficiently emphasized by the WQM program.

The WQM staff as well as several other interivewees hesitated to prioritize the area's water quality problems. The WQM Physical Planning Director expected prioritizing problem areas ot be a later stage of the WQM process. The citizens felt that problems were interlinked insofar as "everything ends up in Galveston Bay." However, they stressed the nonpoint source problem because it is the least recognized and controlled, and they felt that the WQM project should address nonpoint concerns as the local agencies would not, due to the growth constraints which nonpoint source controls imply. A GCWDA official felt that nonpoint sources were larger offenders than point sources.

Other interviewees commented on the overall importance of the water quality problem. A Houston City Coucilman and industrial engineer felt that the nonpoint source problem was "not as great as some believe," and that most

people were not aware of the extensive industrial cleanup already achieved along the Houston Ship Channel. They voiced opposition to more studies and plans, and were generally not in favor of the WQM program. Their comments were that the program is "a waste of resources as there is mandated treatment regardless of further requirements" and "another Federal boondoggle."

Although most respondents considered area awareness of the water quality problem to be low, a local elected official active in environmental planning felt that water quality was in the upper 25 percent of environmental concerns, especially along the Gulf Coast, and that people are well aware of untreated sewage in water courses. He also felt that area water quality concerns focused on contact recreation uses and water supply, including irrigation.

C. Designated Agency

The Houston-Galveston Area Council (H-GAC) is a regional council of governments serving the thirteen counties of the Gulf Coast Planning Region. Organized in 1966, the H-GAC has over 100 member governments including 13 counties, 62 cities, 18 school districts, 11 soil and water conservation districts, the San Jacinto River Authority and the Gulf Coast Waste Disposal Authority.

Other H-GAC regional planning functions include transportation, solid waste and HUD 701 comprehensive planning as well as areawide public services. The cross-correlation of H-GAC planning activities is assisted by computerized demographic data and other research department functions serving all H-GAC divisions. H-GAC's experience in water resource planning includes: an eight-county regional sewer study (1970), a 13-county waste treatment management study, a water supply study for Houston-Galveston, and rural water and sewer plans.

Other plans or activities in the area relate to the WQM project. These plans include the San Jacinto Basin Plan, the Galveston Bay Project, and Houston master plans. Water quality-related agencies serving the area include the Harris-Galveston Coastal Subsidence District which has been operating since 1975. The San Jacinto River Authority, the Gulf Coast Waste Disposal Authority (GCWDA), and the City of Houston also perform water quality functions.

The Director of the Physical Planning Department of the H-GAC is the official WQM Project Manager. Within the Physical Planning Department, the Manager of the Environmental Division is responsible for overall WQM administration and coordination off all environmental programs in conjunction with A-95 review. The Environmental Coordinator coordinates technical and management planning efforts by subcontractors and within H-GAC. In addition to the ten staff members of the Environmental Division with WQM responsibilities, H-GAC Community Planning Division staff are involved in coordination, land use projections and overall WQM mapping requirements.

Taking a team approach to the WQM project, each of the non-management staff is designated as a contact person for a work area, with back-up assignments to ensure continuity, and is responsible for managing the relevant subcontracted elements. Presently, H-GAC has awarded seven separate subcontracts to consulting firms. In addition, the City of Houston is providing a water data base inventory and the Gulf Coast Waste Disposal Authority (GCWDA) has primary subcontract responsibility for the sludge inventory and the solid waste impact study. The GCWDA is coordinating the subsidence study with the Harris-Galveston Coastal Subsidence District. The Texas Water Quality Board is proficing simulation modelling at no cost to the project. The TWQB is also providing technical and informational assistance under a $72,000 state participation contract as required by the TWQB.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

According to the WQM staff, the H-GAC WQM planning project is designed as an ongoing planning process, and focuses on the development of basic methodologies which allow continual reassessment of the overall program, and which is adaptable and available to any eventual management agency. Developing the process (rather than producing a static plan) is a central aspect of the H-GAC effort.

The WQM Project Director summarized his expectations for a successful project as bringing together the Act's intent with a locally acceptable mechanism. He added that, to enable informed decision-making regarding the extent of and strategy for water quality improvement, a strong and credible technical base was essential. In his view, the program must thoroughly identify and communicate to the public the cost/benefit tredeoffs involved in selecting WQM strategies. Further, in their "best management practive" approach to nonpoint sources, the WQM staff felt that a strong data base was necessary to justify monetary expenditures.

Due to time and funding constraints, the WQM Project Director and two staff members agreed that WQM planning would fall short of a comprehensive effort. They believed coordination with a solid waste disposal and air quality planning was necessary, as well as impact and economic assessments and sludge analysis. Further, they noted that the area does not have a regional or comprehensive plan with which to coordinate the WQM project.

Exhibit I shows the general program structure. In organizing the work program, H-GAC divided tasks into 14 separate work packages which are defined as a set of related tasks to be accomplished by a single agency or consultant. The WQM project staff noted that they adopted a team approach to monitoring and coordinating tasks and made decisions together regarding the direction of the program. Each staff member is assigned lead responsibility for work elements with backup assignments assuring continuity.

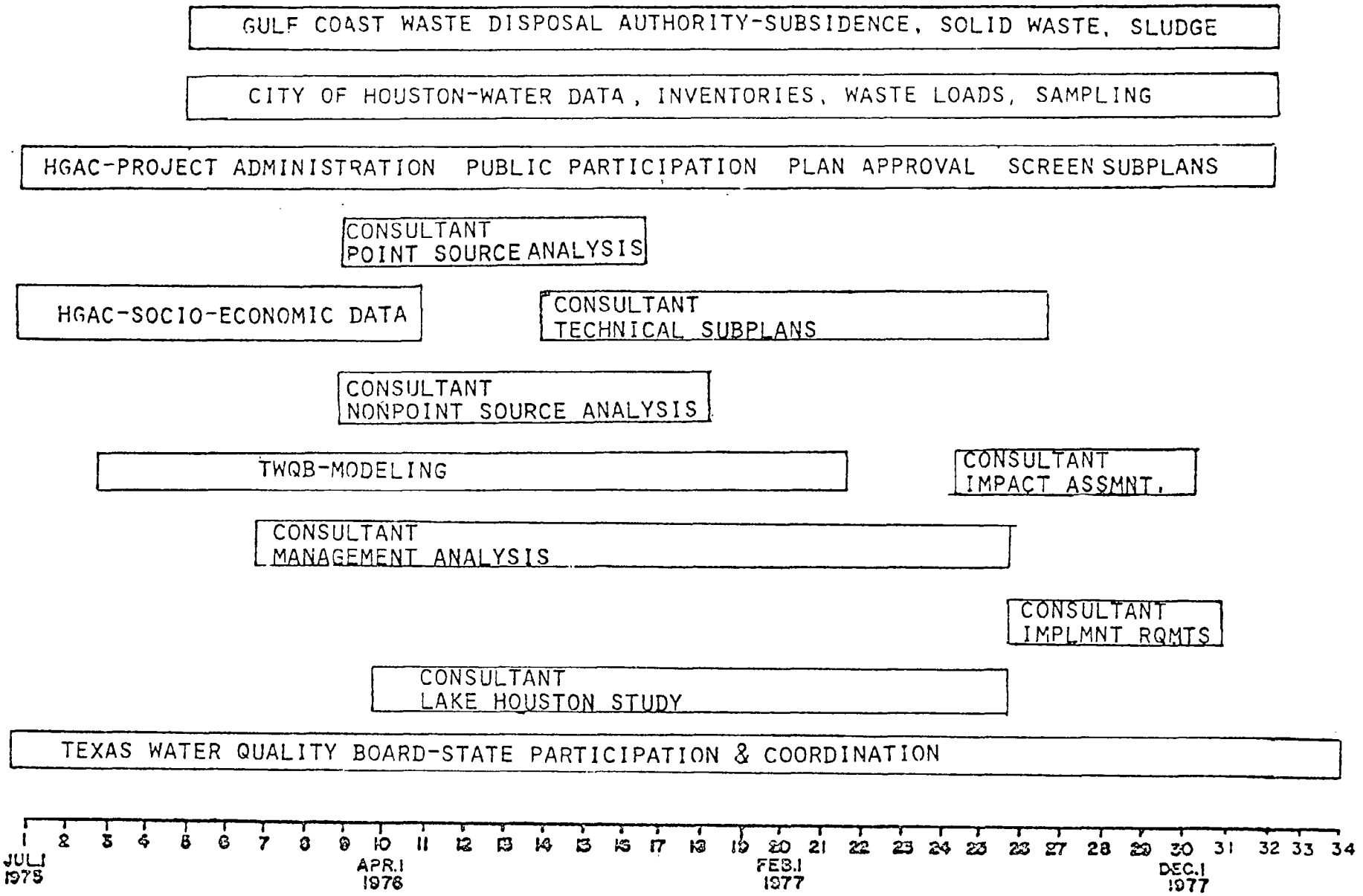
B. Technical Component

H-GAC is developing a technical base which the WQM staff believes can be applied to any adopted level of management. Technical outputs will feed into the criteria for selecting management strategies and agencies.

Technical planning responsibilities are divided among a number of agencies and consultants, as shown in Exhibit I. Water data and inventories relating to point source analysis will feed into a complete point source data base

Exhibit I

208 Program Structure - H-GAC



Source: Houston-Galveston Area Council, Project Design Report for the Areawide Waste Treatment Management Plan for the Greater Houston Area, April 15, 1976, p. 3.

and a detailed handbook of point source control strategies, cost and impacts will be developed. Nonpoint source analysis will provide a preliminary assessment of the pollutant loads contributed by urban stormwater runoff, septic tanks, agricultural and silvicultural activities, construction activities, injection wells, shipping, oil field waste disposal, salt water intrusion, dredging and bottom deposits. On the basis of existing information, a sampling program will be designed including sampling points identified as receiving contributions from one quanrifiable source. A nonpoint source handbook describing structural and non-structural strategies, costs and impacts will also be developed.

As indicated in the Work Porgram, the consultant responsible for developing alternative technical subplans will analyze point and nonpoint source information by water quality segment in order to determine preliminary standards. The WQM staff noted that the technical sub-plans will generate alternative point and nonpoint source control strategies resulting in varying levels of water quality. With attendant cost/benefit tradeoffs and impacts identified, the optimum sub-plan selection will be a combined effort of the area's key local agencies, WQM adivsory committees and public hearings.

C. Management Planning

At the time of the interview, the subcontract for the management analysis work package was still being negotiated. The consultant will inventory the existing legal authority and financial capability of existing WQM agencies and local authorities. Ultimately, the consultant will develop a set of alternative WQM systems and present their advantages and disadvantages in terms of political, social, economic and environmental impacts. The WQM Project Director noted that the public participation program would provide a vehicle for "receptivity testing" of the management alternatives.

A second consultant will develop implementation requirements of the WQM program and will integrate technical and management recommendations into a cost-effective plan. This consultant will begin work before finalization of technical and management systems and become familiar with the various methodologies. For both technical and management components, the consultant will detail the procedures for implementation in a step-by-step process including a construction, operating and monitoring schedule and costs, as well as chronological breakdown and allocation of responsibility for legislation, local ordinances, agency reorganizations and intergovernmental agreements. The work package includes provision for the continuing planning process.

D. Public Involvement Program

The WQM advisory committee structure is a major aspect of H-GAC's public involvement program. In keeping with Executive Order 18, members of the Planning Advisory Committee (PAC) were appointed by the Governor and the

Committee is comprised of various interest groups. However, the WQM Project Director noted that the PAC was weighted toward business interests, and had few environmental representatives and only four local elected officials. Generally, elected officials are more indirectly involved by their participation on the H-GAC Executive Committee, the areawide policy-making body. Although the H-GAC Executive Committee is the final decision-making body in regard to WQM planning, the staff noted that only 10 of the 27 Executive Committee members represent the designated WQM area.

Assisting the PAC in its overall review responsibilities are the Technical Advisory Committee (TAC) and the Citizens Advisory Group(CAG). The TAC members were appointed by the H-GAC Executive Committee members and generally are local operating agency officials. As described by two citizens serving on the CAG, the CAG evolved from the initiative taken by citizens attending the H-GAC's preliminary WQM information workshops. The CAG received official Planning Advisory Committee recognition and is regularly allocated time on the PAC meeting agenda. With H-GAC financial support, the CAG operates as an open forum under its own structure and procedures. Attendance at monthly PAC meetings ranges from 20 to 40. Minutes of the meetings, synchronized with PAC sessions, are distributed to PAC members, The CAG has established 12 subcommittees according to work element areas and presently has been assigned by the PAC to develop program goals and objectives. The CAG has conducted a preliminary mail survey of water quality goals toward this end.[1]

The WQM project staff believed that the H-GAC Executive Committee has final decision-making authority over the WQM process and were concerned with the role of the advisory committees. The PAC, TAC and CAG do have considerable review responsibilities. The Outputs Review Process, shown in Exhibit 2, indicates the items subject to full review and the steps of the review process. Other items may be selectively submitted to the TAC for review, such as the Sludge Inventory or Subsidence Report. Working through the public participation effort, the WQM Project Director feels that "receptivity testing" regarding management alternatives may be achieved. Two citizens, however, stressed a stronger role for the CAG and were concerned that interest groups participated in the program to protect their particular interests and in so doing, "may subvert the intent of the program."

Other aspects of the H-GAC public participation program include a WQM brochure, a monthly newsletter co-authored with the Citizens for Environmental Action, workshops and public hearings, and an "open office" concept. The work plan itself was written such that the initial explanatory chapters can be used for lay distribution.

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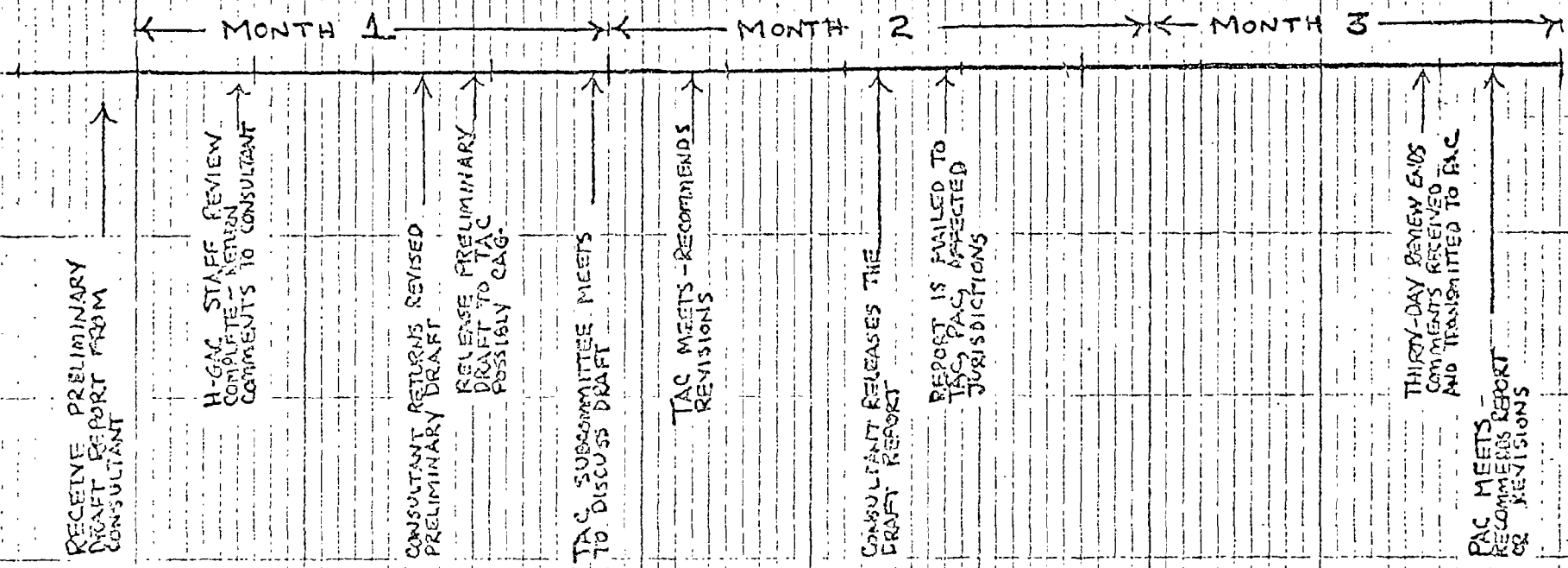
1 The survey questionnaires were sent to persons having previously made inquiries about the H-GAC program.

EXHIBIT II

CRS 7-15-76

GREATER HOUSTON AREA 208 PROGRAM – PLAN OUTPUTS REVIEW PROCESS H-GAC



Source: H-GAC WQM staff.

DOCUMENTS RECOMMENDED FOR FULL REVIEW:

- POPULATION AND LAND USE
- NONPOINT SOURCE ANALYSIS REPORT
- POINT SOURCE PROBLEM DEFINITION REPORT
- ALTERNATIVE TECHNICAL SUBPLANS REPORT
- MANAGEMENT ASSESSMENT REPORT
- BROAD MANAGEMENT OPTIONS REPORT
- FINAL TECHNICAL SUBPLANS REPORT
- MANAGEMENT SYSTEM ALTERNATIVES REPORT
- IMPLEMENTATION REQUIREMENTS REPORT

E. State and Federal Involvement[1]

The TWQB and EPA Regional office have a close relationship in working with the designated WQM agencies. The TWQB was named the lead agency in reviewing and monitoring the local efforts by a two-party agreement between EPA and the TWQB.

The WQM staff noted that EPA's involvement is limited by lack of staff. Only two project officers serve the entire State. Nonetheless, the WQM staff felt that they had a good working relationship with the EPA Regional Office and were impressed with the coordinative effort shown within the Regional Office. The WQM staff did not expect or desire detailed guidance from EPA, as they felt that program interpretation should be locally oriented.

The State is a major participant in the designated WQM projects. Executive Order 18 established that the Governor appoint members to the planning advisory committees and designated the TWQB as the state reviewing agency. The TWQB was also charged with the responsibility for developing criteria and procedures in the form of State guidelines which are binding on the designated WQM planning agencies. The TWQB also monitors compliance with the guidelines including review of detailed workflow charts to determine whether WQM planning agencies are on schedule and whether they understand their tasks. The WQM Project Director and two staff members believed that the State has been "dictatorial" in imposing constraints without recognizing local problems or the local nature of the program. The TWQB determines what must be contained in the work plan, reviews contracts and requires continual update of network diagrams for monitoring purposes. Two WQM staff members noted that changes in the chart require six man-days and divert staff from their regular duties. The WQM staff also cited contract delays resulting from TWQB review procedures and estimated six weeks as the average TWQB "turnaround" time for contract review.

In addition to a sampling and modeling contract, a State participation contract for $72,000 was required by the TWQB for review and technical assistance. The WQM staff felt that review and technical assistance services should be provided as a matter of course. The WQM staff also noted that the State liaison person assigned to H-GAC also serves another large WQM project and consequently has insufficient time to adequately respond to H-GAC's technical assistance needs. The WQM staff and two citizens noted that coordination among State agencies was not evident nor were State inter-agency relationships clearly defined.

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[1] The portion of this section on State Involvement is expanded in Chapter IV F, on Varying Perspectives of WQM.

The TWQB Planning Chief noted that State involvement was necessary to assure the compatibility and consistency of WQM planning in designated and nondesignated areas. State WQM planning in nondesignated areas is proceeding concurrently with the designated WQM planning projects. Due to time constraints for both State and local processes, the TWQB Planning Chief noted that the designated WQM plans will not be incorporated into the present State planning effort, but will be embodied in the State Plan update. She also believed that, with ongoing State involvement, theyr merger should not present any problem.

The TWQB Planning Chief observed that the H-GAC WQM project was one of the two designated agencies having the most difficulty with the program.[1] She felt that these two agencies were having difficulty adapting their strategies to the time allowed and approaching the task as one of "short action response-revition."

F. Scheduled Outputs

The work plan indicates that 30 reports are scheduled to present areawide results, conclusions and recommendations. The list of reports and expected completion dates is shown in Exhibit III. The WQM Project Director felt that interim reports "forced the agency to get something out and accepted," and generally to be accountable to the process to date. He expected the final product to consist of sub-product summaries including technical base reporting, the WQM process and issues, "the state-of-the-art," and would culminate in a series of policy alternatives and their impacts.

G. Achievements to Date

The WQM agency is currently revising its interim population and land use projections for publication. Revision was necessitated by the figures' incompatibility with Houston's construction grant program currently in progress. A draft report on subsidence and its related effects on wastewater collection and treatment facilities had recently been completed.

Although funded in June, 1975, the WQM project received its start date in April, 1976. The WQM staff noted that the work plan required 10 months, although originally scheduled for only two months and, at the time of the interview, EPA had not yet approved the work program. Contract negotiations have required over four months, and several points are still being negotiated.

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1. The other WQM agency was the Lower Rio Grande Valley Development Council (LRGVDC).

EXHIBIT III

PLAN OUTPUTS LIST
H-GAC

Activity #	Document/Report	Release Dates Draft	Final
4	Steady State Sampling Program Design Report	9/75	10/75
4	Steady State Sampling Data	---	3/76
	Project Design Report	11/75	4/76
15	Water Uses and Supply Report	7/76	8/76
8	Interim Land Use/Population Projections	5/76	7/76
7	Municipal Projection Methodology	6/76	7/76
3	Point Source Inventories	5/76	7/76
5	Sludge Inventory and Report	3/76	5/76
10	Steady State Models Available	---	6/76
6	Existing Water Quality Data and Report	7/76	8/76
9	Waste Load and Water Use Projections	---	8/76
13	Solid Waste Inventories and Report	5/76	8/76
14	Subsidence Maps and Report	6/76	8/76
15	Point Source Control Strategies	8/76	1/77
15	Point Source Problem Definition Report	11/76	1/77
16	Nonpoint Source Control Strategies	7/76	7/77
17	Segment Analysis Report	12/76	11/77
16	Nonpoint Surce Problem Definition Report	10/76	2/77
17	Technical Subplan Alternatives	---	3/77
18	Updated Land Use/Population Projections	4/77	5/77
27	Water Quality Data Management System	---	5/77

Activity #	Document/Report	Release Dates Draft	Final
21	Alternative Management System Report	---	8/77
19	Lake Houston Study Report	8/77	10/77
21	Management System Recommendation Report	9/77	11/77
17	Technical Subplan Recommendations	6/77	11/77
17	Technical Subplan Implementation Requirements	9/77	11/77
24	Nonpoint Source Sampling Data	5/77	2/78
22	Impact Assessment Report	12/77	2/78
23	Implementation Requirements Report	1/78	3/78

Source: Houston-Galveston Area Council, Project Design Report for the Areawide Waste Treatment Management Plan for the Greater Houston Area, April 15, 1976, Table III (2)-12.

As a consequence, the project is already two months behind. This situation has required H-GAC to reassess priorities and drop certain important items, such as the Lake Houston Study and dynamic modeling work tasks. The H-GAC Executive Director was concerned that the project may not be completed in two years, but the WQM staff believed that some final plan would be produced on time, although its quality and credibility may be constrained by insufficient analysis.

For monitoring task schedules, the TWQB required H-GAC to submit and continually revise detailed workflow charts. The WQM staff felt that workflow chart revisions were time-consuming and diverted attention from regular tasks.

Although the program is only recently underway, the WQM project staff cited several achievements:

- The public participation program had succeeded in making the WQM process visible and in establishing two-way communication.
- The level of State cooperation is better than that achieved in other programs.
- The WQM staff teamwork approach with backup assignments was a valuable agency achievement.
- The project design as a flexible, ongoing process, rather than a static plan, provided basic methodologies adaptable to any eventual management agencies.

III. EXPECTATIONS

A. Water Quality

There was general agreement that the WQM efforts would effect some degree of water quality improvement, although most believed that the effort would not achieve improvement as quickly nor to the levels expected by EPA. No one expected that the area would achieve the 1983 goals, although the TWQB Planning Chief believed that goals would be achieved where attainable and the WQM process would define areas where goals were not attainable. Several interviewees, including a local elected official and an engineer, believed that industries along the Ship Channel had already achieved substantial cleanup and expected further improvement to be marginal.

B. Plan Approval and Implementation

Most interviewees, including the WQM project staff, expected that the plan would be approved locally if the plan reflected local preferences. The H-GAC Executive Director noted that, although local governments had accepted the WQM responsibility collectively, most were retaining a policy of "watchful waiting" and were reserving judgment on the plan until it is completed. A county official noted that not all local elected officials agreed on the WQM program and the H-GAC Executive Director believed that the H-GAC Executive Committee's proportional voting system would pose potential problems for plan approval.

The WQM project staff believed that an extensive amount of time was required for the plan review process to adequately involve the local public agencies and officials, and to gain their support. The staff also felt credible data was essential to the plan's acceptability. Both the thoroughness of the data and the review process were seen to be limited by the program's time and funding constraints.

State involvement in the H-GAC WQM program and State approval of the completed plan were cited as potential problems by most interivewees. Most interviewees expected that a plan reflecting local preferences would meet neither State nor EPA approval requirements. In addition, an appointed official and two citizens were concerned that State intervention in the WQM process may cause a plan to be produced which is not locally acceptable, particularly if the plan contained elements affecting land use.

The TWQB Planning Chief felt that, if properly executed and documented, the State would support approval of the WQM plan to the extent possible. However, the TWQB has the responsibility for determining whether the designated WQM area plan is compatible with overall statewide interests and cost/benefit tradeoffs.

Interviewees were asked to speculate on the outlook for plan implementation. Views were generally mixed and interviewees couched their expectations in terms of the implementation constraints which they foresaw.

- The WQM project staff believed that some aspects of the plan would be implemented, but did not know the extent or time period, and felt that this would depend on the recommendations and funding availability.

- Most interviewees cited the program's time and funding constraints as hindering the plan's analytic depth and credibility. The WQM project staff also believed the limited time available for the plan review process may result in a weaker plan which would be difficult to implement.

- Several interviewees noted that implementation problems related to the land use implications of the program, local attitudes of autonomy, antagonism concerning State and Federal controls and cost tradeoffs among water quality objectives. One City Councilman believed that the WQM program was a "backdoor" approach to controlling land and other resources, which he did not favor.

- Several interviewees commented on the general level of interest in water quality efforts. Most agreed that there was a low level of awareness, although the H-GAC Executive Director believed that there was a general acceptance that "something must happen." Two citizens believed that economic interest groups would oppose the plan or work within the planning process to subvert the WQM program's intent. A local elected official believed that some counties were not as interested in the WQM project as others.

Expectations for likely management agencies focused on a strong preference for local control. Two citizens were concerned that the State may assume management functions. The WQM staff did not know the ramifications of the fact that the City of Houston's extra-territorrial jurisdiction nearly coincides with the WQM area boundaries and the city council has recently passed unlimited annexation laws. The Gulf Coast Waste Disposal Authority may be part of a consortium of management agencies, but generally, implementation was expected to occur through general purpose governments.

The TWQB Planning Chief expected, due to time constraints, that very few new implementing authorities would be established by 1978. All State level interviewees noted the political unreceptivity to regionalism. The TWQB Planning Chief expressed the need for innovative approaches to management, rather than State-imposed regional systems.

There was general agreement at State and local levels that no legislative needs had been specifically identified. The State is currently identifying existing legal constriants and H-GAC has subcontracted for legal analysis as

part of the management analysis work package. However, several State and local interviewees commented on the existing and required new authority to implement the WQM plan. As presently there are no zoning, permitting or flood plain controls beyond municipal jurisdiction. The TWQB Planning Chief suggested the need to expand county authority and strengthen municipal extra-territorial jurisdiction. County authority is weak with present controls limited to regulating private sewage facilities, e.g., septic tanks, causing pollution or injury to the public health. The WQM project staff expected flood control-related programs to contribute some controls (e.g., flood insurance). As noted by the WQM Project Manager, 14 of the area's 40 municipalities, including Houston, have not instituted zoning. However, the WQM Project Director did not see zoning as necessary, but rather emphasized the need for policies addressing the land use-water quality interface and coordinating growth and capital improvements programming.

All sources mentioned the anti-planning attitudes prevalent in the State. One State legislator called the Texas policy one of "unfettered growth". He stated that the basic problem of the WQM program rested with the fact that there are "no basic rudiments of land use regulatory power to implement 208". The TWQB Planning Chief, as well as an official in the Governor's Office, felt that an aim of the WQM process was to develop an innovative management system, built upon existing authority such that extensive legislation would not necessarily be a prerequisite to implementation. Land use controls have not been authorized by State Statute except on a very limited basis, i.e., to municipalities. Thus, according to the State's Continuing Planning Process, "land use controls on a general basis are contrary to present state policy" and "water quality management planning shall take full advantage of existing authority and administrative capabilities".[1] Further, the TWQB is granted broad police powers under the Texas Water Quality Act to "implement all plans necessary to the Continuing Planning Process required by P.L. 92-500".

No legislative contacts have been initiated by the State or H-GAC. The TWQB Planning Chief regarded such contact premature. One legislative staff member felt that the WQM program would produce plumbing rather than innovative solutions, and, as such, it would not require additional authority for implementation. A State Senator as well as two legislative staff members indicated that most legislators were not aware of the WQM program.

State officials interviewed noted that, should legislation be required, the earliest realistic date for consideration is January, 1979, as the Texas Legislature meets biennially. It was generally felt that legislation during the January, 1977 session was not feasible. A Governor's Office staff member noted that the timing of the WQM program did not allow for a "gap" between plan completion and any enabling legislation required.

C. Continuing Planning Process

Most local interviewees expected some form of planning process to continue after the initial planning period. One local elected official did not favor continuation but expected the process to continue. The H-GAC Executive

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[1] Texas Water Quality Board, The State of Texas Continuing Planning Process, April, 1976, p. 6.

Director expected the continuing planning process to be part of regional planning activities which would include plan updates, monitoring and planning for enforcement. Other interviewees were less clear as to who should perform the continuing planning function. One citizen did not favor a "super-agency" to have this responsibility and two citizens expected that, if the State funded continued planning, the State would also control the program.

The TWQB Planning Chief believed that the continuing planning process will largely be a State responsibility and would consist of: (1) the verification of signficant nonpoint sources and controls, (2) preliminary screening and statistical collection of data regarding the biggest problems, and (3) an emphasis on facility planning in order to provide an adequate basis for the construction grants program.

The WQM project staff estimated that $225,000 per year would be required for ongoing planning and preferred local funding sources. However, the WQM project staff, a State official and other interviewees expected funding from a mix of Federal, State and local sources. The WQM project staff noted that no funding commitments had been sought or obtained. The State legislative branch interviewees believed that the Legislature was not adverse to appropriating funds for water quality efforts.

D. Relation to Other Water Quality Programs

The local interviewees did not know the future relationship between the WQM project and the construction grant and NPDES permit programs. The H-GAC Executive Director expected the WQM plan to provide the basis for the two Federal programs, but three citizens did not expect the WQM plan to have any impact. One of these citizens was an engineer who believed treatment was mandated regardless of the WQM plan and did not expect the WQM plan to alter State and Federal requirements.

The TWQB Planning Chief viewed the helpfulness of the WQM program to depend on the depth of the analysis, i.e., systems work. In regard to the WQM plan's impact on the NPDES program, the TWQB Planning Chief expected the designated WQM plans to establish sound objectives in areas not meeting 1983 goals and to provide a basis for revised wasteload allocations.

State and local interviewees agreed that WQM planning should have preceded the construction grants and NPDES permit programs. The WQM project staff viewed the extensive number of existing of ongoing construction grants projects to preclude the feasibility of WQM recommendations for regional facilities. Two citizens felt that the construction grants projects were "dictating" WQM planning. Moreover, the WQM project staff saw the local ongoing facility planning efforts as based on population projections which differ somewhat from regional projections. The staff also noted that the population projections of the H-GAC WQM project and the City of Houston construction grants project differed in their growth assumptions. Ultimately, H-GAC supported the City of Houston's figures and revised its projections accordingly.

The WQM project staff believed that their extensive and costly review activities should be an allowed WQM project expense in view of their A-95 review responsibilities and the State directive to incorporate all construction grants projects in the area and review discharge permits in cooperation with the TWQB. They noted that the EPA Regional Officer did not currently allow such billing to the WQM project.

E. Local Definition of Success

Most interviewees were asked to state their definition of a success for the WQM planning effort. The WQM Project Director, an appointed official and an industrial engineer generally defined success in terms of a plan which is locally acceptable. The WQM Project Director expanded his definition as bringing together the Act's intent with a locally acceptable mechanism, and developing a cridible program which allows public understanding of the tradeoffs involved. The H-GAC Executive Director believed that success would constitute public and private sector acceptance of the Act's imperatives and commensurate action. Other interviewees offered the comments listed below.

- Two citizens defined success as developing a rational management system including some consolidation of local agency responsibilities and establishing future necessary or feasible actions.

- Two local elected officials did not know what may comprise a success, one city councilman generally viewed the program as "another Federal boondoggle".

- One citizen believed a successful project would produce better information, increased awareness of, and some impact on, the water quality problem.

- The State Water Quality Planning Chief felt a successful WQM project would clarify needs for data regarding treatment systems, develop realistic objectives and identify the origin and solution to water quality problems.

Interviewees also mentioned direct and indirect benefits they expected from the WQM planning effort. The WQM Project Director expected a direct benefit of increased public appreciation of the pollution problem, its causes, and its technically and economically feasible solutions. Indirectly, he expected a benefit to result from the increased extent of involvement, cooperation and communication among all area authorities and levels of government regarding the WQM planning program. Two citizens felt that the WQM project's examination of the nonpoint source problem was a benefit, regardless of implementation concerns. An engineer, although he believed the program would centralize and increase water quality information, generally believed the program was "a waste of resources". A county official believed beneficial outcomes of the effort would include better health and recreation, protection of property, higher economic returns, and more orderly development.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The H-GAC WQM project staff views its role as developing a planning process which is based on methodologies adaptable to changing conditions and institutional arrangements. They did not believe that the "process" aspect of WQM planning had been sufficiently recognized by EPA and that EPA was instead pushing for "products". Central to H-GAC's position was the importance they placed on developing a credible data base and explicitly identifying cost/benefit tradeoffs involved in determining local water quality priorities.

Achieving such a level of analytical thoroughness was not seen as possible within the funding and time allotted. The WQM Project Director stated that the initial program design had been forced into the two-year period to gain EPA approval and H-GAC "would then see what they could do".

The WQM Project Director believed that the H-GAC would "have to get something approved locally" but a locally acceptable plan may not gain State and EPA approval. He also believed that State and EPA roles in the WQM project may determine the outlook for combining local-State and EPA approval requirements. the WQM staff viewed the State as heavily controlling the WQM planning effort and felt that the State had "lost sight of the local nature of the program". The staff saw H-GAC's responsibility for the WQM effort as constrained by State control such that "H-GAC sits between State and local interests" and consequently must perform a sensitive balancing function. The H-GAC Executive Director added that the WQM program's relationship to A-95 review was not clear.

B. Citizens

The citizens interviewed included an Environmental Analyst, a representative of the Audubon Society, a graduate student and an oil company Engineer. All were active in the Citizens Advisory Group. The Engineer was also an appointed member of the Planning Advisory Committee and Technical Advisory Committee. The Engineer was involved in the WQM project because he was concerned with the area's overall allocation of resources. He believed the WQM project to be a waste of resources "as treatment is required regardless of a WQM plan" and participated to assure further resources were not wasted or diverted from other priorities.

Two citizens described their roles as part of a citizen initiative to organize and conduct an open forum supplementing the closed membership of the PAC. They believed that particular interest groups were participating in the WQM effort "to protect themselves" and "may subvert the intent of the program" as well as hinder plan implementation. They also believed that the H-GAC and PAC have responded to their input, but it was not clear how their input is used. They wanted more participation in the WQM process, but recognized that participation was constrained by the funding and time allotted. Another citizen noted that public participation is problematic in a technical planning context and was pleased that H-GAC was backing the CAG-promoted educational efforts.

All of the citizens were concerned with the State's role in the WQM project and believed that State control would hinder local plan implementation. All believed that the H-GAC would suggest a more effective WQM program than the State. Overall, two citizens stressed the importance of addressing the nonpoint source problem because they believed land use implications and economic interest groups would effectively oppose local level discussion of nonpoint source problems.

C. Local Elected Officials

A County Judge and Houston City Councilman were interviewed. Both served on the H-GAC Executive Board. The two officials had opposite perceptions of and interest in the WQM program.

The Houston City Councilman was opposed to more planning and studies. He believed the WQM program "was being pushed down their throats", and suspected the WQM program to be a Federal "backdoor" approach to control land and other resources. Although he felt that local officials had embraced WQM planning as a "worthy cause", he believed officials were reserving judgment until the specific WQM strategies were defined. He felt that his input to the WQM process conflicted with State and Federal program directives and that these directives "tied the hands" of the H-GAC.

The County Judge supported the effort, but noted that not all elected officials agreed on the WQM program direction and that some counties were not as interested in the program as others. As his county was becoming more urbanized, he was interested in planning ahead. Toward this end, he desired county authroity for controlling wastewater discharges (e.g., wastewater treatment requirements in subdivisions over ten acres) and favored land capability analysis and performance standards for controlling nonpoint sources. He believed that the plan should be only advisory to local governmental actions, which he saw as the proper vehicle for plan implementation.

D. Appointed Official

The appointed official interviewed served on the staff of a regional waste disposal authority and was appointed by the Governor to the Planning Advisory Committee. He was also asked by the H-GAC staff to serve in the Technical Advisory Committee. He noted that he serves on the two advisory committees as a technical expert and not as a representative of his agency.

The official was critical of the WQM progaam on several counts. First, he felt that the program's funding limitations would affect the quality of the final outcome. Second, he was concerned with the limited attention to the water supply/water quality relationship, as he saw water supply affecting quality controls. Third, he strongly felt that the State and EPA were directing the plan's development despite "saying it's a local plan". Consequently, he believed participation in the WQM planning effort was necessary to protect local interests. He noted the local antagonism to State and Federal intervention in local affairs. He did not expect the plan to be implemented, although he believed the Gold Coast Waste Disposal Authority could operate in a consortium management arrangement, perhaps with monitoring responsibilities. He did not believe the area was receptive to a regional WQM agency.

E. State Legislators

One State Senator was interviewed, and supplemental legislative information was obtained from a staff member of the Office of the Speaker, Texas House of Representatives, and a legislative committee staff member. All indicated that most legislators are not aware of the WQM program.

The State Senator believed that EPA made a false assumption "that States would come around with land use regulatory authority" to implement nonpoint source controls. He felt that Texas would not legislate land use regulatory powers as its current policy is one of "unfettered growth". He also expected WQM planning to be handled bureaucratically rather than legislatively, and that legislative involvement would be limited to agency budget appropriations. Although he believed legislators were not adverse to appropriating funds for water supply and water quality activities, he felt that the TWQB would need to improve its relationship with the Legislature to obtain the needed support.

Neither the State Senator nor the staff member of the Speaker's office expected legislative support for strengthening the authority of councils of governments and generally viewed regional bodies to have "few friends" due to preferences for local control and overall anti-planning attitudes in the Legislature. All noted that, as the Legislature meets once every two years, no legislative activity could occur until 1979.

F. State Water Quality Personnel

Three State agency officials were interviewed: two planning personnel in the Texas Water Quality Board and one staff member of the Special Advisor to the Governor on Natural Resources. As defined in Executive Order 18-A issued March 23, 1976, three State agencies have responsibilities related to water quality planning for designated and nondesignated areas. The Texas Water Quality Board (TWQB) reviews all WQM planning and conducts WQM planning in nondesignated areas other than that dealing with nonpoint sources related to agricultural and silvicultural practices. These nonpoint sources are the responsibility of the Soil and Water Conservation Board (SWCB). The third State office involved is the Special Advisor to the Governor on Natural Resources. The Special Advisor is the individual with primary responsibility for WQM planning in Texas and, as such, the TWQB and SWCB must seek the advice and concurrence of the Special Advisor in all aspects of WQM planning in both designated and nondesignated areas. The Special Advisor also chairs the State Management Committee which was established to direct nonpoint source management planning in nondesignated areas and to coordinate nonpoint source management planning with point source planning both in nondesignated areas and with designated area WQM plans.

Overall, the State's position with respect to designated WQM planning areas is to be involved throughout the WQM process. Executive Order 18-A established that the Governor appoint members to the policy advisory committees, which include representatives of the Special Advisor and TWQB. The Executive Order also charged the TWQB with responsibility for developing criteria and procedures in the form of State guidelines which are binding on the designated WQM planning agencies. The TWQB monitors compliance with the guidelines, including review of detailed workflow charts to determine whether WQM planning agencies are on schedule and if they understand their tasks. The TWQB also provides technical assistance through a State participation contract with designated agencies. The H-GAC WQM project has such a contract for $72,000 and, in addition, provides sampling and modeling services.

The TWQB Planning Chief noted that State involvement was necessary to assure the compatibility and consistency of WQM planning in designated and non-designated areas. She also indicated that the designated area plans will be incorporated into the update of the State WQM Plan and, with ongoing State involvement, their merger should not present any problems.

The TWQB Planning Chief felt that the Act's intent of State versus local control is unclear, and that the Act seemingly "holds the State responsible for WQM planning while telling locals it is their program". Further, she noted that locals feel that water quality standards should be a local option, but that the State retains responsibility for a Statewide perspective on the WQM problem. As this Statewide perspective is reflected in review of designated WQM planning efforts, she felt that State-local conflicts occur. Although she indicated that the State-local dialogue is currently effective, it is not always friendly or congenial. She expected the State to approve designated WQM plans "if they are properly done and documented".

The TWQB Planning Chief has commented on the State's role in relation to management and continuing planning. She did not expect the State to impose regional management systems, but rather expected innovative management approaches utilizing or expanding upon existing authority to be developed by the designated agencies. Nonetheless, the TWQB is granted broad police powers under the Texas Water Qualty Act to "implement all plans necessary to the continuing planning process required by PL 92-500". As noted in Chapter III, the State expects to have primary responsibility for continuing planning.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The WQM project staff expected that a plan would be completed within the planning period, but would fall short of the credible and comprehensive analysis they had wanted initially. The WQM Project Director noted that their initial program design had been forced into the time allotted in order to gain EPA approval. The staff initially had expected to gain additional time and funding to allow a more thorough analysis. Currently, with a time extension and additional funding unlikely, the WQM project staff is concerned that the plan will be based on weak data, causing its credibility and acceptability to suffer. During the plan approval process, the WQM staff intends to openly discuss the plan's recommendation as qualified by both process and data limitations.

Speculating on the likelihood of plan approval is difficult considering the early stages of H-GAC's WQM effort. The H-GAC Executive Director felt officials were reserving judgement on the effort until the plan is completed. The Houston City Councilman believed officials had embraced the effort as a "worthy cause" but all support depended on the specific means recommended for WQM action. A county official was fairly optimistic about the prospects for plan approval, although he noted that area officials were not uniformly supportive of the efforts. Procedurally, the plan approval process may encounter difficulties. Final plan approval authority rests with the H-GAC Executive Committee which is composed of 27 local elected officials representing counties, cities, school districts, and water conservation districts. Although only ten of these officials serve the designated WQM area, the entire H-GAC Executive Committee must approve the plan. Expectations regarding how the entire Committee will vote on a sub-area concern were not solicited, but the H-GAC Executive Director did note that the Committee's proportional voting system may be a problem for plan approval.

A further complexity is the dominance of the City of Houston, which covers most of the designated area and whose city council recently passed unlimited annexation laws. Consequently Houston's assessment of the plan's merits may alter the likelihood of plan approval. In this light, the view of a Houston city councilman serving on the H-GAC Executive Committee is noteworthy. He did not generally favor the WQM program, calling it "another Federal boondoggle" and a Federal "backdoor" approach to controlling land use and other resources.

Although the discussion of the likelihood of plan approval is highly speculative at this time, there are indications that meeting local, EPA and State requirements for plan approval will be a difficult task for the H-GAC. Most interviewees expected the plan to be locally approved if the plan reflected local preferences. However, they also believed

obtaining both local and State approval may be difficult. A locally approved plan may not meet State requirements. For example, if the area determines the Houston Ship Channel should be reclassified, and the State determines that attendant recommendations had impacts incompatible with statewide interests (e.g., protecting Galveston Bay), the State may not approve the plan. Conversely, if the State is involved in an ongoing way, a plan may be produced which is not in keeping with local priorities and, thus, cause local rejection. Several interviewees believed State intervention may have produced such a result.

The outlook for local plan approval and implementation is clouded by similar factors including unreceptivity to imposed controls, general anti-planning attitudes, and a low awareness of the water quality problem. Point or nonpoint source control recommendations which imply growth or land use controls will likely be ill received in this "pro-growth" area. However, as land use controls are not authorized by State statute, land use controls are not likely to emerge as plan recommendation. Rather, WQM strategies are expected to utilize existing authority, but nonetheless must mesh with local policy if plan recommendations are to be acceptable to and implemented by local governments. That is, if the plan is only advisory to local authorities, implementation depends on local disposition toward taking action. Considering that Houston has no publicly state growth policy, it is particularly vexing to assess Houston's receptivity to WQM recommendations. However, the assumption that locals will have full say in WQM activity after 1978 is, perhaps, premature. The Greater Houston Area WQM effort would be less likely ignored if sanctions coerced certain local actions. At this point, it is not clear what role the State or EPA will assume in WQM plan implementation and, accordingly, how State and local responsibilities will be balanced.

B. Public Involvement

The public participation effort is central to the H-GAC WQM project. The H-GAC seemingly has recognized its primary constituency as key local public agencies and local elected officials from the outset. Although officials reaching local elected directly is problematic (as discussed in Section 5E), the WQM project has involved technical experts of public agencies on advisory committees and provided them with important review responsibilities which further their involvement, effective input and, hopefully, support of the effort. Moreover, subcontracting with local public agencies for work elements, (e.g., City of Houston and Gulf Coast Waste Disposal Authority), provides an ongoing coordination with an important linkage to local agency activities and interests.

The WQM project staff believed that they had succeeded in establishing a visible planning process with two-way communication. The Planning

Advisory Committee (PAC) and Technical Advisory Committee (TAC) are involved in ongoing review, as is the Citizens Advisory Group (CAG), which is a citizen-initiated involvement effort subsequently supported by the H-GAC and recognized officially by the PAC.

If the H-GAC succeeds in integrating advisory committee input with project objectives and in utilizing the committees for "receptivity testing", the H-GAC effort will be a long way towards cementing local support. However, if interest groups emerge in opposition to the project's direction, the H-GAC will be faced with the difficult task of determining how input is to be balanced with programmatic imperatives. Two citizens interviewed were concerned that interest groups were participating with the aim of subverting the program's intent. The dilemma for the H-GAC seems to be how to weight the "advisory" input of various interests in determining the shape and direction of the WQM project.

C. Current Planning Process

The H-GAC WQM program was designed to address comprehensively both point and nonpoint source problems and to focus on developing basic methodologies which underscore a planning process rather than produce an end-product. The WQM project staff is concerned primarily with developing a credible data base, particularly for nonpoint sources, to explicitly identify cost/benefit tradeoffs among water quality objectives and to justify monetary expenditures resulting from recommended actions. The time and funding limitations precluded the fully comprehensive and thorough analysis the WQM project staff believed essential to the plan's acceptability. Despite H-GAC's considerable attention to analyzing nonpoint sources and their management, the WQM project staff believed the nonpoint data base to be weak and require supplementary sampling programs. Additional areas of weakness or in attention during the allotted time included sludge analysis, impact and economic assessment, and coordination with air quality and solid waste planning. All of these areas are part of a proposal H-GAC currently is presenting to the EPA Regional Office for funding. As proposed, these elements which augment the present WQM study would be part of the ongoing planning process.

Seemingly important to the flexibility and adaptability of H-GAC's planning process is their teamwork approach to project management. The WQM staff is large enough to allow primary and backup assignments for monitoring subcontracts and becoming directly involved in the work elements. This "hands on" management of subcontracted work tasks enables ongoing assessment of work progress, coordination of work elements, and necessary adjustments in strategy. Further, the entire WQM staff is involved in determining program direction and strategy.

Probably the most difficult strategic decision will be determining the appropriate cut-off points for analysis in order to allow adequate time for plan review and approval. A State water quality board official had criticized the H-GAC as unable to adapt its strategy to a first-cut analysis approach, and believed H-GAC was reluctant to base their initial steps on a necessarily limited analysis. Considering the nature of the council of governments as a voluntary association of local authorities, and the potential political controversy surrounding WQM planning and implied controls, H-GAC is in the delicate position of serving local, regional, State and EPA interests simultaneously. It seems that the open dialogue and "receptivity testing" H-GAC is trying to incorporate into the WQM planning process is a justifiable incremental approach to the politically, economically and socially complex problem of WQM.

D. Continuing Planning Process

Continuation of the WQM process beyond the initial planning period seems to depend on local commitment and funding. It is not clear that the H-GAC will be able to generate sufficient support to continue the WQM process, although Federal and State funding would greatly increase the likelihood of continued planning.

Most interviewees expected the planning process to continue but were not clear who would perform the function. The H-GAC WQM staff and Executive Director believed the H-GAC, with funding support, could continue WQM planning related to overall regional planning activities. He harbored hopes that EPA would fund specific tasks augmenting the WQM plan. These analytic tasks included nonpoint source sampling, sludge disposal, coordination with solid waste disposal, air quality planning, and impact and economic assessments.

The State is a likely candidate for conducting continuing planning. The State officials interviewed clearly delineated State objectives for a continuing planning process and indicated that the State could continue the planning process should the regional effort not be locally supported. Along this theme, two citizens had indicated that, if State funds support continued planning, they believed the State would assume continued planning responsibilities.

E. Significance of Local Elected Officials' Involvement

Local elected officials, as members of the H-GAC Executive Committee, have final plan approval authority and, as such, are the primary constituents of the WQM planning process. Their support is essential not only to plan approval, but also to continuation of the WQM planning process and to plan implementation. However, as Executive Committee members, local elected officials are not involved directly in the WQM project. Rather, the Executive Committee will ultimately act on the recommendations of the PAC which has output review responsibilities. Only four elected officials serve on the PAC and the WQM staff noted that they are not particularly active.

Local elected officials may be relying on their technical staffs or others more directly involved in the planning process to assist them in their final review responsibilities. Fortunately, the H-GAC has involved many of the area's key agencies as subcontractors for WQM work elements and thereby achieved their exposure to, and support of, the WQM project. Similarly, area technical experts have considerable review responsibilities as members of the TAC, and may lend credibility to overall plan recommendations.

Nevertheless, gauging the support of local elected officials at this juncture is most difficult - especially considering the unknown political ramifications of an as yet undetermined WQM strategy. Political forces, propelled by economic interests in this pro-growth area, framed by traditional anti-planning and anti-control attitudes, and uncountered by a widespread recognition of a water quality problem, may play the largest role in local decision-making regarding the outcome of the WQM project, regardless of the data the H-GAC can muster to document its WQM recommendation.

AGENCY: LOWER RIO GRANDE VALLEY DEVELOPMENT COUNCIL (LRGVDC)

REGION: VI - (Dallas)

GRANT AMOUNT: $775,000

GRANT RECEIPT: June 20, 1975

STARGING DATE: May 1, 1976

STATUS AT TIME OF INTERVIEWS: Work plan had not yet been approved and contracts were being negotiated.

REASON FOR INCLUSION IN SAMPLE: Although the Lower Rio Grande Valley is an economically depressed, rural-agricultural area, it supports a mix of economic activities affecting water quality: developers; citrus-growers; farmers; fisheries; shippers and light manufacturing. The area is also growing, but it is water-short, and present water quality is poor. The water quality issue is complicated by the impact of the Rio Grande, poor migratory workers, and international water source shared with Mexico.

I. BACKGROUND[1]

A. Area Description

In June, 1975, Texas Governor Briscoe designated the Lower Rio Grande Valley Development Council (LRVDC) to conduct WQM planning for the State's southern-most area. Bordering Mexico, the boundaries of the designated area are within the Council's three-county region and include Willacy, Cameron and southern two-thirds of Hidalgo counties. According to the 1970 Census, the area's population is 353,043. The population is not highly concentrated, although the combined McAllen-Brownsville SMSA covers most of the area. The seasonal influx of tourists and migratory workers is not reflected in the population statistics. Both groups have a substantial impact on the area's economy.

The Lower Rio Grande Valley is a leading producer of vegetables and citrus fruit. Related food processing and apparel manufacturing account for much of the area's light industrial activity. The area also produces natural gas, crude oil, and chemicals such as fertilizers and insecticides.

The area is considered an economically depressed area with over 55 percent of the population below poverty level. Consequently, the creation of jobs and the expansion of the tax base is important to the area. However, a water shortage and need to protect existing agricultural activity somewhat limits the area's ability to support future growth.

B. Water Quality Problem

The Arroyo Colorado serves as a floodway for the Rio Grande and, in its lower segment, as an inland waterway for ship transportation. The lower 25 miles of the Arroyo, which feeds into the Laguna Madre Estuary, is designated by the Texas Water Quality Board (TWQB) as a Water Limiting Segment with problems of high coliform count and low levels of dissolved oxygen. Concern for pollutant impacts on the Laguna Madre largely arises from its use as a fisheries nursery.

The WQM effort primarily will attend to the problems of the Arroyo Colorado and, secondarily, to those of the Laguna Madre. The Arroyo receives all of the Valley's runoff as well as the discharges of 30 wastewater treatment plants. All municipal treatment plants are below standard and upgrading these plants is a principal focus of the WQM effort. Although the staff biologist did not expect nonpoint sources to be the major water quality problem, the WQM project will analyze pollutants contributed by septic tanks, saltwater intrusion, construction, dredging, mining, silviculture, and agricultural practices including the pesticide, nutrient, sediment and mineral content of irrigation return flows.

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[1] Information in this Chapter was taken from the Detailed Work Program, May, 1976 , the Area/Agency Designation Package, and interviews.

The limited ability of communities to pay for capital expenditures such as wastewater treatment facilities is a contributing factor to the water quality problem, as noted in the LRGV Area/Agency Designation Package. An additional problem is the concentration of transient settlements (colonias) adjacent to the Arroyo Colorado or next to borrow ditches draining into the Arroyo. Typically, the colonias have primitive disposal systems and septic tanks in unsuitable soils. The pollutants contributed by these systems are as yet undefined. The spokesman for these settlements felt that the colonias badly needed proper sewage disposal.

As a water source shared with Mexico, treatment of the water quality problems of the Rio Grande is beyond the reach of the local WQM effort.[1] However, water drawn from the Rio Grande for the Valley's extensive irrigation system ultimately impacts the Arroyo as irrigation return flow. The poor quality tailwaters which are high in saline content carry pesticides, fertilizers, dissolved solids and other pollutants. Its impact is enhanced by stormwater drainage during periods of heavy flooding.[2]

From a water supply standpoint, the Rio Grande is of primary importance to the area. This water-short area draws all of its water for irrigation and consumptive uses from the Rio Grande. To those persons interviewed, areawide concern for water supply is considerably greater than for water quality; as water supply is critical to the area's ability to support future growth. Water quality issues relevant to improving the water supply (and consequently increasing the area's development potential) were voiced as area priorities. There was also concern, however, that water quality controls potentially may limit the area's capacity for growth. Upgrading municipal wastewater treatment systems was noted as a primary concern among elected officials and persons interviewed. However, each also noted that the general populace is not particularly aware of the water quality problem and that other more immediately felt social and economic needs may have priority.

C. Designated Agency

The Lower Rio Grande Valley Development Council was created in 1967 by a merger of the economic development district and council of governments serving the three-county area. The member governments include three counties, 25 cities, eight school districts and the McAllen Trade Zone. In addition, 13 special districts hold memberships including several water districts, navigation districts and utility boards.

The LRGVDC WQM activities are within the agency's planning department which also conducts 701 comprehensive planning and DOT transportation planning.

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[1] The International Boundary and Water Commission to date has successfully worked to divert a saltwater estuary from the Rio Grande but has yet to ameliorate the point source discharges and the nonpoint sources of pollution, particularly the dumping of raw sewage.

[2] Also of substantial concern to the Lower Valley is the high saline content of irrigation waters drawn from the Rio Grande which is causing salt accumulation on the land. One estimate of the cost to desalinize the irrigation water was given at $300 per acre.

LRGVDC serves as an A-95 clearinghouse and provides areawide services in housing, criminal justice, aging, health planning, and human resources.

The LRGVDC staff is headed by an Executive Director. The WQM Director had been with the program two months at the time of the interview and is assisted by a Biologist and a Planner. With only three professional staff devoted to the WQM effort, most of the WQM funds ($775,000) will be allocated for professional consulting services. As required by the State Guidelines for WQM plan preparation, the staff is retaining responsibility for monitoring and coordinating subcontractor activities, coordinating the plan with affected government units, and integrating subcontractor outputs into the final reports. State Guidelines also require that separate subcontracts be awarded for each planning element; and presently the LRGVDC has awarded contracts for six major plan components:

- Public participation (Resource Planning Consultants);
- Management planning (Barnes and Crow);
- Impact assessments (Tereco);
- Point source analysis and alternative technical subplan (Stevens, Thompson and Runyan);
- Socioeconomic data base (James A. Veltman); and
- Nonpoint source analysis (Roy F. Weston and Sigler, Greene and Associates).

In addition, the LRGVDC has subcontracted with the Texas Water Quality Board (TWQB) for sampling and modeling information and for general State coordination and assistance.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The WQM agency staff expressed specific expectations for the project's outcome which are shaping their planning strategy. As all of the area's wastewater treatment facilities are currently operating below standard, the WQM agency staff hopes to achieve a solution to the point source problem which is publicly acceptable. The WQM staff viewed nonpoint source problem identification to be an important product of the analysis but expected it to (potentially) result in conflict among the various water users, e.g., irrigated agricultural areas using pesticides and insecticides impacting fish nurseries. Local attitudes opposed to imposed controls, regional solutions, increased costs and negative growth impacts were cited as additional constraints on the program's strategy. In light of these limitations, the WQM Director felt that informing officials and the public of the water quality problem sources and recommending corrective alternatives were the extent of the agency's political capabilities. Further, the LRGVDC Executive Director noted that the agency has to serve the interests of its member governments and he felt the WQM process would potentially generate a conflict of interest for the agency.

B. Technical Component

According to the Work Plan, the LRGVDC project intends to analyze comprehensively the point and nonpoint source contributions to the water quality problem. Following this analysis, the LRGVDC will determine the appropriate emphasis on point or nonpoint source problem correction. The WQM agency staff currently expects point sources to prove the major pollutant. The WQM is also concerned with nonpoint contributions of insecticide, pesticide and septic tank pollutants. The WQM staff and the other interviewees did not yet feel they had a clear sense of the level of detail required by the State or EPA, and they felt their analysis would be constrained by the limited planning period.

Two State officials commented on LRGVDC's concern with the appropriate level of water quality analysis. The TWQB Planning Chief and a Governor's Office staff member agreed that the WQM program should be both product and process oriented. Specifically, the TWQB Planning Chief stated that, "Outputs are required to say where the program is going, but an ongoing process is needed to evaluate what can be solved now and what additional data is required". Thus, the State officials expected a first-cut analysis within the time allowed with portions remaining unanswerable. The TWQB Planning Chief felt that, if given more time, the designated WQM agencies would try to solve everything and the result would be more and more planning with no outputs. Accordingly, the TWQB Planning Chief stated that the local WQM agencies were having difficulty adapting to the "short action-response-revision" approach necessary to achieve outputs within the given timeframe.

C. Management Planning

Management planning is to begin in December, 1976 under subcontract to the consulting firm of Barnes and Crow. The WQM Project Director felt that it would be desirable to begin management planning earlier and was attempting to secure the appropriate contractual arrangements.

Financial analysis and existing areawide waste treatment program identification proceeds independently to produce an existing management systems report. Existing authority for nonpoint source controls will also be inventoried and analyzed. Management and financial system criteria, including political constraints, will then be developed and applied to the point source technical alternatives and nonpoint control strategies. The resulting management alternative report will then be integrated with the technical subplan report.

D. Public Involvement Program

The WQM Policy Advisory Committee (PAC) was organized in December, 1975. The 45 committee members and the Chairman were appointed by the Governor and represent the area's public agencies, including the several water districts, public utilities, municipalities and counties, as well as agricultural, private industrial and environmental interests. As local elected officials serve on LRGVDC's policy-making body or Executive Board, their involvement on the PAC was not sought. According to the LRGVD Executive Director and WQM Project Director, this design was necessitated by the limited time commitments possible for officials who serve voluntarily in their elected capacities. The Management and Technical Subcommittees of the PAC have reviewing responsibilities and, to date, have screened and recommended consultants for the subcontracted work elements.

The WQM project was subcontracted with Resource Planning Consultants to design a public participation program tailored to the various phases of the planning process including implementation. In addition, the consultant has the following tasks:

- Prepare a mailing list which specifies interest groups;
- Initiate a quarterly WQM newsletter;
- Assist in preparing educational materials including a bilingual brochure and news release;
- Prepare a slide presentation;
- Train LRGVDC staff to carry out the public participation program and provide ongoing technical assistance;
- Assist in sponsoring seminars for PAC members and local governmental officials;

- Prepare working papers for local review describing the various tasks of the public participation program; and

- Evaluate the participation program and recommend actions for future public involvement in WQM planning. This final report will be part of the WQM plan.

E. State and Federal Involvement

The Texas Water Quality Board and EPA Regional office have a close relationship in working with the designated WQM agencies. By a two-party agreement, the TWQB was named the lead agency in reviewing and monitoring the local efforts. Both EPA and the TWQB representatives attend Policy Advisory Committee meetings and maintain daily telephone contact. Both agencies also have had considerable input to the development of the workplan. Although the LRGVDC project staff felt some EPA and TWQB involvement was necessary and desirable, they noted that cumbersome delays resulted from the coordination and procedural requirements in working with the two agencies. The WQM Director noted that pre-award audits required two to three weeks while one or two weeks were involved in review of the contract.

The WQM staff stated that they had high regard for and good rapport with the EPA regional project officer, but that they needed more personal technical assistance. The WQM staff expressed the need for personal EPA advice on the mechanics of coordinating and managing the project.

The TWQB is a major participant in the WQM agency's project with a State participation contract for $56,000 and modeling and sampling contract for $14,000. State assistance was welcomed for monitoring and providing technical assistance to the project. However, the WQM Project Director felt that they were "locked" into State guidelines and that State involvement was so extensive that considerable delays resulted. He also felt that the TWQB was not clearly defining the necessary level of detail.

As State WQM planning is proceeding concurrently with the designated WQM planning projects, close coordination is built into the two processes. The State Plan is based on 15 planning basin areas, and the TWQB Planning Chief sees the State approach as being very different from that of the designated WQM agencies. Due to the time constraints for both State and local processes, the TWQB Planning Chief noted that the designated plans will not be incorporated into the present State planning effort, but rather will be embodied in the future State Plan revisions. The TWQB Planning Chief felt that the two processes could be developed in a compatible and consistent manner in order to facilitate their eventual merger .

F. Scheduled Outputs

The Detailed Work Program summarizes the reports to be generated by the project and their expected completion data. This summary is shown in Exhibit I. However, expected completion dates were based on a May 1, 1976 start date rather than the actual start date of June 6.

G. Achievements to Date

Most of the effort to date has involved staff organization and the development of the work program, which remains to be approved. The organizational time required resulted in a late start date of June 6, 1976 for the project. In the development of the workplan, the TWQB and EPA had considerable input in order to coordinate the concurrent State and local planning processes. The TWQB Planning Chief felt that such coordination would be required on an ongoing basis and required the EQM agencies to submit detailed workflow charts for the purpose of monitoring task schedules.

Following completion of the workplan, the WQM staff has spent all of their time on the process of awarding and negotiating contracts. The staff noted that the coordination and timing problems of the contract approval process required by the TWQB and EPA have caused considerable delay. The project is already one and one-half months behind schedule, although LRGVDC hopes to catch-up through some lag time built into the schedule.

With a start date of June, 1976, the LRGVDC staff could not yet point to specific achievements. The involvement of the advisory groups in the consultant selection process was noteworthy, however. The Management and Technical Subcommittees of the Policy Advisory Committee interviewed and screened the various consultant groups and made final recommendations to the PAC for approval. Also of interest was the plan for bilingual public information materials and programs.

EXHIBIT I

REPORT SUMMARY
LRGVDC

TITLE DESCRIPTION NUMBER	TITLE	CONTENT	PROJECTED COMPLETION DATE[1]	PROJECT MONTH (QUARTER)
2.36	Socio-Economic Report:	Existing and projected land use, population economic conditions	8-1-76	3 (1)
2.15	Existing Water Quality Data Base Report :	Water quality and use data, water quality problem areas, quantified 1983 objectives	9-15-76	4½ (2)
2.43	Modeling Report:	Sampling data and calibrated and verified model	11-15-76	6½ (3)
2.26	Point Source Report:	Existing point sources, projected waste loads, and control alternatives including costs and impacts	1-1-77	8 (3)
2.59	Non-Point Source Report:	Identification of non-point sources and loads; control strategies, including costs and impacts	1-1-77	8 (3)

TITLE DESCRIPTION NUMBER	TITLE	CONTENT	PROJECTED COMPLETION DATE[1]	PROJECTED MONTH (QUARTER)
3.30	Management Report I:	Management and financial analysis, political constraints, assessment of existing areawide wastewater treatment programs	4-1-77	11 (4)
2.70	Technical Subplan Report:	Segment analysis, alternate discharge points, additional segments for modeling, impacts and costs of technical subplans, screened subplans	7-1-77	14 (5)
3.50	Management Alternative Report:	Conceptual alternatives, management and financial system criteria, management subplans	8-1-77	15 (5)
4.31	Draft Report to include volumes on		2-1-78	21 (7)
	Areawide Plan:	Major provisions of the plan, update and implementation requirements		
	Technical Plan:	Technical details of plan, results of previous technical reports		
	Management Plan	Management details of plan, results of previous management reports		
	Environmental Assessment	Base line description, assessment		

TITLE DESCRIPTION NUMBER	TITLE	CONTENT	PROJECTED COMPLETION DATE[1]	PROJECTED MONTH (QUARTER)
6.40	Public Participation Report:	Existing programs and regulations (1976), program for public participation, results of public participation program	3-1-78	22 (8)
4.32	Final Report:	Identical to draft reports, except for changes made as a result of local and state review. Also, a section will be devoted to public participation in the final areawide plan report	4-1-78	23 (8)

1. Based on May 1, 1976 start date

Source: Lower Rio Grande Valley Development Council, Detailed Work Program for Lower Rio Grande Valley Areawide Wastewater Management Planning Program, May, 1976, pp. 19-21.

III. EXPECTATIONS

A. Water Quality

Most interviewees felt that the WQM process provided a start toward improved water quality. Generally, control of point sources on the Arroyo was expected to upgrade its water quality. However, it was frequently noted that several municipalities would not be likely to accept the facility planning recommendations due to their preferences for an autonomous solution. Accepatable solutions to the several nonpoint sources, particularly agriculture, were not expected. Nevertheless, several PAC members, including local elected officials and employees of water-related agencies, believed the WQM process generated informational benefits which would contribute to water quality improvement, including increased awareness of the importance of the water quality issue, and related costs of improvement and better planning in the extension of water and sewer lines. There was general agreement that the area would not achieve the 1983 goals. A utility board official felt the standards were too high for the area and that there was "a difference of opinion regarding the definition of fishable, swimmable". The TWQB Planning Chief felt that by 1983, the goals would be achieved where attainable and that the WQM process would define areas where goals were not attainable.

B. Plan Approval and Implementation

Interviewees were asked to speculate on the likelihood of plan approval. Although responses varied, they centered around a fifty percent or less chance of approval. The WQM staff was less optimistic than other interviewees. Most interviewees generally agreed that there is a lack of interest in and understanding of the WQM effort and overall water quality problem. As water quality is not particularly an area priority relative to other concerns such as water supply, flood control and economic development, all foresaw considerable and lenghty public exposure as a prerequisite to plan approval. However, the WQM Project Director believed the program's time constraints limited the agency's ability to "sell" the plan to local officials. He also believed a locally acceptable plan would be more flexible and negotiable than seemingly allowed by the State and EPA. Several interviewees expected the area's predominant attitude of local autonomy and the plan's cost implications to be potential obstacles to plan approval. Although the LRGVDC Executive Director stated that local elected officials had so far not voiced opposition to the WQM planning process and felt they were committed to the extent that their resources would permit, two officials expressed a more skeptical view of the plan. One board member of a public utility believed selling the WQM program to his community would be a problem, as the community would be reluctant to relinquish any control of its presently successful, self-supporting treatment system. Another elected

official stated that although, she was interested in the WQM goals, she would support a plan only if it produced locally beneficial results and allowed local control and maintenance of the current tax level.

The TWQB Planning Chief stated that the State would support the WQM plan to the extent possible. However, the TWQB has the responsibility to look at the whole State and determine if the local WQM plan is compatible with overall interests and cost/benefit tradeoffs.

As with plan approval, speculation regarding the likelihood of plan implementation was evenly split. Generally, the likelihood of implementation seemed to hinge on funding availability and plan acceptability.

- Most felt that the economically depressed nature of the area limited resources and causes other social and economic concerns to have higher priority. One local elected official was determined to protect the taxpayer from increased costs and doubted that the plan would offer a local advantage.

- The majority of the interviewees, including the WQM staff and two local elected officials, expected some municipal regional opposition to treatment facilities, due to a strong preference for local control as well as the failure of a previous regional wastewater treatment effort.[1]

- As with plan approval, there was general agreement that the major difficulty with implementation was "selling" the plan locally, particularly considering the area's anti-regional philosophy.

- The diversity of interests in the area -- farmers, colonias, fisheries, citrus growers, developers and municipalities -- was seen to potentially conflict regarding appropriate water quality controls affecting growth and land use.

- The WQM staff felt that nonpoint source controls would encounter substantial opposition from agricultural interests.

- One specific problem noted by several interviewees was the potential impact of controls on migrant settlements.

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[1] A locally initiated planning effort for regional wastewater treatment facilities prompted the establishment of an implementing authority. The eventual failure of the authority was widely felt to be caused by EPA's lack of support. Although the authority still exists, it operates only three systems on a contractual basis.

Because of the social and economic complexity of the problem, no one expected the WQM plan to provide an implementable remedy.

- Most of the interviewees felt that nonpoint source controls would be limited by the lack of land use controls in the area.

Expectations regarding alternate management agencies focused on a strong preference for local control. Most interviewees felt that the LRVDC was not a feasible management agency primarily because of its voluntary nature and its design for planning. The WQM staff did not expect the State to be an implementing authority although the LRGVDC Executive Director felt that a State management agency was necessary for uniform standards and cited the TWQB's present authority for this purpose.

The TWQB Planning Chief expected that very few new implementing authorities would be established by 1978 due to time constraints. All State level interviewees noted the political unreceptivity to regionalism. The TWQB Planning Chief expressed the need for innovative approaches to manageemnt, rather than State-imposed regional systems.

Several State and local interviewees commented on the existing authority to implement the WQM plan. All sources mentioned the anti-planning attitudes prevalent in the State. One State legislator called the Texas policy one of "unfettered growth" and stated that the basic problem of WQM rested with the fact that there are "no basic rudiments of land use regulatory power to implement 208". Presently, there are no zoning, permitting or flood plan controls in the area beyond municipal jurisdiction. Although Texas counties are capable of regulating private sewage facilities, a local elected official noted that only Cameron County has been enforcing septic tank controls.

There was general agreement at State and local levels that no legislative needs have been specifically identified. The State is currently identifying existing legal constraints and LRGVDC has subcontracted for legal analysis with the professional consultants responsible for management planning. The TWQB Planning Chief suggested the need to expand county powers and to strengthen municipal extraterritorial jurisdictions. One local elected official felt that legislation would be required in all aspects of point and nonpoint source control, particularly for the protection of prime agricultural land.

No legislation contacts have been initiated by the State or LRGVDC. The TWQB Planning Chief regarded such contact as premature because the WQM program could not yet "be sold". A State legislator as well as two legislavtive staff members indicated that most legislators were not aware of the WQM program.

State officials interviewed noted that, should legislation be required, the earliest realistic date for consideration is January, 1979, as the Texas Legislature meets biennially. Generally, it was felt that legislation during the January, 1977 session was not feasible. A Governor's Office staff member noted that the timing of the WQM program did not allow for a "gap" between plan completion and any required enabling legislation.

C. Continuing Planning Process

Local expectations for continuation of the planning process after the initial two years were generally mixed. Several respondents indicated that the process should be continued. Among the various reasons cited were the need to address problems as they arise, the long-time period required for problem resolution, and to revise and update the plan. The WQM Director felt that program continuation had a fifty-fifty possibility, with funding, flexibility of the plan and plan approval being the primary factors. The Executive Director of the Colonias responded that continuation depended on local commitment. The LRGVDC Director, PAC Chairman, and one citizen, felt that the WQM process would not be completed in two years. One local elected official felt that if the plan could not be done in two years, the effort should be abandoned.

There was not much local response to the question of who should be responsible for continuing planning. Generally, this issue was tied to whether they believed if funding would be available or if planning should or would be contined. One citizen noted that there were only two existing areawide, agencies LRGVDC and the Chamber of Commerce. The Executive Director noted that LRGVDC could retain the planning function but he was not sure that it should. One citizen hoped that a new agency would be created which was more representative of the area's interests.

The TWQB Planning Chief believed that the continuing planning process would largely be a State responsibility and would consist of: (1) the verification of significant nonpoint sources and controls; (2) preliminary screening and statistical collection of data regarding the biggest problems; and (3) an emphasis on facility planning in order to provide an adequate basis for the construction grants program.

Interviewees generally expected State and Federal financial support for continued planning. The official from the Governor's Office expected some mix of Federal, State and local funds and the State legislative branch interviewees felt that the Legislature was not adverse to appropriating funds for water quality efforts. There was general agreement that continued local planning efforts would not be locally funded. The LRGVDC Executive Director expected any local contribution to depend on the identified benefits of continued WQM planning. One local elected

official preferred local funding of WQM activities to retain a small scope and a cautious approach to spending.

D. Relation to Other Water Quality Programs

Overall, interviewees expected the WQM plan to have some impact on the construction grants program. The WQM Director and LRGVDC Executive Director expected the plan to indicate appropriate funding priorities. The TWQB Planning Chief viewed the helpfulness of the WQM program to the construction grant program as depending on the depth of the analysis, i.e., systems work. One citizen hoped the WQM plan would have a voice in getting substandard facilities upgraded. ne spokeman for the colonias hoped the plan would provide the colonias with eligibility for facilities grants. Another local elected official, however, did not favor the facility funding program which she felt coerced unrealistic and costly regional solutions.

Most of the interviewees expected the WQM effort to impact the NPDES permit program, but were uncertain as to the extent. The WQM Director expected the approved plan to provide the basis for NPDES permits. One citizen felt that present discharge standards were "ridiculous" and hoped the WQM plan would provide a more realistic basis for future permits. The Planning Chief of the TWQB, which has NPDES permitting authority, had a more specific view of the WQM impact on the NPDES program. She expected the designated WQM plans to establish sound objectives in areas not meeting 1983 goals and to accordingly provide a basis for revised wasteload allocations.

E. Local Definition of Success

Each interviewee was asked to state his/her definition of a success for the WQM effort. With two exceptions, interviewees generally defined success in terms of some degree of water quality improvement, particularly point sources, and an acceptable plan. Specifically, their statements were:

- (WQM Director) -- A solution, which is publicly acceptable, to the point source problem within the time and funding framework.

- (COG Director) -- A degree of improvement in water quality.

- (Mayor) -- A plan that locals would accept and the elimination of dumping raw sewage into the Arroyo.

- (Director of Migrant Settlements) -- Program that affects construction grants planning, deals with the problems of the colonias, sets up a democratically controlled mechanism, and meets with generally favorable support.

- (Citizen) -- A complete study of all sources of pollution, including drainage and irrigation systems.

- (Public Utility Board Official) -- Not hopeful that it will be accepted.

- (Navigation District Engineer) -- An organization where all municipalities and the rural area work together to solve problems, as heretofore each has been contributing to the other's problems.

- (Citizen) -- Proper drainage and distribution of water.

- (State Water Quality Board Planning Chief) -- A clarification of needs for data regarding treatment systems, the development of realistic objectives, and an identification of the origin and solution to water quality problems.

Each local interviewee was also asked to indicate the direct or indirect benefits they expected from the WQM process. One local elected official expected "nothing new that will work"; another official, while not in favor of the WQM effort, expected good, usable data as a benefit. Overall, the informational/planning outputs of the WQM program were cited as beneficial in several ways. The following benefits were mentioned:

- Public education;

- Better zoning;

- Improved recreation;

- Better planning in extending water lines;

- Technical advice regarding compliance with water quality standards;

- More efficient systems for sewage disposal;

- More information regarding the water quality problem of the colonias;

- Influence on local political bodies; and

- Clean water.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM agency staff generally viewed their role as providing an identification of the water quality problem and making recommendations to local agencies for problem correction. They saw their role in the context of the planning function performed by the Council of Governments and not to include management or enforcement responsibilities.

The staff felt that WQM programs placed the agency in a delicate position regarding the interaction of water quality, growth and land use, e.g., developers, municipalities, farmers, citrus-growers, and fisheries. In addition, the WQM agency staff saw EPA and State WQM requirements as potentially causing a conflict of interests for LRGVDC.

B. Citizens

The five citizens interviewed included: a Water District Manager, the Director of Migrant Settlements, an Environmentalist, a Navigation District Engineer and An Oil Plant Chemist. All were Policy Advisory Committee (PAC) members.

Four citizens were satisfied with their involvement and felt that the WQM staff was responsive to their input. Further, one felt that the PAC had considerable influence on the shape and direction of the project.

A fifth citizen was dissatisfied with his involvement. He expressed frustration with the cursory level of discussion and felt the PAC should be talking more about area issues rather than the mechanics of the WQM studies.

Most of the citizens believed the area attitude of local autonomy would hinder the prospects for a successful project. One citizen believed local elected officials must be better informed regarding the WQM project. He was concerned that, with the area decision-makers serving on the LRGVDC Executive Board and not on the PAC, reaching them may be a problem. Two citizens also believed the State may not approve a plan reflecting local priorities and preferences for WQM.

Two citizens had specific objectives for their participation. One wanted to obtain sewerage for the migrant settlements. The other wanted to have some input to the ongoing coastal zone management program in the area.

C. Local Elected Officials

One local elected official was interviewed. She was Mayor of a small community and the only elected government official serving on the PAC.

She also serves on the LRGVDC Executive Board. She viewed her role in the WQM project as protecting the area priority of preserving agricultural land and generally protecting taxpayers from costly regional solutions not beneficial to her area.

She was interested in the WQM goals but primarily was concerned with improving water quality related to the present poor quality of water supply and irrigation water as well as obtaining proper sewage disposal. Although her community has need for sewage disposal, its small size precluded priority eligibility for Federal construction grants. In her view, regional facilities were not acceptable because of the loss of local control over taxes. Instead, she was seeking innovative sewage treatment methods which could operate within limited local resources. Generally, she saw the limited local ability to pay as a major obstacle to WQM plan approval and implementation.

She felt the WQM planning function should terminate with presenting the plan and providing information regarding the importance of the water quality issue. Although she did not support continuing WQM planning, she foresaw the PAC as a potential body for continuing areawide WQM policy-making.

D. Appointed Official

A public utility board member answered interview questions in this category. He serves as a member of the PAC as well as Chairman of the board managing a city water and sewer facility.

The board member believed that, although the WQM process would generate information useful to operating agencies, he generally did not expect his board to approve the plan if their present management responsibilities were disrupted. For other communities, he saw a similar preference for local control, which he noted had worked against previous regional wastewater treatment efforts. Further, he believed officials were unable to keep up with the WQM demands because they lack necessary revenues for building facilities.

E. State Legislators

One State Senator was interviewed and supplementary legislative information was obtained from a staff member of the Office of the Speaker, Texas House of Representatives, and a legislative committee staff member. All indicated that most legislators are not aware of the WQM program.

The State Senator believed that EPA made a false assumption "that States would come around with land use regulatory authority to implement nonpoint source controls". He felt that Texas would not legislate land use regulatory powers, as its current policy is one of "unfettered growth".

He also expected WQM planning to be handled bureaucratically rather than legislatively and that legislative involvement would be limited to budgetary appropriations for State agencies. Although he believed legislators were not adverse to appropriating funds for water supply and water quality activities, he felt the TWQB would need to improve its relationship with the Legislature to obtain needed support.

Neither the State Senator nor the staff member of the Speaker's Office expected legislative support for strengthening the authority of councils of governments. All noted that, as the Legislature meets every biennium, no legislative activity could feasibly occur until the 1979 session.

F. State Water Quality Personnel

As defined in Executive Order 18-A issued March 23, 1976, three State agencies have responsibilities related to water quality planning for designated and nondesignated areas. The Texas Water Quality Board (TWQB) reviews all WQM planning and conducts WQM planning in nondesignated areas concerning nonpoint sources related to agricultural and silvicultural practices, which is a responsibility assigned to the Soil and Water Conservation Board (SWCB). The third State office involved is the Special Advisor to the Governor on Natural Resources. The Special Advisor is defined as the individual with primary responsibility for WQM planning in Texas and, as such, the TWQB and SWCB must seek the advice and concurrence of the Special Advisor in all aspects of WQM planning in both deisgnated and nondesignated areas. The Special Advisor also chairs the State Management Committee which was established to direct nonpoint source management planning in nondesignated areas and to coordinate nonpoint source management planning with point source planning in nondesignated areas and with designated area WQM plans.

Overall, the State's position with respect to designated WQM planning areas is to be involved throughout the WQM process. Executive Order 18-A charged the TWQB with responsibility to develop criteria and procedures in the form of State guidelines which are binding on the designated WQM planning agencies. The TWQB monitors compliance with the guidelines including review of detailed workflow charts to determine if WQM planning agnecies are on schedule and if they understand their tasks. The TWQB also provides technical assistance through a State participation contract with designated agencies. The LRGVDC WQM project has such a contract for $56,000 in addition to a sampling and modeling services contract with the TWQB for $14,000.

The TWQB Planning Chief noted that State involvement was necessary to assure the compatibility and consistency of WQM planning in designated and nondesignated areas. She also indicated that designated area plans will be incorporated into the update of the State WQM plan and, with ongoing State involvement, their merger should be no problem.

The TWQB Planning Chief felt that the Act's intent of State control was unclear and that the Act seemingly "holds the State responsible for WQM planning while telling locals it is their program". Further, she noted that locals feel water quality standards should be a local option, but that the State retains responsibility for a Statewide perspective to the WQM. Although she indicated that, to date, the State-local relations are effective, they are not always friendly or congenial. She expected the State to approve designated WQM plans "if they are properly done and documented".

The TWQB Planning Chief also commented on the State's role concerning management and continuing planning. She did not expect the State to impose regional management systems, but rather expected innovative management approaches utilizing or expanding upon existing authority to be developed by the designated agencies. Nonetheless, the TWQB is granted broad police powers under the Texas Water Quality Act to "implement all plans necessary to the Continuing Planning Process required by PL 92-500". As noted in Chapter III-C, the State expects to have primary responsibility for continuing planning.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

Although the LRGVDC project is just getting underway, the WQM staff and other interviewees were already concerned that the planning effort may not be completed. Delays in workplan development and contract negotiations have already put the program behind schedule. The WQM staff attributed delays to extensive EPA and State involvement in the WQM project and the continuing coordination required for working with the two agencies. LRGVDC has much to accomplish in the planning period insofar as all point and nonpoint sources are being analyzed. Following the technical determination of the relative source contributions to the water quality problem, it seems likely that LRGVDC will need to identify and prioritize particular problems. To date, LRGVDC expects point sources to be so identified. Should nonpoint sources prove a larger problem than presently anticipated, the WQM strategy may need considerable adjustment to achieve a completed plan in two years.

The LRGVDC has expressed hope for a project extension and for additional funding in order to complete the plan. The State has encouraged WQM agencies to adopt their strategies to the planning period allowed, but did indicate that a one-year extension may be possible although continued funding was not indicated. From the State's perspective, designated WQM plans will not be incorporated into the State WQM plan until the State plan revision/update. However, the EPA Regional Office recently notified LRGVDC that a project extension or additional funding would not be allowed and that LRGVDC must tailor its program to fit the current planning period. In this light, WQM program cutbacks are likely.

Obtaining both State and local approval of the WQM plan may be difficult. As the WQM Director noted, time constraints may limit the WQM agency's ability to gain local approval, especially given the area's predominant attitude of preserving local autonomy and the uncertainty of the plan's ramifications, such as costs and enforcement. Further, the heavy State and EPA involvement in the WQM project may cause a plan to be produced which is not in keeping with local priorities. Although it is not clear that there will be a disparity among State, EPA and local requirements for plan approval, coordination between these three entities may prove difficult for the LRGVDC. Several factors which pose potential difficulties for plan approval and implementation are:

- Unreceptivity to cost increases together with the social and economic priorities competing for limited revenues;
- The failure of a previous regional waste water treatment effort;

- Potential controversy among economic interest groups regarding nonpoint source controls; and

- The political sensitivity of enforcing septic tank controls in the substandard settlements of poor migrants.

LRGVDC, as a voluntary association of governments, will not be a management/enforcement agency, nor does the State expect to impose any regional systems. Consequently, management will undoubtedly occur at the local level with the WQM plan offering recommendations for implementation. Two local elected officials interviewed were generally not in favor of the WQM plan, except as a data resource. This situation does not support an optimistic outlook for plan implementation.

B. Public Participation

The WQM advisory committees include a range of interest groups and public agency officials. Members have had major program responsibility for screening and selecting subcontractors for WQM work elements. In so doing, they have had a definite impact on the direction of the WQM program and, by their involvement, have become acquainted with the WQM planning process. However, interviewees representing local agencies were somewhat skeptical of the WQM process but felt they should take an active role to represent and protect their various interests. With LRGVDC serving the area at the pleasure of local support, the advisory committees, as well as the LRGVDC Executive Board, may play a significant role in shaping the outcome of the WQM planning process.

Aside from the advisory committees, LRGVDC has not begun any public involvement efforts. The consultant responsible for designing the public participation program is to train and assist LRGVDC staff in its execution. Because of low public awareness of the water quality problem, the need for public education is sizeable. Further, with the potential controversy among economic interest groups (e.g., fisheries, citrus-growers and developers) regarding nonpoint source controls, LRGVDC will need to expand its involvement efforts effectively to reach these groups. LRGVDC's public involvement efforts may have to go beyond the educational materials and seminars, however, this may be the extent of involvement achievable in the limited time and funding period. Ideally, LRGVDC should build support and educational linkages with ongoing related agencies to extend the reach of its present resources.

C. Current Planning Process

LRGVDC is in the phase of problem identification and, following isolation of the relative importance of point and nonpoint source problems, will adopt its WQM strategy accordingly. Although emphasis is expected to be placed on facility planning, LRGVDC is also devoting attention to all nonpoint sources. With no likelihood of project extension, the LRGVDC will be forced to tailor its WQM planning strategy to fit the time allowed and may face difficult decisions regarding cutoff points in its analysis.

With only three professional staff devoted to the WQM planning effort, the demands are extensive for monitoring and coordinating subcontracted work tasks, coordinating WQM efforts within LRGVDC and with the State and EPA, and working with public involvement programs. More State and EPA technical assistance on a personal scale was desired by the WQM staff which was clearly feeling overwhelmed by its programmatic responsibilities and limited resources.

D. Continuing Planning Process

Continuation of the WQM progess beyond the initial two years seems to depend on local commitment and funding. It is not clear that LRGVDC will be able to generate sufficient support to continue the WQM process, although Federal and State funding would greatly increase the likelihood of continued planning. The State seems the most likely candidate for continuing planning should the designated agencies not have that capability. The State WQM planning process is already in high gear with clearly delineated objectives for a continuing planning process. The State's approach, based in 15 planning basins, includes elaborate localized committee structures which could well absorb the LRGVDC effort.

E. Significance of Local Elected Officials' Involvement

Local elected officials are the primary LRGVDC constituents of the WQM planning process and their support greatly affects the likelihood of plan approval and implementation as well as continuation of the WQM planning process. Although their support is essential, the WQM advisory committees include only one local government official. This official is not generally supportive of the WQM effort, but participates to protect her community's interests.

Although the LRGVDC Executive Board members are the locus of areawide local elected official participation, they are only remotely involved in the WQM project. Serving voluntarily in their elected capabilities, local officials generally do not have the time to devote to direct involvement, nor do they have sophisticated expertise regarding WQM. The LRGVDC keeps in contact with governmental staff members (i.e., city managers) to reach these officials indirectly, but no such staff exists for many of the small communities.

As a voluntary association of local governments, LRGVDC primarily serves the interests of member jurisdictions and, consequently, must frame its WQM approach diplomatically according to what is locally acceptable and not according to which water quality improvement is required. Strong attitudes of maintaining local control and autonomy, preventing tax increases and avoiding politically sensitive controls, (i.e., land use and septic tank) will not be dealt with easily in a two-year planning period.

AGENCY: MARTHA'S VINEYARD COMMISSION (MVC)

REGION: I - (Boston)

GRANT AMOUNT: $216,000

GRANT RECEIPT: June 16, 1975

STARTING DATE: June 16, 1975

STATUS AT TIME OF INTERVIEWS: The agency was beginning its second year of scheduled two year planning period.

REASON FOR INCLUSION IN SAMPLE: Martha's Vineyard is a coastal/recreational area posing unique pressures on a limited water supply and currently high quality water resources.

I. BACKGROUND[1]

A. Area Description

Martha's Vineyard is a small island community lying five miles off the coast of Cape Cod, Massachusetts. It has been described as an "island preserve consisting of quaint communities, small shops and aesthetic appeal wrapped in a strong sense of place and loosely federated with the rest of the world by ferry boat, telephone, television, radio and the U. S. Postal Service."[2] The local economy, once based on farming, now centers on tourism, services and construction as they relate to the resort industry. Each summer, the population swells six times more than the normal year round population figure as tourists flock to the Island to enjoy its cultural charm, beautiful beaches and fine harbors. Most of the Vineyard's population is clustered in three of the six towns, The interior, although still rural in character, is quickly succumbing to development pressures.

The entire Island is incorporated into six townships, each with its own elected Board of Selectmen. The Town meeting is still a very influential form of governmenta and is actively supported by local citizens. Although the Vineyard constitutes a county, the Island's county government is very weak, as is true throughout Massachusetts. Only two of the six towns are zoned although all are empowered to do so. Local land use planning has been almost non-existent. There is only one municipally owned and operated wastewater treatment plant on the Island although several towns are currently in initial stages of planning individual plants.

The most unique element in the Island's government and regulatory structure is the Martha's Vineyard Commission (MVC), a multi-town land use planning and management program with regulatory and enforcement responsibilities. The MVC was created in 1974 in reaction to the threat of a Federal Nantucket Sound Islands Trust Bill, which would have established a Federal commission to protect Nantucket, Martha's Vineyard and the Elizabeth Islands from uncontrolled development. The proposed Federal legislation was opposed by the Islanders who feared loss of property rights, Federal interference and lack of resident involvement in decision-making. Through the efforts of the All-Island Selectmen's Association and a broad based Citizen's Consensus Committee, Martha's Vineyard secured special State legislation establishing its own Commission in lieu of a Federally controlled body. The MVC is designed to share regional planning and regulatory functions with the Island towns. Its land use powers are similar

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[1] Information for this Chapter was taken from the Martha's Vineyard WQM Work Plan, 1975, and interviews.

[2] August, Robert M. and Lawrence C. Beal, "Landmark Legislation: The Martha's Vineyard Commission" in A Massachusetts Heritage, Vol. xiii, No. 1, March, 1976.

to those of municipal zoning authorities but are restricted to Districts of Critical Concern[1] and Developments of Regional Impact. It also functions as the WQM agency.

B. Water Quality Problem

There are no substantial bodies of surface water on Martha's Vineyard with the exception of a few salt water ponds. However, some pollution of groundwater resources has been noted recently in the form of salt water intrusion of private wells. Oil spills and high B.O.D. levels have also caused some problems in the harbors. Although these pollution problems are not serious at this time, they do exist and are threatening to increase as island development expands.

In recent years, the very nature of Martha's Vineyard's tourist-oriented economic activity has threatened the Island's quality of life and economic base. A study by Metcalf and Eddy Engineers of Boston has shown that easy access from major population centers of the Northeast has resulted in substantial population growth and subsequent development. Between 1970 and 1975, the year round population increased from 7,250 to 51,250. Similarly, unplanned, inappropriately situated development has strained the Island's sensitive aquatic environment. Limited drinking water supplies has limited the six towns' ability to provide municipal services. Conservation commissions, environmentalists and local elected officials, therefore, focus their environemntal concern on preservation and protection of the Island's water resources.

Most current pollution problems are believed to stem from diffuse nonpoint sources, both agricultural and domestic, (i. e. septic system leachate). Discharges from the Edgartown municipal wastewater treatment plant and oil spills from commercial and recreational boats also contribute to harbor problems as noted earlier.

With the exception of incomplete USGS maps, spotty bacterial studies and well-drilling records from private homeowners, the Island has been lacking in basic geological and hydrological data. This paucity of data has caused considerable problems and expense in locating water supplies and protecting aquifers from possible degradation. Several areas have already suffered from salt water intrusion of drinking supplies due to unplanned development and subsequent overdraft. Protecting the harbors has also been difficult due to an inadequate understanding of the area's ecosystem. Collecting basic data is, therefore, a major concern on the Island.

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1 "Districts of Critical Planning Concern are defined as areas which have an impact on two or more towns. This includes significant environmental areas, cultural or historic resources, future economic development areas, major public investment areas, and natural hazard areas. Developments of Regional Impact are activities which have a regional significance. Regional significance is determined by the nature or magnitude of the development, or its effect on the surrounding environment."
August and Beal, op cit.

Since the WQM grant accounts for the greatest portion of MVC's operating funds, it holds highest project priority with the Executive Director and the planning staff. The Commission and the public, on the other hand, are more concerned with the immediate regulatory actions being taken by the Commission. However, as the WQM project begins to produce technical outputs and management recommendations the Executive Director feels that the WQM project will assume greater status with the Commission and the public.

C. Designated Agency

The Martha's Vineyard Commission (MVC) is the officially designated WQM planning agency for the Island. As described earlier, the MVC is a unique land use planning and regulatory body with the power to exercise innovative land management approaches such as land use control on the rate of growth, design review for aesthetic quality and development rights transfer in specially designated areas. The MVC reviews all large scale development proposals which may effect more than one Island town or the Island as a whole. It can compel towns to enforce local ordinances and powers which MVC deems necessary to protect regional interests.

The Commission is composed of 21 appointed representatives: nine at-large, six from the individual Island towns, one from the County Commissioners of Health, four non-resident tax payers and one State representative appointed by the Governor. The Commission meets regularly on a weekly basis to carry out its regulatory responsibilities. Because of land ownership patterns and the protective concern of Islanders over the character of the Island, citizen interest in MVC activities is active and sustained. This is particularly true in view of the threat of Federal intervention should the Island Commission fail.

The Commission's professional staff is the WQM staff. It includes:

- Executive Director, in charge of administration;
- Regulatory Planner responsible for assisting in determination of critical areas and regional impacts;
- Regional Planner responsible for social and economic planning;
- Cartographer;
- The WQM Project Manager; and support staff.

The staff functions as technical assistant to the Commission, researching, investigating and reporting on items of special concern to the MVC. Most staff members, with the exception of the WQM Project Director, spend part of their time on other planning activities being conducted by the MVC in the areas of housing, transportation, economic development, coastal zone management and A-95 review. Depending on funding levels for these programs, the staff may be enlarged in the near future.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The objectives of the Martha's Vineyard WQM program as stated in the project control plan are to:

- o develop land use plans;
- o suggest controls for point and non-point sources of pollution; and
- o investigate alternative management solutions which minimize the need for capital intensive treatment facilities.

The plan suggests that the WQM study will take a comprehensive look at all possible point and nonpoint pollution problems in the area in order to protect and preserve the Island's water resources. Interviews with the planning staff and MVC members indicated, however, that the most basic goal of the WQM agency is to collect as much scientific and technical data as possible to support the immediate regulatory activities of the Commission and the anticipated comprehensive land use planning efforts of the staff.

Prompted by a suggestion from the WQM study, the MVC is currently embarking on a comprehensive planning process which will integrate the planning activities it is now conducting. The result will be a land use plan which will assist both the individual towns and the Commission in exercising their respective regulatory authorities. The comprehensive planning program will introduce greater interface among project areas.

The Commission staff anticipate that enhancing credibility of the MVC will promote areawide cooperation. Local elected officials expect that the plan will also suggest management techniques in addition to data inventories.

B. Technical Component

Since Martha's Vineyard has no history of prior water studies, the first year of the project was devoted to data gathering. Information relating to groundwater protection originally was considered the highest priority in view of the stress that the seasonal population places on the water supply. The technical team began work early in the study to determine more precisely the water table profile of the Island, the recharge areas and actual or potential sources of pollution.

Groundwater soon lost its priority status, however, when the cost of sinking test wells became prohibitive. The Project Manager and the Executive Director then redirected the study's efforts toward monitoring harbor waters and sampling a limited number of other representative sites around the Island. This strategy was selected because such water studies were less expensive and could yield tangible results within two years. This would enable the public to appreciate the Island's water quality problems and assist the Commission in reviewing development impacts. The groundwater study is continuing now under a U.S. Geodetic Survey project which developed subsequent to the start of the WQM program.

Point source problems related to the Edgartown wastewater treatment facility (currently the only operating facility on the Island) and other proposed facilities on the Island are being addressed by individual Island towns. The towns in need of facilities were already engaged in Step I facilities planning prior to the WQM study. The WQM staff has had negligible impact on these planning activities with the exception of the request for an EIS on a local facilities planning project.

C. Management Planning

Given the presence of the MVC and the towns' unwillingness to surrender any more local autonomy, management planning has been forced to work within the constraints of existing institutional frameworks. In the area of nonpoint source pollution, improvements for zoning, with regard to subdivision controls, health codes and other land use regulations are being examined. Possible recommendations for consideration include:

- Explicit reference to water consumption maximums in land-use classifications;
- Explicit reference to waste characteristics in land-use classifications;
- Provision of special facilities and maintenance programs by developers and purchasers;
- Provision of water table monitoring facilities as part of subdivision control;
- Special on-lot water management systems for fragile areas;
- Controlling or pricing the production of solid waste;

- Licenses or permits for the extraction of water as well as the introduction of waste; and

- Inducements to preferred site selections for various land uses.

The planning staff has already begun work with some local health officers to revise septic system regulations. They have also suggested that Island towns consider jointly hiring one septic system inspector to serve all communities. The staff is also influencing management decisions being made through MVC actions on critical planning areas and developments of regional impact. The present staff policy discourages structural solutions. Where structural solutions are necessary, however, the study hopes to encourage a regional approach to problem-solving.

D. Public Involvement Program

The public involvement process outlined in the work plan is geared toward public education and public contribution to data collection. The program calls for:

- Press releases on sampling programs, alternative plans and sampling program results;

- A questionnaire to the general public on desired future land use patterns and water table levels;

- A reporting system on possible incidences of well water contamination;

- Workshops with well-drillers, harbormasters, shellfish wardens and dumpkeepers on the subject of identifying harbor pollution problems and controls; and

- An advisory committee composed of local officials and special interest groups.

Since the program budget did not provide for a public participation staff person, responsibility for this work fell to the Project Director. Once the study was underway, however, the Project Director soon found himself overwhelmed with othe program commitments and the public involvement program began to flounder. With the exception of a few press releases issued during the course of the program, the press has not been used extensively. Although workshops with harbormasters and shellfish wardens were very effective, according to the Project Director, other planned workshops did not materialize. The Advisory Committee has met only two or three times.

Part of the problem is explained by the fact that Islanders participate in town meetings, public hearings, MVC meetings, Conservation Commission meetings, etc. - all of which are actively supported and attended by residents. Large-scale public participation in yet "another land use or water study" is unrealistic, according to the Chairperson of the League of Women Voters. The MVC staff is unconcerned about the minimal public involvement to date since, until now, the study has concentrated on technical studies. They believe sufficient interest and input will be obtained when plan alternatives are developed and reported later in the project. During the next year, the Project Director intends to reach decision-makers through slide shows, preliminary reports and more personal contacts. The Executive Director hopes to increase the public involvement budget by shifting money away from fringe benefits.

E. State and Federal Involvement

MVC's contact with the State occurs through the Division of Water Pollution Control (DWPC), the official State liaison for WQM planning. Each designated agency in Massachusetts entered a contractual arrangement with DWPC to conduct State review of PCP's and program outputs, facilitate coordination among designated agencies and with statewide activities, and provide technical assistance where needed.

To date, the State's contact with the Martha's Vineyard study has been very limited due to budget constraints and the desire of the designated agency to keep State intervention to a minimum. The DWPC reviewed the Vineyard's PCP and made several comments to the Commission concerning consultant workload. These recommendations were acted upon but since the time of the initial review, no further contact has taken place.

Relations with the Regional EPA office are much more cordial and frequent. EPA personnel are in constant contact with the WQM staff, rendering technical assistance and even occasional direct staff support, particularly in the preparation of reports.

F. Scheduled Outputs

The original schedule of outputs was prepared by outside consultants without staff imput. This schedule was found to be too general and all-encompassing to be of much use to the Vineyard study. The Project Director, with the help of the MVC and EPA Regional Office, revised the plan to reflect specific Island needs.

The revised PCP schedule of tasks to be completed within the two years planning period appears in Exhibit I. This list has been modified somewhat during the planning process in that groundwater study efforts ceased and the number of representative sample sites was reduced. Also, the public participation program, management, financial and land use studies are behind schedule.

EXHIBIT I

PROGRAM OUTPUT SCHEDULE

MARTHA'S VINEYARD

ITEM	DATE
Project Management Section	
Project Direction Meeting	Early November 1975
Alt. plans (preliminary)	May 31, 1976
Narrowing process by MVC and Island Selectmen	June 1 to August 31, 1976
Revised and refined plans final draft	April 30, 1977
Consideration and suggestions for further revision	April 30 to June 30, 1976
Final Plan	July 31, 1977
Public Meetings	October 15, 1975 June 15, 1976 October 20, 1976 May 1977
Public Participation Section	
General Program Description	October 15, 1975
Press Releases	
Sampling Program	September 5, 1975
Alternative Plans	April 1976
Sampling Program Results	May 30, 1976 October 31, 1976
Land Use Questionnaire	November 30, 1975
Water Table Level	November 30, 1975
Workshops	
Well-drillers	September 11, 1975 January 1976
Shellfish Wardens - Harbormasters	July 1975 October 13, 1975 June 30, 1976
Dumpkeepers	February 15, 1976 November 18, 1976

Advisory Committee Meetings	September 10, 1975 October 1, 1975 October 29, 1975 November 22, 1975 January 7, 1976 April 1976 June 1976 August 1976 October 1976 December 1976 February 1977 April 1977 July 1977 September 1977
Interviews	
Boards of Health	September 16, 1975 September 17, 1975
Planning Board	September 23, 1975 September 24, 1975
Conservation Commission	October 14, 1975

Land Use & Environmental Planning

Method for developing land use maps (preliminary)	September 30, 1975
Final	February 28, 1976
NRP Program (anticipated)	June 30, 1976
Maps, except Recharge and Water Table Map	October 31, 1975
Summary of existing land use and CZM land use maps	December 31, 1975
Subdivision Map and Summary Report	January 31, 1976
Land Use Consumption trends discussion	January 31, 1976
" " " projections	February 28, 1976
Criteria for developing land use plans	March 15, 1976
Preliminary Land use plans and controls	May 31, 1976
Selection of plans for in-depth study	August 31, 1976
Select recommended plan	by July 15, 1977

MAP OUTPUT SCHEDULE

All maps will be prepared at scale 1" = 2000'

Surficial Geology	October 31, 1975
Soils	October 31, 1975
Drainage patterns	October 31, 1975
Erosion	October 31, 1975
Recharge Areas preliminary	February 28, 1976
Water Table Depth preliminary	January 31, 1976
Wetlands and Tidal Zones	October 31, 1975
Wildlife	October 31, 1975
Potential Non Point Pollution Sources	November 30, 1975
Coliform Bacterial Surveys	December 15, 1975
Zoning	October 31, 1975
1972 Potentential Subdivision	September 30, 1975
1975 Update of Subdivision	January 31, 1976
Areas served by Stormsewers	December 31, 1975
Areas served by Sanitary Sewers	January 15, 1976
1951-1972 Newhousing density map	January 31, 1976
Plans of Solid Waste Sites	January 31, 1976
Spot Soil Surveys	January 31, 1976
Program Sampling Stations	December 31, 1975
Potential Areas requiring sediment-erosion controls	February 28, 1976
Land Use Maps	December 31, 1975
Current update	February 28, 1976

Ground Water Supply Section

Review available data	September 30, 1975
Coordinate efforts with USGS	December 31, 1975
Analyze groundwater hydrology	
Water Budget	November 30, 1975
Water Table Map	January 31, 1976
Future water use effects	January 31, 1976
Alt. water supply management plans	February 28, 1976

Non-Point Source Control

Formulate analysis plan	October 15, 1975
Well installation	December 31, 1975
Sampling Program	November 30, 1975 April 1976 June 1976 August 1976 September 1976
Estimation of other pollution sources	June 30, 1976
Estimation of potential non-point sources	August 31, 1976
Alternative non-point source controls	
Preliminary	May 31, 1976
Final	October 31, 1976

Point Source Control

Review of existing data	March 31, 1976
Existing sources	
Preliminary report	December 31, 1975
Final report	December 31, 1976
Estimation potential point sources	August 31, 1976
Alternative controls	May 31, 1976

PROGRAM OUTPUT SCHEDULE

Population & Economic Analysis

Population projections	December 31, 1975
Economic Analysis	February 28, 1976

Legal, Institutional & Financial

Analysis of existing controls	March 31, 1976
Alternative controls	
Preliminary recommendations	May 31, 1976
Final recommendations	December 31, 1976

Alternative Management Programs

Identify Criteria for Assessing Alternatives	November 30, 1976
Combine Alternative plans into Management Programs - Preliminary Report	July 15, 1976
Final Report	March 15, 1977
Evaluate Impacts of Alternative Programs	March 31, 1977
Select Recommended Alternative Management Program	April 30, 1977
Final Report	July 31, 1977

Source: Martha's Vineyard WQM Work Plan.

Although the Project Director voiced disappointment in the program's inability to achieve original expectations, he admitted that the original schedule was far too ambitious given the absence of water quality data, limited staff time, and budget any limits. Data gathering activities will cease this fall to allow time for analysis and formulation of management alternatives. Data collection and land use planning efforts that have taken place are viewed as important foundations for continuing planning efforts.

The Executive Director, citizens and MVC representative interviewed did not consider the delay in institutional planning a problem since most Islanders assume that the Commission and the local Boards of Health and zoning will share responsibility for the proposed management and regulatory programs. The overall consensus is that existing authorities are in a position to carry out any acceptable arrangements without the need for additional enabling legislation. Financial planning has received some initial consideration, however, the Executive Director appears to be purposely awaiting a statement on future funding commitments by EPA before he devises any local financing arrangements.

As for the public involvement program, the Project Director feels that there is still time to reach the public given their general awareness of environmental issues and land use activities of the MVC. Currently, the Executive Director and the Commission are attempting to change PCP budget allocations to hire a public participation staff person using funds presently earmarked for fringe benefits. Hiring an additional staff member at this late date, however, was not expected to make a significant difference.

G. Achievements to Date

Despite the program's shortcomings, the project director indicated that the study has been a technical success to date in that the water sampling programs have produced valuable data for ongoing planning and management. For example, information on slope, runoff and the potential effect of septic tank leachate on the local shellfish industry has helped the Commission block (at least temporarily) the development of 800 units along the banks of a salt marsh. This salt marsh is critical to the entire scallop fishing industry on the Island. The WQM study was also successful in identifying pollution problems stemming from the Edgartown municipal wastewater treatment plant. Although the staff has not been allowed to participate officially in individual town facility planning efforts, it is in a position to influence these plans, if necessary, through the MVC.

The Project Director also noted that private citizens have been very helpful in data gathering efforts. Many have contributed by submitting private well-drilling records thereby lightening the burden of water table studies. Observation reports by shellfish wardents and harbormasters also have helped to form an effective informal monitoring system along the coastal shores.

III. EXPECTATIONS

A. Water Quality

Since the waters on Martha's Vineyard are generally of good-to-excellent quality, the pertinent question on the Island is not whether the 1983 goals for clear water can be met but, rather, whether they can be maintained in the face of seasonal population stress and rapid development. All persons interviewed felt that the technical and scientific output of the WQM study, coupled with the current activities of the MVC, were the Island's best chance for maintaining quality water resources.

B. Plan Approval and Implementation

Each person interviewed was asked to evaluate the likelihood of plan approval at both the local and State levels. Although a few people were reluctant to make a statement since the nature of the plan is still unknown, most people were very optimistic about both State and local reaction to the plan. The Project Director was a notable exception. He ranked the probability of local acceptance very low since he felt that the towns had not yet made a comfortable adjustment to the concept of regionalism embodied in the Commission. As such, he felt they may have trouble in accepting any suggestions for further regionalization moves. Most others felt that the towns would have no choice but to accept the plans when they are presented. A local elected official noted there would be no problem if responsibility for plan implementation rested with existing units of government.

There was a greater consensus of opinion on the issue of State approval. All felt that the past record of the State's cooperation suggested no problem for continued approval of Island actions. The Division of Water Pollution Control spokesman felt that approval would be almost automatic if the plan was geared toward Island-wide application and suggested steps for future management action.

Interviewees ranked the probability of plan implementation only slightly lower than plan approval. Generally, the respondents assumed that the MVC would be selected as the primary management agency and that the Commission, in turn, would have no problem in carrying out this responsibility.

All were a little reluctant, however, about the reaction of the local government to a relative increase in the power of a regional body vis-a-vis their own powers. Recently, one of the six Island towns voted on a referendum to disassociate itself from the MVC due to the town's fear of losing local control in matters of land use. However, the local elected officials and citizens noted that such problems could be alleviated if the WQM study team was successful in communicating the intent and nature of the plan and if the plan allowed for flexibility on the local level.

Several persons also noted that if plan implementation required substantial outlay of funds at the local level, full implementation may be in jeopardy. Like most local units of government throughout the country, the towns find it difficult to raise additional revenue.

All respondents perceived the plan in terms of an advisory tool to assist local units of government and the MVC in its regulatory actions and future planning efforts. One local elected official hoped that the plan also would have some added strength to help encourage locals to take action and enforce recommendations made by the plan.

The key persons essential to plan implementation were identified as the town Selectmeen and Boards of Health. The Project Director has made informal contact with most local decision-makers and the WQM staff is scheduled to begin what the Project Director terms a "road show" of slides, maps and preliminary findings to keep the officials well informed of plan developments. This should make it easier to secure their approval at the end of the two year period. The Project Director also hoped to schedule more frequent meetings of the advisory committee now that concrete study results and alternatives were beginning to emerge.

The Island's general approach to management planning is to develop and refine appropriate alternatives (such as dispersed cluster development, concentrated growth plans, etc.) which the Commission and the towns find acceptable. Once these alternatives unfold, the staff will work with the advisory committee and other key local officials and interest groups to decide whether authority should rest with the individual towns, the Commission or a new agency. Fiscal and environmental consequences of each alternative will also be delineated so as to help in the final selection process.

C. Continuing Planning Process

When respondents were asked to select from a range of expectations about the future of WQM, all indicated their hope for the continuation of WQM planning after the initial two year time period. Most indicated, however, that the future of the planning effort hinged on forthcoming Federal funds since they felt the Island was not in a position to support WQM planning at its current level of operation. Also a few people noted that continuation is contingent upon the staff's presentation of findings in a form that is useful for implementation.

With the exception of the State Division of Water Pollution Control spokesperson, all respondents felt that the State of Massachusetts would not assume responsibility and authority for WQM planning in the future because the State could never generate the necessary funds. and, more importantly, because the locals would never contenance such action. Because of land ownership patterns, historic concern

for retaining the character of the Island and basic distrust of any "outside interference", proposals for State intervention would meet with general opposition from the Islanders. The State Liaison, on the other hand, felt that the State Office of Planning could do a much more efficient and proficient job of planning if that Office would take the initiative to do so.

From the perspective of the Project Director, local officials and citizens, continuing planning will involve extended monitoring of ground and surface waters so as to augment the Island's data bank. This information will contribute to the planning and regulatory activities of the MVC and individual towns. Further development of institutional means to deal with water quality problems is also anticipated. Finally, the WQM hopes that ongoing planning will provide a means for heightening the public's awareness of the limitations of the Island's ecology and, hopefully, generate their support in preservation efforts.

The State Liaison expressed the opinion that the more difficult and less pressing issues which could not be settled within the first two years would be addressed in continuing planning. After presentation of the initial plan to the Governor, the State Liaison feels that the Division of Water Pollution Control will polish the report and submit it to EPA to meet the requirement for second phase basin plans. He anticipates the use of Section 106 monies to complete this refinement once WQM money is gone.

Both the Executive Director and the Project Director estimated continuing planning will cost approximately $25,000 a year. This estimate is based on the current salaries of a Planner, Cartographer, and Technical Assistant. An unknown additional sum of money for technical sampling, analysis and scientific equipment was also mentioned.

No alternatives for funding continued planning has been officially considered to date. The Executive Director speculated that two possible sources might be a recently acquired Coastal Zone Management grant or an indirect subsidy from developers through required monitoring of new wells. The general hope, however, was for continued funding from the Federal level of government.

D. Relation to Other Water Quality Programs

To date, the WQM study has had no effect on facilities planning. Those towns currently engaged in 201 planning have specifically banned WQM staff members from speaking at public meetings in hopes of minimizing "outside interference". The Executive Director indicated that this situation will continue with regard to plans started prior to the WQM study but that in the future, the WQM study will identify

the need for new or improved facilities. Actual planning will be left to the locals but Regional solutions will be promoted. The MVC hopes to do this by pointing out the economics of the latter approach.

According to the State Liaison, the effect of WQM plans on NPDES permitting will be minimal, especially since the Island has no substantial industry and currently has only one municipal wastewater treatment facility. In the opinion of the spokesman, the Massachusetts NPDES permits were written in haste to meet deadlines. WQM plans around the State will help correct existing faults and inadequacies.

E. Local Definitions of Success

Most local definitions of success are colored by a general perception of the WQM study as a scientific, data gathering effort. As such, program success on Martha's Vineyard is usually equated with developing comprehensive land use plans and identifying critical areas and developments of regional impact so as to protect the Island's sensitive environment while still promoting compatible economic activity. Local elected officials, in particular, stress the need to define implementable approaches for management and regulatory actions rather than simply a cataloguing of resources.

Citizens defined success in terms of opening channels of communication among the six Vineyard communities and initiating cooperative, possibly regional action on Island-wide concerns. Appointed officials indicated this would be particularly helpful on water supply and health-related issues. Many persons felt that the most immediate benefit of the study would be scientific proof that life on the Island as it presently exists cannot go on without careful planning.

The Executive Director also defined success in terms of tangible, money-saving aids to Islanders. These will take the form of free well-sampling advice that the MVC planning staff would render as part of their continuous monitoring and surveillance program planned for the future. In addition, it is anticipated that increased data on soils and land capability will actually lower the cost of building by eliminating problems of purchasing land which later is discovered to be unusable for residential purposes.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM staff view themselves as support staff to the Martha's Vineyard Commission. All persons involved feel that the study has been geared to meet the current data needs of the Commission and to assist it in future regulatory and planning activities. The staff currently attends MVC hearings to substantiate Commission actions when needed and responds to specific research requests in addition to carrying out its scheduled WQM work program. The Executive Director hopes to broaden the scope and usefulness of the study by making it the fulcrum of a comprehensive planning project scheduled to begin later this year.

Generally, the staff is quite optimistic about the potential success of the WQM program. In their opinion, any amount of data collection is of help to the Island in view of the area's previous lack of water studies. WQM Staff feel that they already have succeeded in convincing at least a few more local elected officials and citizens of the need to plan ahead for continued water supplies, recreational opportunities and commercial fishing, to mention but a few areas of concern. Gaining the trust and respect of local communities should result in a greater local planning support fole for the staff. The WQM Executive Director feels that the program is helping to foster cooperation among local municipalities which traditionally, have remained separate in their planning and decision-making.

B. Citizens

Two citizens were interviewed at Martha's Vineyard. One is a local newspaper editor; the other, the chairperson of the League of Women Voters. Both feel it is their responsibility as Island residents to keep abreast of any activities associated with the protection of Island water supply and preservation of its unique natural and cultural environment. Neither are directly involved with the WQM program but both closely follow the activities of the MVC.

According to the editor, the general public is interested in and supports the MVC. The public is unable to participate actively in the WQM study, however, because of the study's technical orientation to date. Unaware of the program's shift toward management planning, he voiced concern that the program would not move beyond scientific data collection and generalities to actual public discussion of issues and alternatives.

The League of Women Voters representative was, actually, quite surprised to hear about the WQM study's potential for shaping future management and decision-making. The League is very actively involved in MVC activities but views the WQM study merely as a scientific data gathering project. As with several other interviewees, the League representative does not view the lack of public involvement in the WQM study as a problem since she considers the MVC to be the most likely management agency and feels that the general public has adequate opportunity to become involved in its activities. The League woman feels that, even if more WQM public meetings were held, they probably would not be attended since many Islanders already attend two to three public meetings each week.

C. Local Elected Officials

Two local elected officials were interviewed: the Chairperson of a town Board of Health and the Chairperson of the Board of County Commissioners. The first local official is a member of the WQM Advisory Committee and, as such, reviews the project's outputs as they arise. She is particularly interested in the project because of her commitment to public health. Her complaint about the WQM program is its failure to disseminate information on a regular basis to elected officials and advisory bodies. She also feels that the project's data gathering activities may be insufficiently focused on pertinent or pressing Island issues. The degree of responsibility she will feel toward securing funds for water quality planning and management will depend upon how relevant the study's findings are to her concerns for public health in her community.

The second local official is not a member of the WQM Advisory Committee but is a representative to the MVC. As a member of the Commission, she reviews outputs of the study and has close contact with the WQM planning staff through the advisory role of that group to the Commission. As a member of the Commission, she would like to see an increased flow of information from the WQM study which can be used to define non-buildable areas with regard to water constraints. She recognizes that the success and validity of the Commission's regulatory decisions will depend greatly on the justification presented by the WQM study In her opinion, the greatest problem facing the WQM study is the individual towns' reluctance to enter into any joint ventures due to their fear of losing their autonomy. Since the Board of County Commissioners has no power to collect revenue, she views her responsibility for seeking planning and management funds as only one of moral support. Both local officials feel that the WQM program will be a success only if it plays an advisory role and allows for some flexibility of local application.

D. Appointed Official

The appointed official interviewed wears several hats. He is a Commissioner to the MVC, a former Selectman, member of the local conservation commission and a very active citizen in his community. As a member of the Commission, he receives monthly progress reports from the WQM in addition to periodic special reports in relation to Commission regulatory actions. Since he feels identification of the natural capacity of the land is a prerequisite for good land use planning and regulation, he views the WQM study as one of the most important programs to have ever been conducted on the Island. Because an existing agency (i.e., the MVC), is the most likely management agency, he feels that the plan will be approved and implemented to the benefit of all Islanders.

E. State Legislators

The State Senator interviewed was not actively aware of the activities of the WQM study but closely follows the Commission's activities because of the great controversy over the establishment of a Vineyard vs. a Federal regulatory body. Although he has consulted with the WQM staff on site specific environmental concerns, he generally defers to the legislative Committee on Natural Resources for a stand on policy issues related to the WQM program. He does not anticipate and in fact is opposed to seeking new State legislation for implementation of the WQM plan.

The Senator felt that, although the concept of WQM is laudable, it does not hold highest priority on the state level given other pressing social and economic problems facing the State. Since the Vineyard already has good quality water, he does not feel that WQM will require large expenditures of money.

F. State Water Quality Personnel

The State spokesman interviewed is the supervisor of the Division of Water Pollution Control's liaison personnel. In his opinion, the State's role has been limited throughout the WQM planning period by a limited budget arrangement with the MVC. Each designated WQM agency in Massachusetts supports State liaison work by allocating a portion of its grant to the DWPC. According to several sources, the Vineyard's desires to retain as much local control over the WQM program as possible, resulted in a low budget allocation to the State. As a result, the DWPC staff cannot make frequent site visits or engage in active program monitoring.

The State spokesman feels that the DWPC should have been appointed the grantee for the Martha's Vineyard study DWPC since it has a larger staff, more equipment and greater experience in conducting water studies. He also feels that the DWPC would be a more logical agent for areawide planning since it has been charged with responsibility for coordinating areawide plans into a State plan. In his opinion,

designated WQM agencies are basically wasting Federal money by retreading basin plans in their distrust of the State's findings. He appears rather pessimistic about scheduled management and institutional planning. On a more positive note, the State hopes to use technical data generated through the WQM to update its NPDES permits.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

Unlike some areas of the country, Martha's Vineyard has no history of prior water studies. Given the general absence of hydrological and geological data and the general hesitancy of the planning staff to make recommendations without full technical knowledge, the original MVC work plan proposed massive data collection efforts on the full range of possible water quality issues on the Island. EPA Region I and the State recognized that the "shotgun approach" would make it difficult if not impossible to complete technical studies let alone conduct management planning within the study's two year time-frame. They suggested, therefore, that the MVC concentrate its efforts on these areas which the Commission felt were most significant and which could be handled within the WQM study period.

As a result, the revised Vineyard work plan is much more concentrated in scope and balanced between technical and management planning efforts. This approach should help the agency produce a management plan within two years from the start of the program and still allow time to develop a data base for future planning efforts by local planning and zoning boards.

The planning staff appears to have overcome some of its original fear of planning without complete data. After a year of almost exclusive concentration on technical studies, it has somewhat hesitantly brought its data collection efforts to a close and is now embarking on management planning. Should the MVC continue any of its efforts into data collection for any reason, however, the agency will be hard-pressed to complete a management plan and/or to secure plan approval by the end of the study.

Efforts at securing plan approval have centered, to date, on decision-makers rather than on the general public. So far, the Project Director has made informal contact with most local health officials, selectmen, and the Commission members. These contacts appear to have stirred their interest in the study and nurtured a growing trust in the staff's expertise.

As to the general public, the Islanders are already quite sensitive to the need to protect their groundwater; both to ensure domestic drinking supplies and to protect the harbors and offshore waters that are so important to the tourist industry. Given the proliferation of issues already competing for the general public's interest, the shortage of staff time and money and the program's emphasis on data gathering over the past year, the WQM agency was probably correct in selecting the public involvement strategy it has followed (see following section).

Now that the program has entered its second year, however, the WQM program must not take the public's awareness for granted as an automatic approval for any plan related to water quality. Islanders are very much concerned about the ways in which their property rights are affected.

The WQM staff must somehow elicit the emotional support of the public for the water quality programs it proposes. It must also take steps to more actively involve the public or their representatives in actual development and selection of plan alternatives.

The existence of the Vineyard's regional environmental protection and land use legislation has, and will probably continue to work to the advantage of the study. With the Martha's Vineyard Commission already in place, management/institutional planning is greatly simplified and chances of plan approval and implementation enhanced. Although some towns are still uneasy about their relationship with the Commission, none of them have disassociated themselves from it. They are beginning to understand how the Commission can work to their advantage in protecting local interests. For example, the Commission recently took action against a large proposed development project. The proposed project not only threatened the regional environment but also was inconsistent with the local community's land use and growth preferences. If the Commission can continue to set favorable precedents over the next year, approval and implementation of the WQM plan should result.

Some degree of opposition to increased Island-wide action, however, should be anticipated. Here, the controversy over Federal intervention under the Island Trust Bill will work to the advantage of the MVC. The towns realize that if they do not take action themselves, the Federal or State government will. In short, the political climate is right and the plan has a good chance of being approved and implemented as the lesser of two evils.

B. Public Involvement

In the eyes of the Executive Director and the Project Manager, public involvement is the weakest element in the water quality planning effort. The media has not been used effectively, public meetings have not been well attended, and the advisory committee has not met regularly over the past year. The initial efforts at public education only succeeded in making some of the public aware of "some kind of water study".

This self-criticism may actually be too harsh since the WQM agency appears to be judging itself against public involvement standards suggested in EPA guidance which do not necessarily reflect local conditions on Martha's Vineyard. The public involvement program proposed in the work plan seems to have responded to EPA guidance.

Once the WQM agency made the decision to concentrate rather exclusively on technical studies during the first year of planning, however, there was probably little sense in trying to get the general public involved through public meetings and committees. Since data was not being converted into issues interesting to the public, one can argue that there was nothing to which the public could react.

In some ways, the Martha's Vineyard WQM study does not fit the image of WQM planning suggested in the national legislation. However, since both the State and the Federal government approved the work plan, they must now access public involvement and other elements of the particular planning process accordingly. Martha's Vineyard may not have conducted a formal public involvement program suggested in EPA guidance, but the program need not be criticized on this count. Local conditions must be taken into account.

Greater efforts are needed now, however, to keep the public aware of program developments and to involve them throughout the management planning phase. The MVC still has a year of planning remaining. Taking into consideration the WQM agency's proposed actions for reaching the public, which include more active use of the media, additional staff, more frequent public meetings and more active involvement of influential public interest groups, the program may still have enough time to gain their support.

C. Current Planning Process

In the course of revising its work plan, the MVC chose to focus its attention on nonpoint sources of pollution, primarily oil spills, septic systems and landfill leachate. The Commission considered these to be the most important factors threatening the quality of the island's water resources. Due to the absence of basic data, the WQM staff began by concentrating exclusively on technical studies.

In conducting these studies, the WQM program management concentrated on a few representative sites rather than Island-wide sampling and monitoring studies. With hindsight, this decision appears to have been most efficient, given the agency's limited budget and the exorbitant cost of scientific studies. Although the technical studies are not comprehensive in area coverage, Region I feels that the diversity and number of sites selected ensures sufficient coverage to extrapolate to almost any area on the Island. The success of a WQM program must be judged on the program goals and its design and achievements relative to local definitions of needs. In the case of Martha's Vineyard, the study may prove successful in that it promises to produce needed data for planning.

Management planning is now concentrated on developing programs for :

- o Operation and maintenance of septic systems;
- o Control of harbor pollution by marinas;
- o Number and location of landfill sites;
- o Land use through MVC designation of critical areas; and
- o Developments of regional impact.

Emphasis is on areawide as opposed to structural solutions. The WQM study is occurring at a very timely moment in that it has resulted in the request by the MVC for an EIS on a proposed sewage treatment plant before the facility plan proceeds any further. Those problem areas which cannot be covered within the WQM planning period have been left to other water-related programs, such as 201 and NPDES, to local planning bodies or for continued planning under the MVC.

Planning appears to be occurring according to the approved workplan schedule. The staff is continuing in its technical support role to the Commission, thereby contributing to the latter's visibility and credibility. This is extremely important in view of the anticipated management role of the MVC. The staff is also integrating its WQM activities with other planning programs being currently conducted both within and outside of the agency. The WQM study has led to a proposal for an Island-wide, comprehensive land use plan and to a cooperative agreement with a USGS groundwater study currently taking place at the Vineyard. WQM planning is, therefore, not only timely but a stepping stone for further planning and implementation programs.

Interim output requirements have been met with the help of the EPA Project Officer and reports on technical studies are now being distributed to the Commission members and local elected officials. Making this data and analysis available to the decision-makers at this time should help spur their interest in management planning.

D. Continuing Planning Process

The Executive Director and Project Director conceive of continuing planning in terms of extended scientific and technical studies and continued technical support to local and regional planning bodies. The staff is sensitive to the political setting in which it is working. In order to affect decisions made at the local and regional levels, the WQM staff must convince the decision-makers of the WQM staff's expertise on water quality. This expertise will also give validity to MVC regulatory decisions which might result in court actions.

The level of future planning efforts depends on the availability of funds, but the continuation of planning appears to be certain in the eyes of the staff since the staff will continue to support the MVC no matter who provides financing. If the proposal for Island-wide comprehensive planning is approved and funded, it may outline a more concrete role for continuing planning.

E. Significance of Local Elected Officials' Involvement

Local elected officials have been only passively involved in the first year of WQM planning through informal contact with the Project Director. They are, however, all aware of the activities of the Commission and will probably take a more vocal role in WQM planning as the political, economic and social implications of alternative management suggestions begin to surface. The Island is small enough to allow for active involvement of all towns and their officials. With the tradition of strong local government, little action will pass without their careful attention.

Although local communities generally have supported the MVC in face of the threatening alternative of Federal or State intervention, some towns are still uncomfortable with the concept of regionalization and land use as mentioned earlier. If the WQM staff hopes to promote further regionalization or land use control, it has to convince local officials that such action is indeed needed in order to protect and preserve the Island's water resources. It would seem that the best way to do this is to involve them in management planning as soon as possible. How well the agency does, remains to be seen within the next year.

AGENCY: MIAMI VALLEY REGIONAL PLANNING COMMISSION (MVRPC)

REGION: V - (Chicago)

GRANT AMOUNT: $1.5 million

GRANT RECEIPT: June 28, 1974

STARTING DATE: January 1, 1975

STATUS AT TIME OF INTERVIEWS: The project is closing in January, 1977. The WQM staff were preparing for the six-week review period for screening alternative subplans.

REASON FOR INCLUSION IN THE SAMPLE: The Dayton are project is one of the early designates. It serves an urban/industrial area with reprotedly a "pro-growth" climate.

I. BACKGROUND[1]

A. Area Description

The Miami Valley Region includes the four counties comprising the Dayton SMSA (Montgomery, Preble, Miami and Greene Counties) and also Darke County. According to a 1973 estimate, the heavily urbanized area contains approximately 899,000 people.

Industries in the area are largely manufacturing, such as rubber, plastics, electrical machinery, paper and allied products, printing, and publishing. Agricultural and extractive activities occur in Darke County.

The area's predominant attitude of "pro-growth" was expressed by most interviewees. One citizen noted that the loss of manufacturing employment in the area contributed to the area's pro-growth climate. Along with the local interest in economic development, the State is also emphasizing growth. The WQM project staff expected this State policy to affect their WQM efforts.

B. Water Quality Problem

The Great Miami River has water quality problems in regard to domestic and industrial waste discharges in addition to stormwater runoff from urban and agricultural areas. The City of Dayton has an inadequate trickling filter system for wastewater treatment compounded by pretreatment deficiencies in the wastes of 21 industries discharging to the municipal system. The City of Dayton has an ongoing construction grants project for developing steps toward problem resolution.

Obtaining wastewater treatment for smaller communities is a high priority in the area, and generally, there was agreement that the WQM effort was weighted toward municipal wastewater treatment.

According to the MRVPC Pre-Application for Designation, fourteen communities have no treatment and seven small communities have combined sewer systems. The WQM Project Manager noted that local officials saw the WQM planning process as the path to the construction grants program or as "another federal carrot" for areawide planning which succeeds because of the area's need to meet mandated water quality standards. The County Sanitation Engineer felt the WQM project's emphasis on facility planning resulted in costly upgrading of facilities while pollution from other sources, including industrial and nonpoint contributions, continues. Dependency of the area on groundwater resources has caused attention to groundwater for contamination potential from septic tanks, inefficient municipal facilities, and leaching of sludge lagoons, and, to a small extent, to insufficient water supply.

Nonpoint sources of concern are largely urban stormwater and agricultural

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[1] Information in this Chapter was taken from the Miami Valley Pre-Application, May, 1, 1974, the Areawide Water Quality Issues in the Miami Valley Region, June, 1976 and interviews.

runoff. Dayton stormwater runoff contributes a large BOD load, and suspended solids, nitrate, lead and zinc pollution problems. Agricultural runoff is being examined in Painter's Creek and Spring Creek for a first-cut determination of the water quality problem according to a rural runoff model. However, one citizen noted the WQM projects' lack of data on the nonpoint pollution problem was such that the effort lacked a perspective on the relative magnitude of the point and nonpoint source problems. Generally, the WQM Environmental Engineer agreed that the nonpoint source data was particularly weak.

Protection of scenic rivers to prevent further degradation is an area water quality concern. The Little Miami River through Greene County is designated as a Federal Scenic River while the Stillwater River and Greenville Creek in Montgomery, Miami and Darke Counties are designated State Scenic Rivers. Although MVRPC is attempting to identify high quality waters, the WQM Environmental Engineer noted that Ohio has no antidegradation policies.

Interviewees generally agreed that water quality is a low priority in the area. The Chairman of the Water Resources Committee, the body advisory to the WQM project, believed the area's prevalent attitude was that the WQM planning effort "will not change anything". In a similar vein, a local citizen felt people were unwilling to pay the costs of cleaner water.

C. Designated Agency

The Miami Valley Regional Planning Commission (MVRPC) is a regional planning agency serving the five-county area. The service boundaries of the Commission are coterminous with the Ohio Planning Region 2A for which MVRPC is designated the Regional Planning and Development Organization. Membership in the Commission represents 98 percent of the area and 97 percent of the total population.

MVRPC has responsibility for the full range of regional planning functions including HUD 701, rapid transit and DOT transportation planning as well as housing, criminal justice and health planning activities. The WQM project is located within the Physical and Economic Resources Division which also performs planning services in land use, open space, solid waste, economic development, public finance, transportation and local community assistance. Within the agency, linkages among activities are achieved through the use of a common data base, staff meetings and a coordinating office for citizen participation. Coordination with the Regional Air Pollution Control Authority - which included the five-county area and Clarke County - is ongoing regarding the environmental impact assessment element of the WQM plan.

The MVRPC WQM Project Manager is the Deputy Director of the Physical and Economic Resources Division. He heads a WQM project team of eight professionals who provide the framework for directing and coordinating the subcontracted work elements.

Technical aspects of the plan are being developed under contract to the Water Conservation Subdistrict of the Miami Conservancy District (MCD). The Miami Conservancy District is a well-established public agency in the area concerned with flood control and water quality and headed by a three-man Board of Directors who are responsible for implementing determinations of a Conservancy Court of nine judges. In fact, because of its water quality expertise, MCD had been considered a candidate to direct the WQM project; the designation eventually fell to MVRPC due to its areawide planning expertise and political base, but with the locally imposed condition that MVRPC work in partnership with the MCD.

The MCD has received $750,000, or half of the entire grant, for water quality measurement, assessment and projections, along with the development of technical alternatives and their impacts.

Management analysis is being conducted by Linton & Company for $81,000 in close coordination with the MVRPC WQM staff. The WQM project staff has retained responsibility for population and land use projections as well as the environmental impact assessment.

The Ohio Environmental Protection Agency (OEPA) is involved in the WQM project through a contract of $33,000 for coordination of services. Although not required by the State, MRVPC sought these services as the need for coordination became apparent. Problems have arisen pursuant to State level conflict regarding personal services contracts and, as a result, the State WQM staff had been suspended for over one month at the time of the interview. According to the OEPA Environmental Planning Coordinator, this situation was expected to be remedied in the near future.

One of six WQM projects in Ohio, the MRVPC area is contiguous to the tri-State Cincinnati area WQM project, the Ohio-Kentucky-Indiana Council of Governments (OKI). OKI is also an early designate under the WQM program. Coordination between the two agencies is achieved by participation of agency representatives on their respective governing boards.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The WQM Project Director believed that the planning strategy was shaped by MVRPC's time schedule. The WQM application had been developed within a month of initial notification of funding availability. A month later, funding was received and MVRPC launched into its planning period in July 1974. With such a quick turnaround time, MVRPC found its "gearing up" time eating into the planning period. The WQM Project Director believed their necessary haste caused the work plan to suffer. It was not until December, 1975 that MVRPC learned of the six-month extension, but by then, compromises in the work plan had already been made.

All interviewees noted that the time constraint caused a considerable push to complete the process and consequently believed the product will be less than what was initially expected. The WQM Project Director indicated that the WQM project initially proceded according to the Act's intent but some adjustments were made in going through the process. The MVRPC Executive Director observed that the orginally planned "technical bite was more than they could chew" within the time and funding allotted. Both the MVRPC Executive Director and the WQM Project Director described the planning strategy as aimed at what was 100 percent locally acceptable and implementable rather than what may be intended by the Act. Both believed that the technical work can be done, although it is "haunted" by limited data, and their greatest concern was the time required for going through the political process to achieve commitments to the WQM effort.

Citizens and an appointed offical commented on the overall WQM planning strategy. All believed the project was focusing on certain problems and ignoring others. Two citizens believed the process was not sufficiently open to allow a prioritization of water quality problems and rather had assumed municipal facilities were the appropriate target. One citizen had hoped for determining the nonpoint source problem impact and an overall assessment of where area resources should be concentrated. The appointed official also criticized the project's emphasis on municipal facilities, as he felt costly facility improvements unreasonable while other point and nonpoint sources continued to pollute. He believed political pressure for area economic development caused the weak analysis of industrial pollution. He also believed the most overlooked aspect of the WQM effort was the need to address water quality problems economically. He believed "people must be given choices with the costs attached" and that the effort lacked a mechanism for determining cost-equalization. Consequently, he foresaw continued fractionalization of authority due to local politics and little improvement over past efforts.

As the Regional Comprehensive Plan was adopted just prior to the inception of the WQM process, the WQM Project Director believed the 1973 plan's goals and policies statements were adequate. Rather than repeat the goals process at the outset of the project, the WQM Project Director believed soliciting

goals input could be more meaningful in a latter stage of the process. He also expected a continual interchange among the area's planning programs would achieve a "refitting" for overall plan agreement.

B. Technical Component

Technical planning has concentrated on municipal point sources and agricultural nonpoint sources. Urban runoff and other nonpoint sources, e.g. pesticides and salts, have received less attention. The WQM staff noted that the subcontractor for point source analysis was not examining the industrial loads as much as it could.

MVRPC's rural runoff model is making a first-cut determination of the agricultural runoff pollutant contribution. Monitoring in rural catchment areas is proceeding by kinetic stream survey and grab samples. However, the WQM Environmental Engineer believed the nonpoint source data was particularly weak and noted that the technical effort had not distinguished a dominance of point over nonpoint source problems. He noted that budgetary and time constraints required that more thorough data needs remain unmet and a cut-off in the technical analysis was essential to allow staff attention to "selling the plan".

All of the interveiwees were uncomfortable with the technical planning components and noted that MVRPC has had considerable difficulty with the subcontractor for technical analysis, which is a well-established public agency in the area. The WQM Project Director noted that the subcontractor had not utilized their existing staff expertise but rather had employed entirely new staff for the WQM effort. Consequently, considerable delays in technical planning arose because of the subcontractor's "gearing up" time. Further delays in the entire process resulted from the subcontractor's belated generation of interim outputs. An appointed official believed the technical work was poor and that, as technical elements are "handed out in spoonfuls," it was difficult for those persons involved in the process to keep a perspective on the projects. A citizen was critical of the MVRPC for not initially writing a sufficiently binding contract to hold the subcontracting agency accountable.

C. Management Planning

As in the technical planning arena, MVRPC was pioneering in management planning far in advance of Federal guidelines and without any "model" efforts. MVRPC's particular approach was to examine existing legal, financial and management capabilities and experience. The management analysis has also identified 25 different legal authorities essential for realistic implementation. Comparing required and existing authority, no single agency possessed all of the authority expected to be required. The analysis recommends that the implementing vehicle may be some cooperative arrangement among local, region-

al and State agencies which is optimum in terms of benefits/costs and compatibility with proposed technical solutions.[1]

D. Public Involvement Program

The WQM advisory committee structure is central to the MVRPC's public involvement program. Three bodies have functional responsibilities for reviewing the WQM effort. The overall Commission, which governs the areawide agency, is the final WQM planning authority and has responsiblities for A-95 and WQM project review. The Commission is entirely composed of local elected officials. Input to Commission review tasks is made by the Water Resources Committee (WRC), which is the lead WPM advisory body, and the Technical Advisory Committee (TAC).

The WRC and TAC adopted a specific WQM output review procedure which defined the interrelationships of the full Commission, WRC and TAC.

- The consultant will submit draft copies of reports to the MVRPC staff.
- The MVRPC staff will review and comment on the draft reports and work with the consultant to produce a complete report.
- The MVRPC staff will present the complete report to the appropriate committee (TAC or WRC) with a staff recommendation.
- In the case of technical reports prepared by the Miami Conservancy District, the TAC will review each report and make a recommendation concerning it to the WRC. The WRC will, if it deems it appropriate, direct that the report be presented to the full MVRPC for final action.
- In the case of management reports prepared by Linton and Company, Incorporated, the WRC will review each report. The WRC will, if it deems it appropriate, direct that the report be presented to the full MVRPC for final action.[2]

In addition, the WRC regularly reviews facility plans, and water-related pre-applications for HUD community development grants. The WRC has reviewed an application to construct a low dam in the Great Miami River.

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[1] MVRPC, "208 Water Quality Notes", May, 1976

[2] MVRPC, "208 Water Quality Notes", December 1975

The WRC voting membership is 51 percent local elected officials and, in keeping with Commission policy, 25 percent citizens. TAC membership is primarily open to those having technical expertise, including public officials and citizens.

Citizen members were selected as part of MVRPC's overall process for appointing advisory committee members. This process involved soliciting nominations from 25 to 30 environmental and citizen-activist groups in the area. The Commission subsequently appointed citizen members to the agency's committees, of which the WRC is one. The WPM citizen coordinators, at one point in the project, sought to increase citizen members' attendance, and surveyed those citizens frequently absent from WRC and TAC meetings. If their participation was not possible, they were replaced by new appointments.

MVRPC utilized a series of activities to disseminate information and involve the public.

- MVRPC held a series of "Touch Base" meetings with public officials and organizations. Meetings with such groups as the Optimist Club, city recreation steering committees and river priority boards, were set up through public officials. WRC members often were part of the program which presented the WQM project and its potential impacts and provided for answering questions.

- MVRPC also solicited extensive public involvement in developing the land use sketch plans for input to the water quality analysis. In each community lacking a land use plan, MVRPC staff held meetings to collect local preferences for growth and land use patterns. The WQM staff noted 300-400 attended the meetings. Preliminary sketch plans based on community impact were reviewed by the community.

- In communities already having land use plans, MVRPC met with local officials to update plans to reflect real or anticipated growth patterns.

- The WQM staff designed a WQM display for the Dayton Horse Show, at which they distributed 4,000 brochures. The display was subsequently exhibited in several locations in the area.

- As part of its environmental education effort, WQM staff made presentations to high school classes.

- WQM staff conducted a random telephone survey of 250 area residents.

- The WQM project regularly publishes a monthly newsletter and disseminates information through brochures and newspapers.

- Thirty-second media spots were a recent public awareness effort.

- Summaries and full texts of all WQM reports are placed in public depositories, e.g. public libraries, university libraries and courthouses.

- MVRPC has also publicized a "Clean Rivers" public information telephone number.

The WQM Project Director noted that local elected officials plan an important role in the WQM process and he felt that the process had been designed to be responsive to officials. By ongoing contact with officials' administrative aides, the series of community meetings with local elected officials and full Commission and WRC involvement in the A-95 and WQM output review process, the WQM staff believed they had achieved officials' exposure to the WQM effort. Further, they believed increased officials' involvement had built upon MVRPC's record of extensive contact with its constituent governments. However, the MVRPC Executive Director and WQM Project Director felt that the WQM effort had failed to attain priority interest of officials. Rather, both saw officials primarily interested in Federal aid programs and less receptive to programs demanding local resource commitments without commensurate funding support. Moreover, the WQM Project Director believed areawide planning had historically achieved local support because of Federal funding and accordingly saw officials participating in the WQM project because they saw it as a path to gaining construction grants. On the other hand, the MVRPC Executive Director believed many technical people involved did not expect the Federal government "to be serious" about following through on the Act's intent.

Citizens and local officials, including the head of an operating sewer agency, commented on the involvement of local elected officials. All agreed that local elected officials had little grasp of the WQM program and were participating in the effort in anticipation of its ties to future Federal funding programs. A county official stated that the prevalent attitude among public officials was that the WQM program "would not change anything". An appointed official believed officials did not expect Federal backing of the WQM program, but rather believed the Federal government "was running a bluff" such that officials were not taking the WQM project seriously. He also noted that officials were not in frequent attendance at WRC meetings. Seeing this vein, an official serving on the WRC, believed local officials have limited time to devote to the WQM project, as they serve voluntarily in their elected capacities. A citizen noted that officials were not publicly stating support for regional planning or for the MVRPC.

Overall, the WQM staff experienced satisfaction with the public involvement

effort insofar as they had made the best effort possible. They also believed the successes of their efforts would contribute to improved public participation in other areas. However, the WQM staff felt they could not assess how effective their efforts had been and the MVRPC Executive Director stated that "still, for the amount of effort, (he) saw little change in the degree of public interest" in the WQM project. On a more positive note, the MVRPC Executive Director believed the data generated by the project has heightened an awareness of the longer term effort and commitment required to guide growth.

The WQM staff noted the difficulties in achieving citizen participation in long-range planning. One difficulty was retaining interest in the effort without immediate tangible outputs to which the public can react. Second, the number of past or present goals-setting programs in the area, e.g. Bicentennial Horizons, Model Cities, has contributed to a local emphasis on tangible results. Third, the delay in technical planning caused outputs to be available for review only in the latter project stages. These delays have caused the most important aspect of public review - the alternatives screening process - to be squeezed into a six-week period. Finally, the MVRPC Executive Director believed the WQM project was still "unable to answer a lot of hard questions".

The citizens and public officials interviewed also commented on their involvement in the WQM effort and generally expressed some frustration with programmatic and time constraints which affected their involvement as well as some criticism of MVRPC's public involvement strategy.

- All noted the voluminous amounts of material to be reviewed by the WRC and TAC precluded thorough study, and that the time constraint forced them to pass outputs quickly through the review process in order to meet the completion date.

- Three citizens did not feel that their comments were being incorporated into the project and believed the time constraint largely at fault.

- A county official believed his input was received and used to the extent that it fit into the staff's perception of the WQM program.

- One citizen questioned why the MVRPC citizen coordinators seemed outside of the planning process and development of the plan. She was concerned with overall program coordination and communication among the various parties involved in the WQM project.

- Three citizens believed MVRPC should be concentrating more on building the public as its constituency and accordingly initiate more outreach efforts.

- One citizen was concerned with how a continuing citizen participation effort would be structured and wanted more discussion of this aspect of the process.

An Ohio Environmental Protection Agency (OEPA) official also commented on WQM public participation efforts. He generally believed regional agencies could not achieve large scale public education and must be heavily supplemented by massive public relations programs. He believed this was appropriately EPA's role and that overall public education had been "a huge void" in the WQM program.

E. State and Federal Involvement

As an early designate, MVRPC has not operated under the EPA controls that later WQM projects have experienced. Initially, MVRPC received little guidance from EPA. The WQM Project Director noted that this was a cost as well as a benefit of being an early project, insofar as there were no model projects to follow but also fewer restrictions. He felt that MVRPC could have used management guidance as they proceeded to expand functions. At this point, he did not desire additional EPA guidance and "just wanted to get through."

The EPA Region V Project Officer has a good relationship with MVRPC. She attends WQAC meetings and makes frequent contacts by telephone. She also serves as the project officer for the contiguous WQM project in the Cincinnati area which fosters coordination between the projects.

The State of Ohio became involved in the project about one year after the MVRPC WQM effort was underway. MVRPC sought State involvement in July, 1975 following EPA funding authorization for State participation. EPA increased MVRPC's WQM planning grant to cover the $33,000 contract with Ohio for coordinative services. The Ohio Environmental Protection Agency (OEPA) provided a liaison person to MVRPC. However, at the time of the interview, the OEPA Liaison had been temporarily suspended due to legal problems with State personal services contracts, but was expected to be reinstated in the near future.

The WQM Project Director indicated that the State has been minimally involved in their efforts. He believed State involvement was limited by current State administration policies of attracting economic development. This policy rendered WQM planning a low state priority. He felt State policy affected WQM planning insofar as the State encouraged municipal facilities plans to provide excess capacity to allow for growth potential.

Although the OEPA Environmental Planning Coordinator believed that two early designates, MVRPC and the Cincinnati area WQM project, had the greatest likelihood of success, he was dissatisfied with the limited State participation in the early designated WQM programs. Primarily, he felt that EPA, in the program's first year, provided no vehicle for State involvement and has felt very excluded from all designated WQM efforts in Ohio. He did not feel that State input was being used by the agencies, although the agencies were responsive to State comments. He also noted that EPA Region V Project Officers for these early agencies do not make an effort to keep OEPA informed. He also

felt that there was animosity between State and EPA levels of involvement such that the designated WQM agencies were uncertain as to "whom they have to please". OEPA has just recently received funds for State WQM planning. Ohio has completed no basin plans, but has determined wasteload allocations for NPDES purposes. The OEPA Environmental Planning Coordinator did not expect the State to assume the designated WQM agency's functions. Rather, he expected that State-local shared WQM responsibilites would enable a review of construction grant and NPDES programs for compatibility with locally established priorities. He did not see OEPA's role to include recommending legislation.

F. Scheduled Outputs

MVRPC has scheduled outputs in three phases:

- Background information;
- Technical/Management alternatives and their impact assessments; and
- A final document describing the selected alternative.

The second phase of the project is just being completed and MVRPC's full Commission review is slated for October. Project completion is expected by January 30, 1977.

The WQM Project Director noted that the technical planning had been seriously delayed. The subcontracting agency for technical planning undertook their work tasks with a new staff rather than using their existing expertise and the start-up of their efforts was fully one year behind schedule. The WQM Project Director also felt the subcontractor had not understood the overall planning process which requires their continual reporting for review purposes. Consequently, the MVRPC had considerable difficulty in eliciting interim technical reports from the subcontractor.

The delays have caused a heavy output review schedule for the advisory committees in order to meet the required project completion date. Several WRC committee members had expressed the need for more review time, but recognized that project funding carried the project only to the end of January.

G. Achievements to Date

MVRPC has produced several background reports such as population and land use projections and environmental baseline information. The draft population and land use projections were completed in June, 1976 and approved by the Water Resources Committee.

The WQM Project Director believed the population and land use effort had been a particular achievement from the aspect of putting all area planning efforts on a similar base of reasonable scale, and of achieving considerable public input as to local preferences for growth and land use. The population and land use input to the WQM effort was based on information collected by the MVRPC and extensive community participation. For communities with previously adopted land use plans, MVRPC sought to update plans to reflect real or anticipated growth patterns and achieved this through discussions with local elected officials. For communities without previous land use plans, MVRPC held 18 community meetings to seek citizen and public official input regarding future growth. This information was incorporated into land use sketch plans. All communities received prelimiary land use plans in the year 2000 for review and further input. Preliminary plans were also distributed in local newspapers. Local observations were then incorporated into the land use patterns and delineation of service area boundaries.

In addition, the total management package has been completed and approved by the Water Resources Committee. The eight reports will be released simultaneously as a full text and as summaries for lay distribution.

- A review of federal programs impacting regional water quality management;[1]
- A review of state agencies impacting regional water quality management;
- A review of regional agencies impacting regional water quality management;
- A review of local agencies impacting regional water quality management;
- Experience and potential for regional water quality management;
- Financial critical factors analysis;
- Legal critical factors analysis;
- A review of critical factors impacting regional water quality management.

Eleven technical reports have been produced by the subcontractor for the technical planning component and are being reviewed by the advisory committees. Summaries of these reports will also be available for lay distribution.

- Existing water Quality Data,
- Climatic Data,

[1] EPA Headquarters has distributed this report to all State and designated WQM programs.

- 1975 Point Source Waste Discharge Loads and Stream Data;
- Inventory and Evaluation of Nonpoint and Intermittent Point Source Controls;
- Water Resources and Critical Dry Weather Criteria;
- Design of Sampling Programs, Data and Analysis for Nonpoint and Intermittent Source Loadings;
- Land Characteristics, Stream and Basin Parameters;
- Inventory and Evaluation of Point Source Structural and Nonstructural Controls;
- Application of Point Source Wastewater Controls;
- Application of Nonpoint and Intermittent Point Source Wastewater Controls; and
- Water Quality Models.

III. EXPECTATIONS

A. Water Quality

Most interviewees expected some improvement in water quality, although an appointed official was uncertain if the WQM effort would have any effect. The WQM Project Director stated that the WQM process would reveal the best way for achieving improvement, but actual improvement depends on "the will and the push" to take necessary actions. An elected official and two citizens expected improvement primarily through upgrading municipal facilities and generally agreed that the NPDES and construction grants programs were already achieving point source improvement. There were mixed expectations regarding nonpoint source improvement. An appointed official and two citizens did not expect the WQM project to impact the nonpoint source problem. On the other hand, two elected officials expected nonpoint source improvements which one official believed would be achieved through educational efforts in concert with SCS and Farm Bureau functions.

The OEPA Environmental Planning Coordinator felt improvement would be achieved through the review of construction grants and NPDES permits for compatibility with locally established priorities and he expected such review would institute a better processing mechanism available to both State and local efforts.

No one believed the 1983 goals would be achieved and most questioned whether the goals of fishable, swimmable waters were reasonable or realistic. The MVRPC Executive Director believed water quality goals would have to vary by use of the water body. He also postulated that reliance on local funding resources for WQM efforts precluded meeting the 1983 goals. He also was uncertain whether the State would be willing to support WQM plans aimed at achieving the goals insofar as such plans may be incompatible with current State economic development policy.

B. Plan Approval and Implementation

Interviewees were asked to state their expectations for plan approval. All believed some form of a plan would be adopted by the Commission. The WQM Project Director indicated that the entire design of the WQM planning process was aimed at producing a locally approvable plan, although he did expect some towns to accept the plan less readily. He noted that the major "selling" point of the WQM plan was its emergence from a locally-based process and the MVRPC Executive Director added that the plan's flexibility was another important factor in gaining local approval. Although a local elected offical actively serving on the WRC believed a locally created plan would be acceptable, he stated that most officials felt the plan had yet to be an integrated whole and, while parts of the plan received seem "innocent separately", the delineation of management responsibilities may be controversial. Two citizens agreed that local versus regional management was sufficiently controversial

to cause plan recommendations to reflect the preferred local control. One citizen also expected the plan to skirt politically sensitive land use elements.

Several interviewees also commented on local officials' involvement in the WQM process which may affect plan approval. An appointed official expected some officals to be "surprised at the time of (plan) adoption", because, to date, they have not actively participated in the process or taken the WQM effort seriously. He also expected the area's largest municipality may be reticent in approving the plan. A citizen believed officials would assess the plan's acceptability in terms of its ties to funding eligibility for the construction grants program. Another citizen expected some difficulties for plan approval to arise from a turnover in elected officials following the November, 1976 county elections. As the plan approval process is to occur on the heels of the election, continuity in local support may be affected.

Most interviewees expected State approval of the plan. The WQM Project Director felt ongoing State participation assured a high probability of State approval. The Ohio Environmental Protection Agency (OEPA) official also expected State approval to be no problem.

To the WQM Project Dirctor and MVRPC Executive Director, plan approval and plan implementation were somewhat inseparable in the WQM planning strategy. They underscored MVRPC's explicit directive to local officials to approve plan components only if they expect to locally implement them. Accordingly, the WQM Project Director and MVRPC Director expected to solidify political support for incremental and realistic steps toward water quality problem resolution rather than for a politically unrealistic, comprehensive effort. In addition, the MVRPC Executive Director stated that MVRPC did not intend to commit political suicide by offering a locally unacceptable plan.

Other interviewees were also asked to speculate on the outlook for plan implementation. Most, including the WQM Project Director, expected EPA sanctions to play a major role in the extent of point source problem correction, particularly ties between the WQM plan and the construction grants program. In this vein, a local elected official believed implementation would occur to the extent it is mandated. He believed opposition to increased sewerage rates for upgraded facilities would be subordinated only as local governments are "forced" to improve them. However, this official as well as a head of an operating agency believed the prevalent attitudes among local officials were that the Federal government was "running a bluff" and the WQM program would not be backed with enforcement authority. Consequently, he felt that it "would not change anything."

Most interviewees were uncertain what nonpoint source controls would be locally undertaken, but generally did not expect the WQM plan to have a significant impact on the nonpoint source problem. The MVRPC Executive Director, the WQM Project Director and the Environmental Engineer believed

the weakness of the nonpoint source data may not sufficiently demonstrate the nonpoint source problem to their local constituency. The MVRPC Executive Director added that the uncertainty surrounding future 701 comprehensive planning funds complicated their ability to "see" the WQM program in light of a compatible local planning process. Commenting on MVRPC's overall capacity to interrelate land use and water quality planning was one citizen who saw MVRPC currently terminating its WQM staff such that the necessary expertise was being lost. She also observed that the WQM program provided no incentive for local governments to implement nonpoint source measures, but, nevertheless, MVRPC should have made an effort to work with agricultural and construction industry interests. A local elected official did not expect local governments to readily accept water qulaity as an important factor in land use decision making although he believed the WQM plan may have some informational impact.

Overall implementation concerns focused on the predominant attitude of retaining local control. One local elected official favored regional water quality actions but another official summarized local officials' attitudes toward WQM as "wanting a plan with the least amount of interference in local decision making" and consequently officials were "suspicious" of regional planning. With this latter view, three citizens agreed there was "no great publicly stated support for MVRPC" as local officials perceived regional planning to threaten the erosion of local authority.

Two additional factors cited by several interviewers as limiting plan implementation were costs associated with water quality improvement and pro-growth attitudes. The MVRPC Executive Director expected Federal funding shortfalls would restrict plan implementation and, in addition, doubted that local government would commit local resources to a long range plan without knowledge of their future bonding capacities. Three citizens believed development pressures would work against plan implementation, particularly as State policy explicitly encouraged economic development.

A key component of implementation is the management structure. According to all interviewees, the designation of management agencies was a politically sensitive issue. The WQM Project Director expected management to consist of intergovernmental cooperation in assuming different roles. He believed no new agencies were feasible in the short term, because the new experience of integrating the many processes involved in WQM precluded the practicality of simultaneously shifting the area's political balance. However, most of the non-staff interviewees believed the MVRPC and the Miami Conservancy District (MCD) were vying for lead management responsibility. Several interviewees noted the history of the MVRPC-MCD relationships in WQM. Both had sought designation as the WQM planning agency. MVRPC met EPA guidelines for designation although lacking the water quality/technical expertise of the MCD. Provided that MVRPC and MCD share the WQM planning functions, local

governments agreed to MVRPC's lead responsibility. Hence, the MCD was to provide the technical planning component. Although most non-staff interviewees maintained the two agencies were seeking management agency designation, an appointed official heading the TAC expected no umbrella agency would emerge. Rather, he believed management functions would possibly be divided among the MCD, City of Dayton, and Montgomery County and, if funds are available, continued planning may fall to MVRPC. A local elected official opposed management by a regional planning agency, especially if the agency had veto power over local decision-making.

The WQM Project Director commented on existing and needed authority for plan implementation. He stated that the plan will be predicated on existing local authority and agreed with a local elected official that implementation cannot depend on new legislation. However, he believed that MVRPC could begin legislative activity if the Commission so moved. In any event, he felt a locally adopted WQM policy must precede legislative considerations.

The OEPA Environmental Planning Coordinator expected a need for extensive legislation although he had not yet examined what authority currently exists. He did not expect any legislative activity for at least one year and did not view recommending legislation as an appropriate State role. Contrary to the OEPA's position were two state legislators' view that the State should be working toward needed legislation.

The two Ohio State Legislators interviewed have had no involvement with or awareness of the WQM program. Their perceptions of various WQM roles and responsibilities in regard to legislation is given in Section IVE.

C. Continuing Planning Process

Interviewees expectations for continuation of the WQM planning process after the initial funding period were closely linked to three factors: extent of local support, Federal funding, and EPA requirements. Most interviewees were skeptical that local support exists for continued planning due to the low priority of water quality planning and dubious support of areawide planning efforts. The WQM Project Director stated that "the WQM program is naive' and "pretends that a commitment to broadscale areawide planning exsists." A citizen and elected official noted that MVRPC's support is under continued threat, as certain member governments have intermittently threatened to withdraw from the regional commission. Their actions were noted to be predicated by conflicts surrounding regional versus local decision-making. In this light, an appointed official did not expect continuation of WQM planning and an elected official believed continuation would be locally supported to the extent that their support is mandated. A citizen also noted that obtaining local support was complicated by the upcoming county elections which affect a significant portion of the officials serving on the Commission and WRC.

All interviewees expected continuing planning to depend on substantial Federal funding support, with perhaps some local and State contribution. An elected official believed local contributions would be commensurate with the local share required for eligibility for construction grants programs. The WQM Project Director indicated that no local funding sources had been committed to continuing planning but postulated several possible sources. These included a fee structure attached to the construction grants program and contracted services.

The OEPA Environmental Planning Coordinator saw the WQM program as appropriately regional and not as a State function. However, the State of Ohio will share responsibilities with designated WQM agencies in the State's continuing planning process which the designated agencies had a major role in generating. Issues of a continuing nature were water quality standards, wasteload allocations, and plan update among others not yet identified. The focus of the continuing process, in his view, depended on the success of the WQM effort.

The WQM Project Director and MVRPC Executive Director outlined several issues the continuing planning effort might address, although they expected the design of the process to reflect the available funding support. These are:

- Update plan;
- Integrate further the construction grants programs currently underway;
- Verify results of agricultural and urban stormwater runoff portions of technical planning;
- Define annual financial responsibilities; and
- Develop process whereby growth can be evaluated through impact assessment and ameliorate potential conflicts with other policies, e.g. housing.

The MVRPC Executive Director added that a reduction or elimination of 701 comprehensive planning funds would affect the scope of the continuing planning process, e.g. data.

The WQM Project Director estimated that a minimum of $150,000 was necessary to continue the WQM planning function and that the ultimate cost would depend upon the continuing planning roles assumed at the local, state, and Federal levels. Both the WQM Project Director and the MVRPC Executive Director were concerned with continuity of the planning process and believed MVRPC would, as a minimum, require a token force for transition purposes.

D. Relation to Other Water Quality Programs

The WQM Project Director outlined the MVRPC's approach to working simultaneously with ongoing construction grants programs in the area and with the WQM planning project. The process combines A-95 review and WQM planning responsibilities. The WQM staff is involved in every step of reviewing and approving ongoing construction grants projects, which involves providing information, suggesting alternatives, and assessing the construction projects in terms of their compatibility with the emerging areawide WQM plan. Following staff review, the water resources committee (WRC) studies the construction project and after full Commission review and formal approval, the construction project becomes an adopted portion of the regional plan. The WQM Project Director believed that the process had a significant impact on meshing the ongoing construction grant and WQM projects such that no ongoing construction grant projects had precluded WQM alternatives. The MVRPC Executive Director added that he hoped this process would be consistently supported by State and Federal actions.

Other local interviewees generally expected the WQM effort to impact the construction grants program. However, the head of an operating facility said that he was discouraged with the interrelationship of the two programs and was uncertain that the programs could effectively mesh.

Regarding the NPDES permit program, the WQM Project Director hoped future permits would reflect any modifications indicated by the study's findings. Specifically, he expected findings regarding the nonpoint source problem may evoke pressure to modify the wasteload allocations. Other interviewees either expected some general impact of the WQM project on the NPDES program or deferred the matter to a State concern.

The OEPA Environmental Planning Coordinator stated that most WQM efforts in Ohio were out of phase with issuing the next round of NPDES permits and generally did not expect timely input from the WQM agencies, although he felt that WQM would institute a processing mechanism for reviewing the compatibility of both construction grant and NPDES permit programs with locally established priorities.

E. Local Definition of Success

Most interviewees defined a success for the WQM effort in terms of a plan/process which is useful to local decision-making and enhances public understanding of the water quality problem.

- The WQM Project Director emphasized the development of a realistic management structure.

- The MVRPC Executive Director believed that the WQM project would be successful if there is sufficient continuity, e.g., staff retention, following plan completion to take steps toward plan implementation. He also believed a successful outcome would be EPA-State-local agreement on the WQM plan and their alliance in future WQM steps.

- One elected official saw success as a plan that achieves the WQM program goals, is acceptable to local and regional interests, and functions within the framework of existing statutes. Another official saw a success simply as a well thought out plan.

- An appointed official considered success in the form of an understandable, reasonable plan used as a guide by affected agencies.

- One citizen viewed a successful WQM effort as a comprehensive assessment of the water quality problem, including water supply and development of a process by which local decision makers are informed of the impacts of potential development. She hoped the plan would establish parameters for various types of development and indicate the best manner for addressing development impacts.

- Two citizens defined success in terms of increased awareness of the need for improved water quality and the associated costs.

- The OEPA Environmental Planning Coordinator defined a success as aggreement on a plan/process, acceptance by the Governor and any substantial portion of the plan which can be implemented within six months.

Interviewees also cited benefits generated by the WQM planning project. These generally fell into the following four categories:

- Greater intergovernmental cooperation;

- Progress in new technical areas, e.g., nonpoint sources and land capability analysis, which are tools for better local planning for growth;

- Increased public and political awareness of the water quality problem through efforts to involve citizens and local elected officials;

- Better regional planning through becoming articulate with local officials in the water quality arena and developing a process for public participation.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM Project Director and the MVRPC Executive Director agreed that the WQM planning strategy was formulated to produce a 100 percent locally acceptable and implementable plan. Accordingly, they viewed MVRPC's role as serving the interests of local governments, although the WQM effort may fall short of the Act's intent. They both noted that the major "selling" point of the areawide WQM effort was its locally-based, flexible process. They expected to solidify political support for incremental and realistic steps toward water quality problem resolution rather than for a politically unrealistic, comprehensive effort. The MVRPC Executive Director added that MVRPC did not intend to "commit political suicide" by proferring a locally unacceptable plan.

Both noted that the MVRPC staff is advisory to the Commission which has final authority in A-95 review as well as WQM planning review. He cited the Commission's role of reviewing all ongoing construction grants programs as exemplary of the officials' involvement in water quality decision-making within the emerging areawide WQM context. Further, the WQM Project Director saw his staff's role as coordinating planning activities in the area and attempting to "sensitize all decision-making processes to water quality issues."

The MVRPC Executive Director and the WQM Project Director expected MVRPC to provide further coordinative services in the continuing planning process, although the scope of the continued WQM planning effort would be defined by the available funding. At a minimum, they were concerned that MVRPC should retain a transitional staff following the project's completion such that continuity is not lost.

A WQM staff member was also concerned with continuity. He noted that, with time and funding running short, various members of the WQM planning staff were being released and others were continually uncertain of their position's longevity. Consequently, he felt staff morale was suffering just at the plan review and approval stage when staff commitment to the project was most important.

B. Citizens

The three citizens interviewed were active on the WQM advisory committees with two serving on the Water Resources Committee (WRC) and one on the Technical Advisory Committee (TAC). As noted in Section IId, all three citizens generally expressed some frustration with programmatic and time constraints which affected their involvement. Due to project output delays

and the resulting condensed report review period, they did not feel that their comments were being incorporated into the WQM project. They also noted that the massive amounts of technically complex material to be reviewed by the TAC and WRC precluded adequate, study and the approaching completion date forced the committees to quickly adopt reprots with only cursory review.

The three citizens also were concerned with the overall public involvement program. They generally agreed that MVRPC should be concentrating on reaching the public to build a WQM constituency. One citizen questioned the role of the WQM citizen coordinators which was seemingly outside of the process of developing the plan and therefore was concerned with the overall effectiveness of communication among the parties involved in the WQM project. She also noted a lack of attention to a continuing citizen participation effort following the plan's completion.

They also commented on the involvement of local elected officials. Each of the three citizens believed that public officials yet had little grasp of the WQM effort and were participating only in anticipation of the future WQM program ties to the construction grants program. They also noted that the officials had not evinced support of regional planning efforts and were "suspicious" that the regional project threatened an erosion of local authority. Consequently, they expressed skepticism regarding the likelihood of local implementation of a significant portion of the plan.

Tied to their view of public officials as MVRPC's primary WQM planning constituents, was the belief that the WQM planning strategy reflected the most politically expedient route to gaining officials support. Accordingly, they observed the plan emphasizing municipal facilities and avoiding the potentially controversial nonpoint source problem which implies land use controls. The area's pro-growth attitudes were cited as the crux of the controversy. In addition to the limited attention to the nonpoint source problem, all three citizens were critical of the overall quality of the technical planning components.

C. Local Elected Officials

Two local elected officials, a county engineer and a mayor, were interviewed. Both serve on the Water Resources Committee and felt that their views had been considered to some extent, although one county official believed his input was used to the extent that it "fit the staff's perception" of the WQM program. The county official also commented that local elected officals were participating in the WQM effort only because of its expected future ties to the construction grants program.

The two officials were involved in the Committee's report review process. They both believed the condensed time for review may affect the quality of the final plan. The county official added that the plan's components, as they are reviewed separately, appear "innocent" and he had reservations re-

garding the acceptability of the integrated plan, particularly the management component. Although the Mayor, who presided over a growing bedroom community outside Dayton, favored regionalism, the county official strongly believed the areawide attitude advocated local control such that the WQM plan should advise local governments and proffer the least amount of interference in local decision-making. However, the county official also foresaw local implementation of the plan to occur only to the extent that it is mandated. Although he expected the plan may have an informational impact on land use decision-making, he did not believe public officials would readily accept water quality as an important factor in land use decisions.

D. Appointed Official

The appointed offical interviewed was a county sanitary engineer who served as chairman of the Technical Advisory Committee and member of the Water Resources Committee (WRC). In his role on the advisory committees, he has had considerable report review resonsibilities and, in his professional capacity of heading a county operating agency, he expected to assume some management responsibilities as part of an intergovernmental cooperative arrangement.

Overall, he was critical of the technical planning components in terms of quality and focus, and the process by which the advisory committees review technical reports. He believed that "obvious problems" were being overlooked, particularly industrial pretreatment inadequacies, which he felt were due to the political pressure for economic developments in the area. He felt the result was an overemphasis on municipal waste, which would be upgraded at great cost while other pollutant sources continued unchecked. He also emphasized the fact that the WQM project lacked a mechanism for assessing equalized costs, and that the WQM project "will not tell us the cost" associated with alternatives. In regard to reviewing technical reports, he stated they were "handed out in spoonfuls" such that the committees could not maintain a perspective on the WQM project. With the heaviest review demands at the end of the process, he faulted the time constraints of the WQM project with forcing the advisory committees to quickly approve reports so as not to cause further delay in light of the rapidly approaching deadline for completion.

He observed that the local officials on the WRC were not attending, nor seemingly taking, the WQM effort seriously. He expected "a point of realization" when the time for WRC and Commission adoption arrives.

E. State Legislators

One of the two Ohio State legislators interviewed was a State Senator and Majority Whip who also served on the Senate Energy and Environment Committee. He has had no involvement with the WQM program and has not been contacted by any WQM agencies. He felt that his awareness of the program was limited and

noted further that the legislature is generally not aware of the WQM program or its objectives. He strongly recommended that attention of legislators might be gained if the program were presented to them in a form retainable for future use and which highlights the fact that related legislation may be required. He felt that water quality was not a priority issue in the legislature. He generally saw legislative and public support for the protection of industry, although he saw support for upgrading and regionalizing municipal systems. Recent legislative land use study committee hearings were noted to have received considerable testimony opposed to land use controls.

A freshman representative to the Ohio House of Representatives also had not been contacted by any WQM agencies and had no awareness of the WQM program. She felt it was the responsibility of the WQM agencies to keep legislators informed. She felt it was OEPA's responsibility to suggest any needed water quality legislation, but believed present State administration's priorities for attracting jobs and industrial development may conflict with water quality objectives.

F. State Water Quality Personnel

The Environmental Planning Coordinator was dissatisfied with OEPA's limited participation in MVRPC's efforts which he felt was caused by EPA delay in providing a vehicle for state involvement. Although MVRPC was responsive to State comments, he did not feel that State input was bing used. He also felt that there was animosity between State and EPA involvement, such that the designated WQM agencies were uncertain as to "whom they have to please."

Although Ohio is just beginning State WQM planning, the OEPA Environmental Planning Coordinator expected continuing planning to be a State-local shared responsibility. He viewed the designated WQM plan, based on locally established priorities, to provide input to the construction grant and NPDES programs. He did not see OEPA's role to include making legislative recommendations nor to assuming designated WQM functions. He voiced several major criticisms of the WQM process. He felt that EPA has not worked toward massive public education and participation which he felt was essential given the low level of awareness of the water quality problem and the limited ability of the agencies to reach the general public. He also felt that the relationship between water quality and water supply had not been emphasized and noted that State planning for nondesignated areas will encourage the incorporation of related water supply and solid waste elements.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

Speculation regarding the outlook for plan completion is couched in terms of the rapidly approaching January 30, 1977 termination date. Considerable delays in producing technical planning outputs (noted to be caused by the subcontractor's "gearing up" time and recalcitrant generation of interim reports) have caused a squeeze in the final planning stages. This is felt particularly in the output review process involving the advisory committees. Because of time constraints, MVRPC's schedule for advisory committee screening of alternative plans prior to public hearings does not allow for any flexibility. Should the advisory committees balk at immediate endorsement of the alternatives, MVRPC may experience an untimely setback in the extensive public hearings already scheduled for November and December. Any setbacks in the public review of alternatives would render a pessimistic outlook for a final plan approval process in January.

For this reason, an MVRPC staff member noted that MVRPC and concerned State officials were meeting to consider the feasibility of additional funding. A six-month funding period beyond the original January termination date would enable MVRPC to have the flexibility necessary for a throught and responsive review process. In this event, if the advisory committee and public comment did require alternatives and final plans revisions, MVRPC would not be faced with the dilemma of releasing its WQM staff due to funding shortfalls just as their expertise was most essential.

In light of the above, the final plan approval process over the six-month extension may allay some of the concerns voiced by the public officials and citizens serving on the advisory committees. To date, they had felt the condensed process for reviewing the massive amounts of technically complex material resulted in only cursory study and hasty approval of the reports to expedite the plan's completion within the funding period. Further, as two public officials noted, up to this time the Committee's exposure to the plan components has been piecemeal and has lacked a perspective of the WQM project. Consequently, a totally integrated plan will likely require thorough study and discussion prior to plan approval. The lengthier review period will allow a fully responsive process to occur. This seems especially imperative given interviewees's opinions that local elected officials have not been actively participation in the WQM project. The situation is complicated by the county election, affecting a good number of the Commission members. A January approval date would collide with the officials' turnover period and force a vot ewithout sufficiently exposing the new officials to the WQM effort.

However, interviewees did expect some form of a plan to be approved and generally noted that the planning strategy had been designed with the aim of gaining local approval. Non-staff interviewees had commented that the strategy reflected a WQM approach which was most politically expedient, skirting

politically sensitive issues such as land use. This strategy was likely to recommend a management structure built on existing local authority, and emphasising municipal treatment. The WQM Project Director as well as several local officials interested and support.

At this point, the outlook for implementation is highly uncertain. Most interviewees, including the WQM Project Director, expected EPA sanctions to affect the extent of point source problem correction. The case was stated more strongly by an elected official who expected that meeting Federally imposed requirements may be the maximum action taken by local officials. Regarding nonpoint sources, most expected little impact of the rather weak data on local decision-making. Even if the data could demonstrate the water quality impact effectively, the development pressures in this pro-growth area would pose a considerable obstacle to instituting nonpoint source controls. As a citizen noted, there is not incentive for local government to implement nonpoint source controls; and her view was somewhat confirmed by a local official's statement that local governments may not readily accept water quality as an important factor in decision-making. Nonetheless, MVRPC has provided the are with population/land use projections based on extensive local input. Together with the land capability analysis, the projections offer a generally agreed upon basis for future local decison-making in many areas related to water quality. The WQM Project Director stated his belief that the WQM project can only show a way to handle water quality problems. Hence, the WQM project provides tools useful to local governments, but cannot direct how the information is used.

B. Public Involvement

To date, most of MVRPC's public involvement in shaping the WQM project has remained at the level of the advisory committees. Their ongoing role in reviewing WQM outputs and water-related A-95 reviews has provided some opportunity for input to the project, but that input has been constrained by the limited planning period. Delays in technical planning components have caused an unfortunate bunching of review responsibilities close to the end of the project, such that adequate committee review of the plan's components was precluded. Interviewees' comments indicated some frustration with the hastily processed reports whose technical complexity seemingly demanded more thorough study. Consequently, the WRC and TAC members interviewed seemed to be left wondering if their comments had or could have any impact on the rapidly developing plan. A six-month extension which is being considered for funding by the State would alleviate some of the stress in the important phase of evaluating plan alternatives as well as final plan approval.

The advisory committees have not provided the only input to the WQM effort. MVRPC conducted a laudable outreach effort to involve the public in developing future land use sketch plans in areas lacking plans and to work with officials in updating existing plans. They also provided opportunities through telepnone surveys, "touch base" meetings, the use of media as well as other tactics to solicit public comment. But the question remains, as to how effective these efforts have been. Noteworthy is the MVRPC Executive Director's comment that, for the amount of effort expended by MVRPC to reach the public, he saw little change in the degree of public interest in the WQM project. As tangible, integrated WQM alternatives became available for public review and were presented at public hearings, MVRPC hoped to elicit more public response. However, it is not clear whether the time constraints of the process, even with the six-month extension, will allow for the area's range of constituents (public officials, interest groups, and the gneral public) to digest and react fully to the WQM plan. As plan implementation is seemingly contingent upon the willingness of the public to pay for improved water qualty (e.g., increased sewage rates) public education regarding the water quality problem is paramount to corrective action.

C. Current Planning Process

As an early designate, MVRPC has not been subject to the EPA directives affecting later WQM planning efforts. This was, as stated by the MVRPC Executive Director, both a benefit and a cost. Lacking models after which to pattern their efforts, MVRPC was a pioneer project and vulnerable to mistakes. Scheduling was difficult for MVRPC to handle without adequate time for full preparation. MVRPC also had no knowledge of the "startup" time extension until midway through the process. At the outset MVRPC initially proceeded according to the Act's intent, and its strategy did change as the program proceeded.

The WQM staff defined their approach primarily as developing a flexible plan based on local preferences. The WQM Project Director and MVRPC Executive Director emphasized that the strategy was aimed at producing a 100 percent locally acceptable and implementable plan. Accordingly, they expected to solidify political support for incremental and realistic steps toward water quality problem resoulution rather than to offer a comprehensive approach which they deemed politically unrealistic. Considering many interviewees' comments they regional actions did not meet with widewpread local support, and MVRPC's own statement that MVRPC did not intend to commit "political suicide" by making unacceptable recommendations to local governments, it is small wonder that MVRPC assumed a conservative role in WQM planning. MVRPC cannot be faulted for its stance in light of the frequently mentioned local attitudes of pro-growth and local control which presage considerable political sensitivity to stronger and more sweeping regional actions.

Two citizens believed the planning process insufficiently open to allow for a prioritization of water quality issues and that MVRPC rather had "assumed" a proper focus on municipal facilities. Further, an appointed official believed costly facility improvements unreasonable while other point and nonpoint sources continued to pollute.

The quality of technical planning haunts the WQM project. All interviewees expressed disappointment with the outputs of the subcontracting agency, the Miami Conservancy District (MCD), as well as MCD's large role in causing delays in the entire planning process by its belated generation of outputs. In addition, the WQM staff noted that the nonpoint source data was particularly weak. Overall, the MVRPC Executive Director summarized the technical dilemma as an analysis constrained by the two year planning period and perhaps insufficient "to answer a lot of hard questions."

D. Continuing Planning Process

From interviewees' comments, the outlook for continuing planning is not highly promising unless Federal funding is avialable or a continued planning function is ideally mandated. No one believed local support is sufficient to carry a continued planning function, primarily due to the lack of commitment to areawide planning in general.

The WQM staff already has defined issues for the continuing planning function, including developing a process of assessing growth impacts, but foresaw the scope of their tasks limited by available WQM planning monies as well as 701 comprehensive planning funds. However, it seems the major problem to be faced in the continuing planning issue is mere continuity of the WQM effort, as it could possibly terminate in a completed plan without a "transition force" to expedite its implementation.

E. Significance of Local Elected Officals' Involvement

Primarily involved in the WQM project as commission members, local elected officials have final authority in approving the WQM plan. With the aim of developing a locally acceptable plan, MVRPC staff indicated that local officials were vested with considerable responsibility throughout the WQM planning process. The Water Resources Committee (WRC) is comprised of 51 percent local elected officials. The WRC reviews WQM planning outputs as well as water-related projects subject to A-95 review. The WRC reports its recommendations to the overall Commission which then takes final action.

Conceptually, the linkages for effective communication with local decision-makers have been structured. In actuality, there is little evidence of local officials' commitment to areawide WQM planning. As noted by several interviewees, including MVRPC staff members, local elected officials were participating somewhat in anticipation of future WQM program ties to construction grant eligibility, but, nevertheless, did not expect Federal sanctions to be imposed. Consequently, their rather token attention to the WQM to date is a result. Review of the WQM alternatives and the integrated final plan, however, may evoke increased interest, particularly in regard to management agency recommendations.

The support of local officials is essential to plan implementation, as well as to continued WQM planning. Except to the extent that plan implementation is required, the plan is expected to be advisory to local actions. With the frequently mentioned attitude of retaining local control over decision-making and the prevalent pro-growth climate in the area, plan implementation would likely depend on the receptivity of officials to incorporating water quality consideration in their decision making process. Moreover, nonpoint source data was acknowledged generally to be weak and, as the WQM program lacks an incentive for implementing nonpoint source controls, the outlook for officials' serious attention to nonpoint source problems is not promising. Unfortunately, continued planning, which may provide a vehicle for verifying data and perhaps credibly documenting water quality problems, is not particularly well-supported. Consequently, a means for translating the informational base into local planning efforts may be lost or at least so undercommitted as to portend a WQM planning tool which rests on the shelf.

AGENCY: MID-AMERICA REGIONAL COUNCIL (MARC)

REGION: VII - (Kansas City)

GRANT AMOUNT: $1,400,000

GRANT RECEIPT: June 13, 1975

STARTING DATE: July 1, 1976

STATUS AT TIME OF INTERVIEWS: Data gathering stage subsequent to EPA approval of work plan.

REASON FOR INCLUSION IN SAMPLE: MARC is representative of a bi-state planning effort.

I. BACKGROUND[1]

A. Area Description

The Mid-America Regional Council (MARC) is the planning body for the Kansas City metropolitan area. The total region extends over 3800 square miles in the States of Kansas and Missouri. The 1970 Census figures indicate that the region's population is 1,327,266. Missouri represents 65 percent of the total popultaion.[2] Missouri counties include Cass, Clay, Jackson and Platte. Kansas represents the remaining 35 percent; its counties include Johnson, Wynadotte and Leavenworth. Only Leavenworth county is not in the SMSA.

The Missouri River and numerous streams and highways are the major features of the land. Agricultural uses comprise 80 percent of the land on the Kansas side and 50 percent on the Missouri side. The major employer in the region is industry, accounting for 42 percent of the labor force. Services and retail trade follow with 19 and 15 percent of the labor force, respectively. MARC projections indicate an expected employment growth rate of 65.63 percent between 1970 and 2000.[3] Efforts are underway to insure this growth through a program to attract light industry sponsored by the Chamber of Commerce.

The area presents an interesting situation for regionalization. The States of Kansas and Missouri do not have a history of cooperation, dating back to the Civil War. The political lines are drawn almost as clearly as the geographical lines. An apparent reason for this lack of cooperation is the fear of regional dominance by Kansas City, Missouri. The political party affiliations of the states are different. Missouri is predominantly Democratic, while Kansas is predominantly Republican.

In addition to the inherent differences in perspectives on each side of the river is a strong preference for local government - - the smaller the better. For example, many of the smaller towns on the Missouri side are not pleased with Kansas City's vigorous annexation program. Accompanying this preference for small government is a dislike of the Federal Government and its programs. WQM came to Kansas City as the least of three evils. The first two were the States or the Corps of Engineers being responsible for water quality planning. Perceiving these as the only alternatives, the area chose to retain as much control as possible. Consequently, MARC was chosen as the vehicle for WQM planning. One sentiment shared by both sides is an aversion to land use controls.

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1 Information for this Chapter was taken from the MARC Designation Package, MARC, 1975; WQM Grant Application, MARC, 1975; and various interviews.

2 MARC Designation Package, March, 1975

3 Includes construction, manufacturing, wholesale trade, transportation, communications and public utilities.

Environmental quality and clean water are not considered priority issues in the Kansas City Region. Interest groups with water quality goals exist, but most interviewees felt that there was not much public knowledge of or support for water quality activities. Two general reasons for this were cited. The first is that water quality has improved significantly in the past ten years without being a "hot" issue. The second is that the major bodies of water are not highly valued for aesthetic or recreational factors which would increase the level of public awareness.

B. Water Quality Problem

The Missouri River is the major river in the region. The confluence of the Missouri and Kansas Rivers is in the approximate center of the developed part of the region. The Kansas River runs through the participating Kansas counties before joining the Missouri River. With the exception of the Marais Des Cygnes (Kansas) and the South Grand (Missouri), all major watersheds in the region discharge directly into the Kansas and Missouri Rivers. The WQM Director stated that the major water quality problems exist in the tributaries -- not in the major streams. The sources of pollution are vaired, including municipal, industrial and nonpoint source pollutants. Dissolved oxygen and biological oxygen demand were cited as major pollution problems. Heavy metals and toxics are the predominant pollutants in industrial areas.

According to the Designation Package, another problem is the lack of water quality data on all streams in the region. Most of the previous studies were conducted on a State or basin level and are not specifically tailored to the water quality data needs of the metropolitan area. In addition to the water quality problems of an urban industrial area, the MARC WQM effort faces a complex institutional setting. There are presently 168 wastewater operating agencies in a bi-state region that is traditionally separatist. Anti-regional sentiments in each state further complicate efforts to consolidate the disparate operating agencies.

Most interviewees felt that the completed 3 (c) management plan for the Kansas City Metropolitan Region provides a sound plan for meeting the 1977 water quality standards. Additionally, the 3 (c) study proposed a politically acceptable regional management system which provided a good start for WQM planning. Many looked upon the WQM study as a vehicle for completing and implementing work under the 3 (c) study (See Management Planning, Chapter II).

C. Designated Agency

MARC was organized in 1972 as an Inter-state regional council of governments. MARC was an outgrowth of the Metropolitan Planning Commission, established in December of 1966. The Regional Council is composed of twelve general purpose units of government and one sewer district. Representation on the

governing board is made up of local elected officials or delegated representatives.

Planning functions which relate to WQM through sharing the same data base are HUD 701 and transportation planning. Other planning programs conducted by the Agency include airport, emergency medical, manpower, aging and resource recovery planning. MARC also acts as a coordinating agency for six designated Air Quality Maintenance areas. Previous studies of water resources include: "Sewer and Water Facility needs -- Kansas City Metro Region: (1967); "Storm Drainage Study" (1970); and "Comprehensive Area-Wide Water & Sewer Plan for Johnson County, Kansas" (1972).

The size of the MARC WQM staff fluctuates with the various projects of the WQM process. The WQM Coordinator estimated that there is a full-time equivalent of 12.5 professionals. The actual number may vary from six to twenty individuals at varous stages of the process. There are four main positions which will remain constant over the two-year period. These are one engineer (point and nonpoint source pollution and project coordinator), one public administrator (financial/management), one planner (land use) and one lawyer.

It was apparent from both agency and non-agency interviews that regional planning is not a popular activity in the Kansas City area. Anti-regional sentiment in the area necessitates the low-profile approach of the planning agency. Several non-agency interviewees view regionalization as another function of an already too active and too large Federal government. WQM is seen as a vehicle to keep local control through the combined effort of local governments. The individual nature of each constituent jurisdiction was a paramount consideration for politically feasible alternatives in the region.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The goals for the WQM study were defined in previous studies, primarily by the 3 (c) study and the staff through their work with local elected officials. These goals are part of a set of MARC's regional comprehensive plans. The staff conducts a comprehensive yearly review of all MARC programs in developing an Overall Program Design. This effort ensures that all programs are compatible and coordinated.

The highest priority of the MARC WQM plan is to develop a politically feasible management system for the interstate area. Antidegradation is not an issue in the MARC region. The primary effort will be directed toward bringing stream water into compliance with the standards.

MARC's final work plan had just been completed at the time of the visit, following two unsatisfactory submissions to EPA. Stated reasons for the unacceptable plan were that the internal project management was not sufficiently detailed. The final product was developed by Stanley Consultants for $50,000. The MARC staff stated that the approach is basically the same, however the final product will be able to reach a much wider audience. Although the MARC Board had not approved the plan, little difficulty is expected.

B. Technical Component

MARC is relying heavily on consultants in the technical aspects of the plan. $ 300,000 of the $ 1.4 million grant will be contracted for work on point and nonpoint source modeling. The Study Design stated that the nonpoint source modeling efforts were to be a simplified attempt at defining the problem.

Basic data-gathering for the study will be done either in-house or contracted to local governments. The MARC staff stated that the land use and population information was current and needed only to be aggregated on a watershed basis for the WQM study. MARC plans to contract with five local agencies for data collection in the areas of land use, point and nonpoint source pollutants, and management information. Additionally, these contracts include the functions of review and comment throughout the planning process. Analysis of the management alternatives will be done in-house.

C. Management Planning

Most interviewees felt that the 3 (c) study provided a politically feasible management plan. The MARC staff indicated that EPA had encouraged a total revamping of the management analysis, however, EPA said that the 3 (c) provided a sound basis and only needed refinement and state approval. The

3 (c) plan consolidated 168 operating agencies into 12 management agencies. The plans call for keeping seven existing agencies and forming five new ones through consolidation of districts in outlying areas. The 3 (c) plan keeps management authority in separate States -- apparently the only politically feasible alternative at this time.

D. Public Involvement Program

The public involvement program is scheduled to begin this October, the fourth month of the planning period. The work plan calls for designating the public involvement program at that time. The MARC staff readily admitted that general public involvement is not a high priority in this study due to a low level of public interest and involvement in a recent transit study. The MARC staff expects to assemble a citizen's committee this September. The process for their input was not yet developed.

The staff discussed the general approach for public involvement over the two-year period. Public education and information dissemination would comprise the activities for the first year. The next eight months would entail alternative plan analysis, followed by four months of plan selection.

E. State and Federal Involvement

Both Kansas and Missouri have assigned one full time person to work with the MARC WQM. Both liaisons and the WQM Project Coordinator have a weekly meeting. The staff indicated that there is a good working relationship in terms of exchange of information, although there has not been a major impact on the plan as a result of state involvement. The States, on the other hand, felt that their input had been significant. Both States felt that there was sufficient opportunity for state input throughout the planning process.

The long-standing lack of cooperation between Kansas and Missouri was alluded to by most interviewees. Two years was considered to be too short a time to overcome the political barriers to the developement of a single management agency. Legislators in both States were not specifically aware of the WQM program, but were equally pessimistic about interstate cooperation, especially when considering land use controls.

The States are doing the agricultural nonpoint source work elements in the WQM study area. This includes 80 percent of the land on the Kansas side and 50 percent on the Missouri side. The results of the States' work will be incorporated into the final WQM plan.

The MARC staff reported that a good working relationship has been established with the Regional Office. As the offices are located in the same city, the proximity has apparently facilitiated frequent communication. The staff generally considered regional guidance to be adequate. EPA, however, was said to

be slow to respond in terms of work plan and contract approval.

F. Scheduled Outputs

The MARC WQM Study Design consists of approximately 78 products, reports and memoranda in the area of point source, nonpoint source, financial and institutional analysis. Committee input is clearly defined by requiring approval at key points in the process. The two bodies designated for primary input are the MARC Board and the Utilities Policy Committee. The latter is a permanent agency committee composed primarily of elected officials. The Committee's role is to make substantive policy recommendations to the MARC staff and Board.

At this time, MARC is one month into the two year planning process. The first products requiring approval are not scheduled until the end of the second month. These are:

- Report on previous institutional recommendations (Utility Policy Committee approval required);
- Memorandum on selection of water quality model (Utility Policy Committee approval required); and
- Memorandum on decision making process recommendations (MARC Board approval required).

No revisions of the study Design are anticipated presently. Some interviewees felt that the design was ambitious, and could need trimming as the need arises. The MARC WQM planning effort began July 1, 1976. No outputs had been scheduled at the time of the site visits.

G. Achievements to Date

The WQM Coordinator stated that as a result of the refinement of the work plan, the approach in the MARC Study Design is exceptionally well-directed, and thus should succeed in achieving its objectives. As the MARC effort had been in operation for only one month, no planning achievements could be reported.

III. EXPECTATIONS

A. Water Quality

A variety of expectations emerged when interviewees were asked in what ways they expect the water quality to improve. Generally, no one expected major improvements. Either they expected no change, continuation of existing clean-up efforts, or they expected a selected aspect of the study to be implemented which would become part of the ongoing clean-up effort.

The MARC staff and the Kansas State Liaison expected that the WQM effort would help insure the continuing improvement in water quality that has occurred during the past ten years. They did not think that WQM would have a drastic effect on water quality. The Executive Director thought that WQM planning would provide a better method for making community development decisions by having water quality data to feed into the decision-making process. State of Missouri officials expected a clean-up in the smaller streams through an improvement in regional wastewater control. A local appointed official expected storm water management control, presently non-existent, to be a product of WQM planning. Additionally, he expected some improvement in flood control. One local elected official and a representative of local elected officials stated that they did not expect improvements in water quality for varied reasons. One reason was that the rural county did not have water quality problems, the other was that they did not expect completion of the study. However, better control of development relative to water quality objectives and insured recreational use of certain segements was anticipated.

Responses on the 1983 goals were not quite as varied. A citizen thought that there should not be a problem meeting the 1983 goals, if people were willing to spend the money and effort. All others interviewed did not expect to meet the goals. The Executive Director thought that the thrust of the goal was admirable, but that it went too far. One official stated that swimming and fishing in some of the bodies of water in the Kansas City area is not considered desireable "unless you want to do it in a mud pool." The MARC staff stated that even Lewis and Clark throught the water was unsuitable in 1783. The cost of interceptors, treatment and the elimination of combined sewer overflow were considered too vast to be absorbed by 1983.

B. Plan Approval and Implementation

Questions as to the likelihood of plan approval and plan implementation once again brought a variety of responses. It is interesting to note that despite all the discussion of local political problems, people generally expected the fewest problems with local plan approval.

The WQM staff expected the States to encounter problems with bi-state cooperation, and EPA to encounter problems with the locally acceptable multi-agency separate State management system. A local appointed official and the

State of Missouri official interviewed were confident of plan approval. The former's reasoning was that it would get "pushed through one way or another"; the latter's was that if the plan was followed, the State approval should come easily. The Kansas Liaison and a citizen thought that it was premature to comment.

People were much more reticent to comment on the likelihood of plan implementation. The major factor inhibiting implementation for those who commented was the avialability of money. If the construction grants program and capital improvements money were able to fund the plan implementation, the major obstacle should be removed. The political climate was also mentioned as a possible factor affecting plan implementation, however, that was considered an unknown at this time. No work has been currently undertaken to build the legal foundation for plan implementation, however, consideration of management alternatives did begin on the first day of the planning period. The expectations for the management system are heavily colored by local bi-state area political conflicts. Most feel there is little chance for a single authority for this plan. There was a feeling that over time, however, some of these obstacles could be lifted and thus enable serious consideration of a single management system. (See discussion of 3 (c) plan under Chapter II, Management Planning.)

C. Continuing Planning Process

The major factor affecting the existence and extent of continuing planning activities was money. Most felt that EPA would have to share some of the burden. Although a matching grants program was considered desirable, the local share was predictably low. The amount of the local share was dependent on the amount of overall funding. The Executive Director gave a rough estimate of $ 250,000 for a coordinating function. The WQM Coordinator mentioned a "low profile encouragement" function for plan implementation. Others interviewed felt it was too early to discuss continuing planning because it was dependent on the results of the planning effort.

D. Relation to Other Water Quality Programs

The relationship between WQM planning and other water quality programs (201 and NPDES) was not clear at this stage of the planning process. There were, however, a number of ideas expressed concerning the potential effects of WQM on 201. The MARC staff thought that if capital grants were contingent on the WQM plan, it would provide a strong incentive for WQM implementation. A local elected officials's primary interest in the WQM effort was insuring future sewer monies for his community. The citizen stated that if 201 money became contingent on the WQM plan and if the WQM plan differed from state priorities, then Kansas would be inclined to use its own money. One local appointed official stated that if WQM was conducted as the law required, it should pre-empt at least step one of the 201 program. He added that in reality, the WQM plan probably will not be used to guide 201 because the plan will not

cover the issue of facilities in sufficient detail.

The States did not believe that the WQM plan would have a significant effect on 201. In Missouri, the 201 areas are outlined and the State expected MARC to follow the State's regional priority list. The State of Kansas thought the WQM planning effort and 201 had imposed too many planning requirements on facilities construction. The official stated that the State had fallen five years behind schedule because of Federal requirements.

Most people interviewed did not perceive a strong relationship between WQM and NPDES, although the need for coordination was realized. The Kansas Liaison felt that NPDES had confused and complicated the state permitting system which was established in 1907. Missouri officials stated that they did not expect much impact on NPDES from WQM, but said that the State was open to input from the WQM effort. Neither State expected inherent conflicts between the WQM plan and NPDES.

F. Local Definition of Success

The majority of responses to the question regarding individual definitions of success centered on the institutional aspects of WQM planning. This coincides with the study, as the selection of a management system is the first priority. The Executive Director expected institutional change in terms of moving toward more cooperative efforts in wastewater management. Local elected officials also considered the consolidation of sewer districts a success. One expected consolidation within his county whereas another was looking at a larger scale but did not expect the system to cross State lines. The citizen was hopeful of a bi-state authority by 1978, but was aware of the political obstacles to be overcome in such a short period of time. The Kansas Liaison estimated that a bi-state authority may be implemented by the year 2000, but certainly not in 1978. Missouri officials considered a successful finished product to be that which was politically acceptable, economically sound and provided effective control of pollution.

A few interviewees expected additional benefits from the WQM planning effort. The Executive Director expected better methods of controlling development to result from the study. A local appointed official hoped only for better land use data for his city. The citizen expected a variety of benefits: a savings to the taxpayer in the form of more cost-effective solutions, an increased awareness of growth implications, and a better understanding of the need for regional planning.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

Neither regionalism nor the Federal government are popular political issues in the Kansas City area. This fact was pointed out by the MARC staff and confirmed in local and State interviews. The importance lies in how these attitudes color MARC's approach to WQM planning. It was readily pointed out that WQM was not a coveted program in Kansas City. WQM planning was undertaken by MARC in order to insure local control over water quality, and more importantly, land use issues.

Consequently, the MARC staff emphasized that the low-profile encouragement approach was the only politically viable strategy for their agency. A strong emphasis is placed on pleasing their politically diverse Board of local elected officials. The COG Director felt that EPA does not always recognize the fact that local consensus governs all regional planning decisions.

The emphasis of the study, according to the WQM Coordinator, is on the management system for municipal facilities. There are few expectations for any land use controls from the WQM effort. The Executive Director stated that the MARC goal is to achieve consensus. He views WQM as a difficult task because of its progressive, liberal nature. In an area dominated by conservative suburban governments, the task that lies ahead calls for significant change. He views the two year time frame as sufficient for the technical work, but definitely inadequate for the major institutional and ideological changes necessary for implementing a "comprehensive" WQM plan.

B. Citizens

Two citizens were interviewed for their perspective on WQM. As the citizens' committee had not been assembled (one month into the process), the views could not be obtained on MARC's WQM efforts to date. Both citizens were members of the MOKAN Coalition for Water Quality, a locally active environmental group. One citizen sits on MARC's standing Environmental Review Committee. The MOKAN Coalition for Water Quality had written a letter requesting membership for the other citizen on a WQM Committee. No response had been received at the time of the interview. It was felt that MARC had a tendency to play down active environmentalist roles because of the conservative nature of its constituency.

The citizen on the Environmental Review Committee criticized MARC's defining the "public" as local elected officials. She would like to see citizen input considered from the earliest stages of plan development throughout the process. As it stands, she will be attending her first meeting next month, but had, through her own efforts, become very knowledgeable on the WQM program. Both citizens felt that there is a knowledgeable element of the cit-

izenry that would be able to actively participate in MARC's activities. The citizens did acknowledge that water quality was not an issue in the Kansas City area, and that people are not generally aware of water quality issues. One person had been giving lectures of what P.L. 92-500 means to citizens in an attempt to increase public awareness of the condition of the water in the metropolitan area. The other citizen considered the development of a bi-state management authority a success for this WQM effort, but was also aware of the major political obstacles which would have to be surmounted in order to accomplish this.

C. Local Elected Officials

One urban County Commissioner on the Kansas side and one representative of rural local elected officials were interviewed. Both interviewees are members of the Utilities Policy Committee which has been delegated a major technical review function in the WQM planning process.

The rural priorities for WQM consisted of the consolidation of 20 sewer districts within one county. Although it was considered too early in the planning process to comment on WQM activities, the rural officials' reaction was that MARC was satisfactorily "feeling its way" at this time. Although he felt that there was enough money for planning, he doubted the availability of funding for the structural improvements necessary to raise the water quality in the area. His opinion of the role of the Utilities Policy Committee was that, in the past, MARC has been very receptive to committee input. He hoped that the document would be primarily advisory, laying out water quality alternatives, costs and benefits. His rural county is against regionalization because of the fear of dominance by the larger cities. He believed that the unpopular aspects of the WQM (regionalization and land use) could be imposed by EPA through regulations, however he felt that the local residents would not be receptive to a substantial amount of regulation.

The urban county in Kansas saw WQM planning as insurance for future sewer monies. A study of water as a health hazard was also a county priority. The Kansas official preferred a concentration on point source rather than nonpoint sources of pollution and "didn't want any part" of the land use aspects of WQM. Although he "agreed with WQM in principle," he disliked any strong Federal role in local affairs. Like the rural Missouri county, the urban Kansas county was against the concept of regionalization. Once again, there was a preference for management systems in the separate States, such as the previously proposed 3 (c) management system.

D. Appointed Officials

The Director of Water Pollution Control for Kansas City, Kansas, was interviewed for opinions of the WQM program. The Director is an engineer who acts as a representative for the mayor and will participate on a WQM Advisory Committee. Additionally, Kansas City, Kansas will be contracted for one of

the local data-gathering efforts. The Director does not see Kansas City as reaping major benefits from the WQM effort. Facilities plans for the entire city are completed. Accurate mapping would have been a useful tool, but that could not be done under WQM planning. The Director considered the study to be considerably underfunded. He felt that sound conclusions could not be drawn because not enough data would be gathered to substantiate conclusions.

He reiterated the same anti-regional sentiments as all other interviewees had expressed. He alluded to political difficulties in consolidating Kansas side. Additionally, Kansas City, Kansas feels that its twin city is dominating MARC activities, and feels it is overpaying for presently provided sewer services. Although the Director expects some benefits in the area of stormwater management and flood control, WQM is not a current priority for his area. The priority in the Kansas City, Kansas area is the elimination of combined sewers, for which a $75 million outlay over the next six years has been projected.

E. State Legislators

A representative for an urban area of Johnson County, Kansas was not familiar with the WQM program. She had worked with MARC previously and was the only person spoken to who was in favor of the concept of regionalization if it proved to be the most cost beneficial alternative. Unfortunately, she stated that she felt that present cost differed widely. She was hopeful that WQM would provide the necessary data on which to base decisions for regionalization.

F. State Water Quality Personnel

Interviews were held with officials from the States of Kansas and Missouri. On the Missouri side, three officials of the Department of Natural Resources were interviewed: the Chief of the Environmental Division, the Chief of Water Quality Management (Regional and WQM Coordination), and the Chief of Statewide WQM Planning. On the Kansas side, the WQM Liaison was interviewed. Both States will be doing all aspects of the agricultural nonpoint source study in the WQM area.

The Kansas Liaison feels that the State had significant input in the plan design. He sees his role as "bringing Kansas' wishes" to MARC, and as one of encouraging rather than directing the MARC effort. To date, MARC has been very receptive to state input which is generally received in weekly meetings with the WQM Coordinator. His opinion is that the plan may include too much in the areas of land use and nonpoint sources. Although he stated that he was not in disagreement with the concept of regionalization, he did not expect that a bi-state authority would be a politically acceptable alternative for the WQM effort. He stated that the separatist sentiment is deep in the present political structures, and that it will require a new generation to be

open to consideration of regional alternatives. Certainly, no major changes can be expected by 1978; a single authority may possibly be developed by 2000.

The Liaison felt that Kansas has seen significant water quality improvement in the past ten years, and did not expect WQM to do more than to continue at the same rate. He added that working with the Federal system is burdensome because of the bureaucratic processes that must be followed.

The Missouri officials also felt that the State had significant input into the study design, and plans to watch the outputs very closely. The study design requires state approval, and officials do not foresee difficulties if the present plan is followed. Additionally, a committee of the ten executive departments of the DNR was set up for WQM to insure coordination among all State programs and WQM planning. The State feels that MARC has been responsive to its input, and hopes that State participation throughout the process will make it possible to automatically incorporate the WQM plan into the State Water Quality Management Plan. The State of Missouri expects the most significant water quality improvement in the small streams and tributaries, through the elimination of direct discharging. The concept of regionalization and the bi-state conflict was not as sensitive an issue with Missouri DNR officials as with all others interviewed.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

In the past year, MARC has concentrated on developing a work plan that is acceptable to EPA. The final study design was completed in July, 1977, and the two year planning period began at that time. The MARC staff's confidence in the final study design as an appropriate and workable plan indicates successful plan completion. The staff considers the plan to be readily understood by the various interest groups involved in the WQM planning process (local elected officials, appointed officials and citizens) because of its well-ordered layout and the clear treatment of technical information.

As the planning process continues, the MARC staff and the Kansas State Liaison felt that there may be a need for a reduction in the level of detail within specific work elements due to either an overambitious work plan or to "normal" delays in the planning process. It was felt that these adjustments could be made without deleting major plan elements. The Kansas State Liaison said that land use and urban nonpoint source work were most likely to be affected by this de-emphasis. Inasmuch as these elements did not receive high local priority and are the most controversial aspects of the study, their de-emphasis is not surprising.

Generally, less difficulty is expected with plan approval at the local level than with the States or EPA. Although serious concern exists over the possible consolidation of sewer districts, most interviewees were confident that MARC could develop a final plan reflecting the concerns of the local member units of government. Problems were expected with the States because of the historical unwillingness of Kansas and Missouri to work together. Problems were expected with EPA because it was felt that a management system which is locally acceptable may not be as acceptable to EPA. More specifically, all involved thought that EPA expects a single, bi-state management agency by 1978, and that locally palatable alternatives such as the 12 agency alternative proposed in the 3 (c) plan would not meet with EPA approval.

The Executive Director and the WQM Coordinator stated that it was too early in the planning process to discuss the likelihood of plan implementation. This reaction was true for most interviewees. There was consensus on one aspect of plan implementation that its likelihood was dependent on EPA's future financial committment. This financial committment was seen in terms of funds for both capital improvements (combined sewer overflow, interceptors and wastewater treatment) and ongoing planning activities.

B. Public Involvement

MARC's public involvement program design is scheduled for October, four months into the planning process. In the meantime, however, newsletters are being distributed and committee meetings are being held. MARC will

be emphasizing the participation of local government officials rather than that of the general public. Consequently, permanent committees, the MARC Board and the Utilities Policy Committee (composed of local elected officials or their representatives) are delegated the major review functions in the WQM planning process. The MARC staff was cognizant of the fact that the program underplayed the role of the general public in the decision-making process. The reason given was that the staff had been disappointed with public involvement efforts in a recent transit study; the low involvement level having stemmed from an inability to arouse citizen interest.

Although the design of the public involvement program has not formally commenced, the staff indicated that the general framework will probably consist of one year of public education, followed by one year for review and approval. Additionally, the MARC staff feels that their contracts with local governments for data collection are an import vehicle for obtaining public input. Citizens generally were critical of the lack of emphasis on general public involvement because they felt that an interested group exists which is available to participate in WQM.

It is too early in the process to predict the repercussions of MARC's approach to public involvement. To the extent that water quality seems to be a politically live issue only with environmental groups, the MARC approach may be realistic as well as appropriate, given the amount of resources available. However, an uninvolved citizenry may cause problems later in the planning process.

C. Current Planning Process

MARC is undertaking the management aspects of the entire study area, while the respective States will be addressing agricultural nonpoint source activities. Agricultural lands comprise 50 percent of the Missouri study area and 80 percent of the Kansas study area.

The collection of land use, nonpoint source (urban areas) and financial data is contracted to five local jurisdictions. This work is designed to increase the participation of the local jurisdictions, and requires analysis, review and comment by these jurisdictions. MARC will be playing the role of the coordinator. The design of these work elements is consistent with MARC's emphasis on actively including local elected officials and their staffs in the planning process.

All interviewees indicated that the major priority of the WQM effort is the study of alternatives for the consolidation of sewer districts. Additionally, all interviewees stated that the locally approved 3 (c) study provided a sound basis for the WQM planning effort. The 3 (c) plan provides for the consolidation of 168 operating agencies into 12. Seven of these agencies presently exist, and five would be developed through the consolidation of districts in

less populated, outlying areas. No districts would cross State lines. The WQM effort is seen as a way to refine the 3 (c) effort and acquire the States' approval.

There seems to be some discrepancy between EPA's position on management analysis and the MARC perspective of that position. The WQM Coordinator and the Executive Director stated that EPA would like to see the management analysis redone without significant reliance on the 3 (c). On the other hand, EPA stated that MARC could refine and begin implementing 3 (c). There appears to be a significant misunderstanding between MARC and EPA on this issue.

The strong negative reactions to land use regulations in the Kansas City area has resulted in a de-emphasis on land use in the study. MARC has assumed this backdoor approach because avoiding the term "land use" makes working with the concept possible. The approach seems to be fairly successful, and they are presently considering a model construction practices ordinance.

D. Continuing Planning Process

Most interviewees expressed the need for planning to continue after the two year period, and for EPA to provide funding for this continuing planning. The Executive Director thought that a matching grants program would be more effective. He felt that, when local governments are forced to spend their own money, they are more thoughtful about how it should be spent. He added that if planning was totally dependent upon local funds, it would not occur. He saw the major function of continuing planning as low profile encouragement for plan implementation by MARC. The States and the citizens felt that the continuation of planning will be dependent on the outcome of the plan. With the exception of the Executive Director, it generally was considered too early for continuing planning to be an issue in the Kansas city area.

E. Significance of Local Elected Officials' Involvement

Although the concept of treatment plant regionalization did not rest well with local elected officals, most supported MARC and were aware of the need for participation in the MARC planning process. The MARC staff, realizing their position is neither politically strong nor popular, currently assumes a low profile and attempts to achieve consensus among local governments. This seems to be the only politically realistic approach for MARC, given the strong belief in local government. To date, it has been relatively effective.

The role of local elected officals is defined clearly in the WQM planning process. Review and approval of plan outputs is delegated to the Utilities Policy Committee or the MARC Board. The approach of letting contracts to

local governments for data collection was also seen as a means of insuring active local participation. Although MARC is only one month into the planning process, there was a definite awareness of WQM and water quality issues on the part of local elected officials. These local attitudes were generally similar, and consisted of a dislike of both regional water quality solutions and a strong Federal role in local water quality issues. Local elected officials' strong desire to insure that WQM planning will reflect local priorities is operating as a significant inducement for active participation in the WQM planning effort. It is too early in the planning process, however, to foresee how much of a problem this will pose in choosing an acceptable solution.

AGENCY: MIDDLESEX COUNTY PLANNING COMMISSION (MCPC)

REGION: II - (New York)

GRANT AMOUNT: $1,420,000

GRANT RECEIPT: June, 1975

STARTING DATE: June, 1975

STATUS AT TIME OF INTERVIEWS: The agency was ending its data collection phase and beginning to concentrate on development of management alternatives.

REASON FOR INCLUSION IN SAMPLE: The area was selected because of its high urban-industrial concentration.

I. BACKGROUND[1]

A. Area Description

The Lower Raritan/Middlesex County WQM area consists of 380 square miles in northeastern New Jersey. The WQM area includes all of Middlesex County and those portions of Union and Somerset Counties containing contiguous watersheds. New York City lies directly northeast of Middlesex County, across the Arthur Kill.

Most of the 731,550 people who live in the region reside in the highly urbanized and industrialized northern and eastern portions of the designated area where large manufacturing plants of the American Cyanamid, Dupont, National Lead and other companies are located. The rest of the designated area contains large undeveloped tracts of land which are currently available and attractive for both home and industrial development. With the pressures of overcrowding in neighboring New York City, the availability of land in the WQM area and the possibility of oil and gas exploration off the coast of New Jersey, the Middlesex County Planning Board expects the designated WQM area will experience significant population and economic growth over the next few decades. Population in Middlesex County alone is expected to rise from 583,813 in 1970 to 700,436 in 1980.

The designated area is composed of a highly complex institutional network of 34 individual municipalities, three counties, a variety of special purpose districts and authorities of the State of New Jersey. The County planning boards, composed of elected freeholders, are chiefly advisory in nature with no significant regulatory powers or responsibilities. The special districts are concerned with specific issues such as wastewater treatment and soil conservation. The State, on the other hand, exercises a variety of powers related to environmental quality standards and development reviews. The most powerful regulatory authorities on the local level still rest with individual municipalities which derive their strength from the power to zone and provide municipal services.

Currently, the chief water related management agency in the designated area is the Middlesex County Sewerage Authority (MCSA) which was created in 1950 by a resolution of the Board of Freeholders of the County of Middlesex. The Authority is empowered to construct, maintain and operate sewerage facilities in and around Middlesex County. Construction on the existing plant began in 1954. Today, the primary treatment

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1 Information presented in this Chapter was taken from "Work Plan for Areawide Treatment Management Planning under Section 208 of PL 92-50". May, 1975; and various interviews.

plant services 24 municipalities including some outside of the County and 10 industries which participate directly. MSCA is currently expanding its facilities and upgrading waste water treatment to the secondary level. This action will allow the Authority to accept and treat the anticipated increased volume from current sources as well as from additional clients, most notably, the City of Woodbridge.

Other management agencies in the area include county soil conservation districts created by the State. These soil conservation districts have latent land use control powers which have never been used, partly because of the cooperation the districts have received from landowners without the use of sanctions and partly because their rulings may be overturned by a petition of 25 landowners. Under the recent State Soil Erosion and Sedimentation Control Act, the soil conservation districts acquired additional power to review all surface-water disturbances caused by construction projects. Jurisdicational confusion between the districts and local zoning inspection boards has unfortunately resulted in a confusing system which is often inefficient and ineffective in dealing with water quality problems in the area.

The general public has been highly concerned with environmental issues of late, because of widely publicized environmental health studies establishing a connection between industrial chemical pollutants and cancer. These studies have added urgency to the public's cry for growth controls to eliminate the possibility of spreading industrial problems throughout the designated area. Possible contamination of aquifers essential to the area's water supply is one of the major concerns of local environmental groups.

B. Water Quality Problem

The major bodies of water in the Middlesex WQM area are the Raritan River, the Arthur Kill and the Raritan Bay. All three bodies of water are badly polluted and have been classified "effluent limitated" by the State Department of Environmental Protection. Part of the Raritan is so badly polluted that it has been classified "water quality limited". Indeed, with the exception of limited segments of the county's surface water, portions of all the major waterways within the proposed area are "water quality limited". Of the three major waterways, the Raritan is most heavily used for recreation while the other two are used almost exclusively for industrial and shipping purposes.

Most of the WQM area is presently or will soon be with existing and planned facilities operating at secondary sewered treatment levels. According to recent studies, urban runoff and non-point sources including mining and construction actually contribute more to pollution loading than does treated effluent from recorded point sources. The WQM staff felt that the key to understanding problems in the Raritan system will be urban runoff including that from industrial sites.

More than half of the area's present and future water supplies come from aquifers, parts of which have already been polluted by salt water intrusion and industrial pollutants. The latter are leaching from poorly located, under-managed solid and liquid waste sites. Prior studies have indicated a need for areawide groundwater recharge area protection and for coordinated efforts to develop point source discharge, urban runoff borne waste, solid waste, toxic and hazardous waste control plans to prevent further degradation of aquifers.

The continued availability of water from aquifers is partly contingent upon the availability of waste treatment effluent for reuse in industrial processes and possibly for recharge augmentation to halt salt water intrusion. The viability of reuse depends on consideration of pretreatment standards for industrial wastes entering public treatment systems and the degree of treatment provided.

To supplement the current water supply in ancitipation of growing domestic and industrial demand, a major reservoir project has been proposed on the main stem of the Raritan River. Whether the quality of upstream water is now or can be made and kept suitable for its intended use as a drinking supply and recreational resource is an unresolved question.

Even though a number of water studies have been conducted in the Middlesex area, a great deal of State 303(e) data was not available at the start of the WQM project. Most of available information had been collected under previous studies conducted by the County, State, private industries and local communities. The Raritan Bay is being studied by the New York City WQM agency since most of the Bay's pollution originates in the New York area.

C. Designated Agency

The Governor of New Jersey designated the Middlesex County Planning Board as the official WQM planning agency in May, 1975. The MCPB represents 25 communities in Middlesex County. It is governed by an elected Board of Freeholders, many of whom represent real estate and industrial interests. The Board is responsible for policy decisions and selection of planning staff.

The MCPB has conducted a variety of planning activities including tri-state transportation, delivery of social services, solid waste management, air quality and reservoir studies. It is currently engaged in planning for mass transit, housing, floodplains, coastal zone management and air quality maintenance. It is also awaiting money to conduct an off-shore oil study to determine secondary impacts of energy development on land use and the environment.

All of MCPB's planning activities are tied together through the Board's major planning endeavor - a comprehensive, land use county-wide planning effort aimed at achieving a balance between economic, housing, transportation and environmental interests. Each of the MCPB's project

staffs feed into the land use planning program, in addition to carrying out the functions and responsibilities of their individual programs. For example, the WQM Land Use Specialist and the Economic Planner calibrate models jointly in order to balance out the interests of both groups. Joint weekly staff meetings are also held to ensure communication and exchange of information among project staffs. The WQM program currently holds high priority within the MCPB because it represents the largest program budget and because its comprehensive scope complements the data needs of the comprehensive land use plan.

The WQM staff consists of seven persons:

- Project Manager;
- Water Quality Specialist;
- Land Use Specialist;
- Institutional Analyst;
- Public Involvement Specialist;
- Draftsman; and
- Support Staff.

The Project Manager serves as Staff Coordinator and Liaison between the agency staff and consultants. The Water Quality Specialist is responsible for technical aspects including analysis and overseeing of monitoring, sampling and modeling efforts by consultants. The Land Use Specialist is actually more closely tied to the MCPB's comprehensive planning program. His responsibility is to facilitate an interface with the WQM effort and to oversee the nonpoint source management study. The Institutional Analyst is responsible for a review inventory of the existing legal/institutional structure and the development of new arrangements and institutions where necessary. The remaining positions are self-explanatory.

Approximately two-thirds of the WQM agency's total grant is committed to outside consultant work, primarily in technical water quality sampling, modeling and analysis. The three prime consultants are large engineering firms; among the minor consultants is a review group from Rutgers University. The latter is assisting in technical review of engineering consultant work. The WQM agency has also contracted with the New Jersey Department of Environmental Protection for coordination on statewide activities and for reveiw of program outputs. The State is also facilitating coordination among other WQMs adjoining the Middlesex designated area namely, Monmouth County, Mercer County and Upper Raritan.

II. PLANNING PROCESS

A. Agency Objectives

According to the Middlesex County WQM work plan, the purpose of the WQM program is to maximize achievement of the following goals:

- Ensure and protect adequate quality and capacity of all surface and groundwater storage systems;
- Protect and enhance existing recreational, cultural and aesthetic amenities; and
- Meet the 1983 goals of PL 92-500 in an economically efficient manner throughout the designated area.

In order to meet these overall goals, the WQM program has been designed around the following objectives:

- Determine reasonable land use distribution and controls;
- Develop a water data file for continued planning;
- Work with the State to identify water quality criteria to be achieved;
- Coordinate with ongoing WQM projects to dtermine facilities needs;
- Assist the State in setting waste load allocations;
- Integrate WQM planning with related planning efforts, particularly solid waste;
- Implement point source controls;
- Determine ways to protect groundwater supplies;
- Develop alternative wasy to deal with urban runoff and nonpoint sources;
- Recommend a plan and implementation strategy; and
- Implement an ongoing planning program.

According to the Project Director, primary emphasis of the program is focused on groundwater protection, municipal point source identification, urban runoff and residual wastes management. The WQM staff would have also liked to investigate toxic wastes and unrecorded discharges.

The program had to forego these studies, however, in order to concentrate on more basic point source and stream quality data collection. Even industrial source studies had to be scaled down since a thorough study would require monitoring of 700 to 800 industries. According to the Assistant Executive Director, any amount of data would be a boom to the County which is anticipating a water supply crisis in the near future.

Most interviewers indicated that environmental concerns were the motivating factor behind that WQM study. A different opinion was voiced by a State legislative assistant. According to the Assistant, water quality is a "noble goal for the program", but the real goal of the program is to use the WQM data to "justify growth controls for their own ends". He did not consider growth control and environmental protection incompatible, but he objected to what he perceived as public deception on the part of the MCPB.

B. Technical Component

The technical component of MCPB's planning strategy consists of two elements: data collection and data analysis. The water quality data gathering effort focused on:

- Municipal and industrial pollutant discharges;
- Particular trouble spots exhibiting low D.O. levels, thermal pollution; etc.
- Hazardous and solid waste production and disposal.

Land use data was also collected early in the process and more closely tied to technical planning than is usually true in traditional water quality studies. This approach reflects the MCPB's commitment to investigate the full range of water pollution problems and to consider nonstructural solutions where possible. It also reflects the MCPB's interest in developing a comprehensive county-wide land use plan.

On the basis of historic data and State classifications of the designated area's waters, the WQM staff and consultants designed an analysis program to verify and project water quality impacts of future growth and land use configurations in the WQM area. The program consists of surface and stream sampling, stormwater/urban runoff surveillance and simulation modelling using models developed previously by the consultants. Problems identified for study include eutrophication, groundwater degradation and surface water pollution. The eutrophication study was undertaken to identify areas of actual and potential

eutrophication and to provide guidelines for allocation of allowable nutrient loadings. The groundwater study was designed to monitor demands, describe the system as it connects with surface water, and assess the decline in groundwater quantity resulting from loss of recharge area and increased groundwater demand. The surface water degradation study focused on pollution resulting from direct pollutant discharges, erosion and sedimentation, nutrient build-up, and runoff borne pollutants.

Careful attention was given throughout the technical phase to the interrelationships of WQM planning with other County and local data. These data include:

- Population and economic growth plans;
- Community development plans and programs;
- Transportation plans;
- Air Quality maintenance plans;
- Water supply plans;
- Sanitary sewerage facilities plans;
- Storm drainage and flood control plans; and
- Solid waste management plans.

Particular care was given to the data needs of the MCPB's comprehensive planning effort.

C. Management Planning

The Project Manager acknowledged the need for some technical analysis before management planning begins in earnest. However, due to the short time frame of the study, management planning has taken place in tandem with technical planning.

The management planning strategy basically consists of an inventory and analysis of the current and potential legal/institutional structures needed for water quality management. The anticipated outputs of management planning include:

- Structural and non-structural alternatives to water quality problems;
- Alternative institutional frameworks to implement pollution control strategies;
- Assessment of social, economic and environmental impacts of alternative strategies;
- Assessment of public and public acceptability of strategies;
- Selection of a comprehensive plan and implementation strategy;
- Development of an ongoing planning process.

Currently, most direct water quality management powers are held by the State while indirect powers of zoning and land use controls rest in the hands of local units of government. The goal of the WQM management component is to get the two series of powers coordinated and enforced. The WQM program is considering the option of creating a new level of government by:

- Establishing a new areawide land use authority;
- Creating a decentralized DEP with an agency for each drainage area; and
- Reorganizing the State Division of Water Resources down to the basin level.

In the face of the already complicated jurisdictional patterns in the area, however, the prospoect of introducing another authority into the County appears dim. The preference is definitely for utilizing existing local agencies and strengthening them where needed. The overall consensus was that most of the State laws and local ordinances necessary for water quality management are already in existence with possible exceptions in the areas of urban stormwater runoff and oil exploration. No action to secure such legislation had been taken yet, nor was it anticipated in the near future in view of more pressing local planning and management matters and the current climate in the State legislature.

D. Public Involvement Program

The public involvement program is designed to both disseminate information and obtain feedback from the general public, public interest groups and local elected officials. Primary vehicles for heightening the public's awareness include:

- A newsletter sent to all local elected officials, interested citizens and interest groups, newsletter reports on program development and major issues to be discussed at upcoming committee meetings;
- Slide shows presented upon request at public interest group meetings and other public gatherings; and
- Press releases to local newspapers.

The major route for public involvement is the committee structure -- primarily the Policy Advisory Committee, the three area task forces and the Steering Committee. The Policy Advisory Committee serves as a policy setting and decision-making group. It is divided into six sub-committees delineated along drainage basin lines, with each sub-committee allocating one vote to an environmentalist, an industrial representative, a private citizen and a representative from each of the municipalities within the basin. The three task forces are drawn across geographic areas with one member from each basin in the area. the task forces are responsible for assessing credentials of staff and consultants, reviewing committee agendas and making policy suggestions to the WQM staff. Members of the general public, interest groups and local elected officials also serve on the WQM Steering Committee.

Committee meetings have been generally well attended, according to the Public Participation Specialist, with the exception of local elected officials who are often too busy with municipal affairs to attend committee meetings. The staff attempts to compensate for this through phone contacts and frequent mailings to public officials. The Public Participation Specialist and Project Manager admitted however, that contact with local officials has slacked off recently and that efforts will have to be regenerated if the WQM program hopes to receive local approval of the final plan.

Another elaborate system designed to secure public involvement in the WQM process is the rise of surveys designed by outside consultants. One mail-out survey was conducted to compile data on public goals, values and objectives to be considered in the development and evaluation of various plan alternatives. Unfortunately, the survey was poorly designed and elicited few complete responses.

The Assistant Executive Director of MCPB acknowleged the difficulty the program has had in obtaining a public consensus on water quality issues. He attributes part of the problem to the agency's lack of experience with public involvement programs.

The Project Manager attributes lack of local officials' interest to the fact that 201 planning and money is not a major issue in the area. Since most areas in need of facilities are already into planning or are awaiting grants, the thunder was stolen from WQM.

E. State and Federal Involvement

As noted earlier, MCPB entered a contractual agreement with the State DEP to provide assistance in the WQM process. According to the State Liaison assigned to the Middlesex WQM study, the State's responsibilities are to:

- Provide technical assistance in the form of facilitating data dn reviewing consultant work;
- Assist in the selection of consultants;
- Review and monitor program outputs to ensure compatability with State and Federal policies;
- Act as liaison between the WQM agency and the County; and
- Coordinate activities among New Jersey WQM agencies.

According to the Project Manager, the State Liaison is beginning to provide useful services to the program by supplying information where needed. Until recently, however, the State's role has been minimal with little if any useful exchange of information.

Middlesex's contact with EPA occurs through the Regional Office in New York City. Communication takes the form of on-site visits by the Project Officer once or twice a month. The Project Manager was somewhat frustrated with EPA's belated dissemination of policy statements and untimely issuance of technical guidance which sometimes resulted in the need to redo work elements hurriedly, and haphazardly. The Project Manager was particularly annoyed at EPA's tardiness in reviewing its consultant's testing labs. The delay resulted in a general setback in the project's technical and management planning schedule. He also expressed concern over what he perceives as the low Federal priority of WQM planning in EPA's scheme for water quality.

F. Scheduled Outputs

A list of MCPB's scheduled outputs appears in Exhibit I. All of the outputs have taken slightly longer to produce than orginally anticipated. The most significant schedule disruption, (i.e., in land use, can be attributed to the delayed delivery of technical reprots from consultants, and the unexpected overall scarcity of basic environmental data. The Project Manager felt that this delay was not disrupting the flow of the project, however, and that there would be time to complete the entire work schedule by the end of the planning period. The State Liaison expressed more concern over the delays. In his opinion, they will drain time and energy away from developing alternatives and ensuring plan implementation. He felt that there was little the State or WQM agency could do to change the situation at this late date.

The overall work plan was revised after the initial starting date of the program. Because the WQM staff had to spend the first five months of the program in this revision, it received a three month extension on the final date for plan completion. The extension of time was not accompanied by an increase in grant funds. All original budget allocations of the program were maintained with the exception of public involvement which has taken more time and more power than originally anticipated.

G. Achievements to Date

Although the program is somewhat behind schedule, the Project Manager could report a number of achievements to date. Among these were:

- The establishment and operation of advisory committees which have brought environmental and industrial interests together in common discussions. (These committees are working to the general satisfaction of the WQM staff.)

- The completion of goals and objectives survey (despite incomplete responses and a relatively low number of returns, the Public Participation Specialist felt the findings were significant because they confirmed the original program goals defined by the WQM staff).

- The completion of the land use inventory, institutional and legal inventory, and some water quality sampling programs (all of these have contributed to the county's data base for future local and county planning).

- Increased public awareness of water quality issues (the most dramatic evidence is a Citizen's petition to ban further use of a chemical disposal site until an environmental impact study is conduced on the effect of waste leachate on the underlying aquifer).

- Good cooperation between the WQM study and the MCPB's comprehensive land use planning program (according to the Assistant Executive Director of MCPB's, both programs have benefited from the arrangement).

EXHIBIT I

MIDDLESEX 208
Monthly Milestones (Outputs)

1975

September 1975
- Technical Advisory Committee and Policy Advisory Committee created
- Consultants engaged
- Work Plan completed
- Project Control Plan prepared
- Major point sources indentified

October 1975
- Land use input needs defined
- Land use inventory designed
- Newsletter Number 1 issued
- Public Meeting Number 1 (water quality/use goals)
- Phase I Low Flow sampling carried out
- Point source sampling carried out
- Phase I Eutrophication sampling carried out

November 1975
- Initial available point source data inventoried
- Existing historical stream quality data collected

December 1975
- Newsletter Number 2 issued

January 1976
- Public Presentation Number 1 prepared (Introduction to 208 Planning - "What is 208")
- Existing Land Use data collected and coded
- Environmental Base data collected for land use (DYLAM) model input

February 1976
- Urban analysis areas identified
- Weekly monitoring program designed and implemented
- High and low trend population and employment projections prepared for 1980, 1985, 1995 and 2000 for the study area

March 1976
- Newsletter Number 3 issued
- Public Meeting Number 2 held (Policies for land use distribution)
- Phase II Eutrophication sampling carried out

April 1976
- Analysis report on sampling to include:
  . analysis of low flow data to date
  . analysis of point source data to date
  . analysis of eutrophication data to date
  . report on methodologies, scheduling and evaluation of on-going and future low flow and storm sampling
  . analysis of geometry survey data to date
- Narrative statement on use of DYLAM model generated land use data to develop runoff pollutant loadings attributable to alternative land use patterns
- Interim Report on interfacing; SWMM and stream water quality model

- Status Report on refinement and calibration of water quality model to include:
  - identification of streams by segment, to be modelled (both for low flow and storm conditions)
  - identification of input needs
  - identification of water quality parameters and criteria for each modelled segment
  - procedures for and timing of model verification
- Interim Report on Task 6 to include:
  - preliminary non-urban loadings
  - definition of SWMM usage
  - complete delineation of four urban areas
  - description of selection of urban analysis areas and storm water sampling points
  - completion of land use inputs for SWMM
- Calibration of DYLAM model for Trend projections
- Refinement of land use acreage requirements for high and low trends completed
- Interim Report on "major" and "minor" point source inventories

May 1976

- Status Report on Public Participation Programs
- DYLAM attributes reflecting water quality planning policies defined and coded
- DYLAM land use outputs for 1980, 1985, 1995 and 2000 (high and low trends) based upon "trend" policies
- Interim Report on "winter" storm sampling data analysis
- Interim Report on Groundwater analysis to include groundwater inventory and hydrogeologic description of the study area

June 1976

- Tested DYLAM land use outputs for 1980, 1985, 1995 and 2000 based upon "planned" policies
- Public presentation Number 2 (land use and water quality issues)
- Newsletter Number 4 issued
- Public Meeting Number 3 (land use outputs, preliminary water quality problem identification)
- Phase III Eutrophication Analysis carried out

July 1976

- Preliminary report on perceived surface and groundwater water quality problems in the study area from field survey, sampling and historical data analysis, results and public input through surveys, PAC, TAC, etc.
- Interim Report on Institutional analysis to include:
  - inventory of all local agencies and programs related to water quality management
  - analysis of resources and powers of existing agencies and programs based upon reports and legislation

August 1976

Report describing methodologies to be used to evaluate eutrophication, non-point, urban runoff, and point source water quality problems

- Phase IV Eutrophication sampling carried out
- Identify water use factors and waste generation factors for domestic, industrial and commercial activities in the study area

September 1976
- Report on completion of interview process for State and federal level institutional elements
- Interim Report on "spring"/"summer" storm sampling data analysis
- Phase II Tidal Raritan sampling carried out
- Phase II Diurnal D.O. sampling carried out
- Phase II Low Flow sampling carried out

October 1976
- Final sampling report including:
  - . complete low flow sampling analysis
  - . weekly monitoring results
  - . stream storm sampling
  - . urban storm sampling
  - . eutrophication sampling
  - . tidal Raritan sampling
  - . dye studies
  - . stream geometry
  - . diurnal D.O. variation sampling
- Report on finalized waste load allocation factors relating water use, waste generation and water conservation for major land use/activities
- Newsletter Number 5 issued

November 1976
- Report on completion of tidal and non-tidal water quality model calibration and verification
- Report of preliminary waste load allocations
- Interim Report on hazardous and solid wastes inventory

December 1976
- Report on prioritization of water quality problems
- Report on land use refinements required
- Newsletter Number 6 issued
- Public presentation Number 3 prepared (priorities of water quality problems - structural versus non-structural approaches
- Public Meeting Number 4 held (water quality problem priorities and structural versus non-structural approaches)

January 1977
- Report on inventory analysis of local study area institution's (legal, financial, organizational)
- Point source control alternatives identified
- Non-point source/urban runoff control alternatives identified
- 201 analysis completed

February 1977
- Alternative groundwater strategies identified
- Alternative strategy evaluation criteria report prepared

March 1977
- Newsletter Number 7 issued
- Public Meeting Number 5 held (input on alternative strategy evaluation criteria - cost, environmental, social impacts)

April 1977	- Interim Report on existing and proposed institutions required - Report on results of modelling tests of water quality impact of alternative point and non-point source control and groundwater management strategies - Report on Final waste load allocation (303e) and point source management input evaluation
May 1977	- Complete evaluation report of management alternatives to include: . environmental impact; political feasibility/ public acceptance report based upon planning balance sheet approach; legal/institutional constraints; financial constraints.
June 1977	- Legal action required for implementation identified - Funding sources for on-going planning and implementation identified
July 1977	- Environmental impact assessment issued - Draft Report completed including: . point-source strategy, non-point/urban runoff strategy, groundwater strategy, legal-institutional, financing strategy - Newsletter Number 8 issued - Public presentation package (Draft Report summary) - Public Meeting Number 6
August 1977	- Report on Draft Report review and revision - On-going planning program designed
September 1977	- Final Report prepared - Issuance of final summary report for public distribution - Report on financial and institutional status for implementation
October 1977	- Adoption of Final Report (Water Quality Management Plan)

SOURCE: Work plan for Areawide Waste Treatment Planning under Section 208 of PL 92-500, MRPC, August, 1975.

III. EXPECTATIONS

A. Water Quality

Given the highly urbanized and industrialized nature of Middlesex County, few expect the WQM program will precipitate major improvements in existing water quality. Two rather optimistic citizens expected to witness improvements in many local streams and brooks, but according to the Project Manager, such improvements will probably be minor and evident in only a few isolated areas. The State Liaison and a local elected official noted that some rivers will show improvements, but that these will result chiefly from facilities improvements initiated prior to the WQM study. On the other hand, most people expected that the WQM program would help prevent further water quality degreadation through stricter controls over industrial water use, solid waste disposal and wastewater treatment facilities. The major anticipated public benefit was the protection and preservation of groundwater aquifers which furnish most of the area's drinking supply.

All persons interviewed felt that the 1983 goals would never be met in the Middlesex area because the cost of solving current water pollution problems would not only be exhorbitant, but would most likely require sacrifice of the local economic base. Needless to say, these consequences would be totally unacceptable to local communities; especially since the 1983 goals were not ever meaningful in some parts of the area. For example, no one cares to fish or swim amidst the ships and barges in the Raritan Bay.

B. Plan Approval and Implementation

Most people were quite optimistic about the likelihood of plan approval both by local communities and the State. The Project Manager based his optimism on what he perceived as a sound public involvement program. He and a citizen member of the Policy Advisory Committee felt that general community in the program was running high and that local input into the process would insure widespread approval of the final plan. One local elected official felt that local communities would approve the plan because there were few perceivable negative consequences, at least at this time. The fact that the WQM agency is concentrating on the use of existing institutions rather than new, regional bodies has helped. A few interviewees felt that concern over an imminent wate shortage would prompt most local decision-makers to approve the plan if for no other reason than to protect their political positions.

On the other hand, one citizen voiced considerable concern over the fact that local elected officials were not concerned about or involved in the process. She felt that active attendance at PAC meetings by industries, environmentalists, and other public interest groups would not compensate for the absence of public officials when the time for plan approval arrived. Optimism on the State's reaction to the plan ran high among interviews because of generally perceived

close working relationship between the WQM staff and the State DEP. Most people felt that this relationship provided adequate occasion to overcome any differences of policy along the way. As long as no conflicts arose, and the plan did not place a financial burden upon the State, no problems were anticipated in State review and acceptance. The one exception was voiced by the State Liaison who chose to reserve judgement on the issue until he could assess whether the plan required an additional legal basis for implementation.

On the subject of legal foundations, the Project Manager and the State legislator's assistants concurred on the need for additional State laws and local ordinances in the areas of mining, oil exploration, land management and particularly urban storm water management. They indicated, however, that actions toward securing this legislation could be deferred without affecting approval or implementation of the plan. Most interviewees felt there was a sufficient legal basis for implementating the final WQM plan - that the real problem was one of directing and prompting enforcement of existing powers and authorities.

The interviewees ranked the likelihood of implementation only slightly lower than that of WQM plan approval. Among the possible problems they felt might arise and hinder implementation were:

- Lack of program understanding by some local elected officials;
- Prohibitive costs;
- Opposition of interest groups such as developers and industries;
- Disagreement on tradeoffs between environmental and economic considerations; and
- Opposition from local rights groups.

However, with the exception of one citizen and one local elected official, most felt the WQM program's public involvement program would deal with these problems before the implementation period began.

C. Continuing Planning Process

The outlook on continuing planning varied by type of person interviewed. The Project Manager, Assistant Executive Director and two of the three citizens felt that, if money was available, planning should and would continue since the need for continued technical studies and public education will persist beyond the two year study time-frame. Two local elected officials voiced radically different opinions. One felt that WQM planning should not continue beyond the initial planning period because of the cost involved. In his opinion, continued planning would be

no more than a worthless duplication of effort - a problem common to the Federal government and to be avoided in Middlesex if at all possible. The other local elected official felt that the initial WQM plan would be sufficient unless a dramatic change in the economy facilitated more implementations, thereby necessitating more planning. All interviewees assumed that continuing planning would be conducted by the MCPB. According to the Project Manager, continuing planning will be concerned with further identification of unaccountable point source pollution, particularly from toxic and hazardous wastes and residual waste disposal. It will also delve more deeply into the issue of preserving drinking water supplies.

The Project Manager was unable to fix a cost on continuing planning. The Assistant Executive Director, however, noted that it may be rather high if the agency tries to deal with land use in highly populated areas. He assumed that the County Board would supply some of the money needed to finance continuing planning, but that the source of the remaining sum was questionable. The Project Manager stressed the absolute necessity for Federal money and felt reasonably certain that this money would be made available, if not immediately after plan completion, then sometime soon after.

D. Relation to Other Water Quality Programs

According to the Project Manager, WQM planning will have little if any effect on 201 facilities planning since most of the area is already sewered, in the process of planning municipal water treatment facilities, or has applied to do so. If all of the proposed facilities plans materialize, there will be little need for additional work in this area except to recommend upgrading where needed. Even this role will be limited, according to the State Liaison, because the WQM study is not conducting the level of technical studies needed to thoroughly substantiate their reocmmendations. Without sufficient data, the State would never act upon WQM suggestions.

The primary agent for 201 planning in the County is the Middlesex County Sewerage Authority. The Director of the MCSA felt that the WQM plan might effect his activities indirectly through its land use elements. If the WQM management agency has authority over the location and timing of land use, the timing and the expansion of MCSA's capacity could be directly effected. He felt this was also possible with regard to storm water management.

As to the NPDES program, the Project Director indicated that the role of the WQM agency will be to review industrial and municipal point source permits. He felt the State would be forced to rely on the WQM agency because the agency will have better data than the State by the end of its two year planning effort. The State Liaison acknowledged the value of the WQM information in issuing and renewing permits. However, his perception of the WQM agency's role in NPDES is much more passive than that of the Project Manager. According to the State Liaison, data produced through the WQM model will be interpreted by the State, not the WQM agency.

E. Local Definition of Success

Definitions of success seemed to center around two issues: prevention of further degradation and involvement of the public's. In the opinion of a local elected official and a State legislator's assistant, a WQM success would be meeting the ultimate 1983 goal. However, since success has to be measured in degrees, they would be satisfied if water quality conditions were first stabilized at their present condition. Any improvement beyond present conditions would be a bonus. The Project Manager shared their view, expressing a particular concern for maintaing some recreational and wildlife resources which are currently few and precious in the designated area. An appointed official felt the WQM agency would be successful if it took into account development which had been unchecked in the past and if it helped implement a more economically meaningful system of land use controls that would eliminate further degradation and need for additional treatment facilities. The only person to take a less flexible stand was the State Liaison who defined success in terms of meeting all of the WQM agency's goals and objectives outlined in the work plan. He felt that the WQM program would be especially successful if it generated useful information on the area's stormwater problems and the secondary impacts of land use patterns.

One local elected official and two citizens defined success in terms of establishing and operating a meaningful public involvement process. For the local elected official, this constituted a real challenge since he felt it will be very difficult to convince participating cities and towns to cooperate in a regional approach to problem-solving. For the citizens, true responsiveness to public involvement has been minimal, if attempted at all, in other planning programs. Whether or not the WQM process changed this pattern would determine success in their estimation.

Among the direct and indirect benefits expected from the WQM program were:

- Improved recreational potential;
- Presearvation of drinking water supply and quality;
- Maintenance of the current economic base;
- Maintenance and/or enhancement of quality of life; and
- Possible increase in property values.

Among the more basic long-term benefits were increasing the public's awareness of water quality issues and augmenting the data base for future planning.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

There was a general consensus among WQM staff members about the goals and strengths of the Middlesex project. All agreed that the overall objectives of the WQM study are to heighten public awareness of water pollution problems and to promote a regional approach to problem solving. All felt that the Middlesex project was the best in the State because of its comprehensive approach to planning, its emphasis on implementation and its elaborate structure for public involvement.

Since most of the technical data gathering, modeling and analysis work is being conducted by outside consultants, staff members viewed the WQM program from the perspectives of management/institutional planning and public involvement. They considered these the most crucial roles in the program because of the area's extremely complicated institutional setting and the anti-regional attitudes prevalent among most local elected officials. All voiced a common concern that current efforts at public involvement were not reaching local decision-makers and that this would cause problems when the plan comes up for final plan review and approval. The staff felt some frustration in selecting the most appropriate approach to their problems. One staff member expressed a need for more coordination among work elements and tighter overall program management. Presently, some staff people felt isolated in their position and thereby hindered in their ability to most effectively carry out their duties.

The Project Manager shared his staff's concern over poor participation of local elected officials. However, unlike his staff, he felt confident that informal contacts through newsletters and phone calls were keeping them well informed of program progress and would balance out their current lack of active involvement. He also felt that the agency was doing all that was possible to run a smooth effective program. He attributed most of the agency's problems to an insufficient start-up time which impeded maximization of time and funds.

The Project Manager viewed the WQM project as more of an integrated whole than did his staff. As the direct link between the WQM program and the MCPB's comprehensive land use planning effort, he recognized the WQM project's unique opportunity to influence future land use decisions with water quality concerns. Even if the WQM program does not continue on a large scale after the initial two year period, he indicated that the data collected and the contacts made during that time would have an effect on the area through other MCPB's planning activities.

B. Citizens

Three citizen members of the WQM Policy Advisory Committee were interviewed. One was a representative of a large manufacturing firm; another was the owner of a local marina; the third was chairperson of a local environmental commission. Two of the citizens were very pleased with their roles in WQM planning, indicating that the WQM staff was very receptive to their ideas and suggestions. These citizens felt that the public involvement program was particularly successful because it was divided along sub-basin lines, thereby making it easier for people to relate to the program through problems and issues of local importance. They were also pleased with the balanced representation of environmental and economic interests which facilitated discussion and compromise between the two groups.

Unlike the first two citizens, the third citizen was very vocal about her dissatisfaction with the public involvement process. She felt that, earlier in the program, pre-arranged meeting agendas left no room for open discussion, thereby eliminating the public's chance to influence program direction. The agenda problem was apparently resolved as the program progressed. However, she still felt that public involvement was too heavily directed by the WQM staff who "insulted the publics intelligence" by limiting discussions to only the most elementary levels. She wanted to hear more about the technical data which supported the staff's recommendations. Her suggestion was to occasionally hold joint meetings between the Technical Advisory Committee and the PAC and to require some technical staff attendance at all PAC meetings to answer the public's questions.

The industrial representative also mentioned that some PAC members were dissatisfied with what they considered a one-way flow of information, rather than a two-way exchange of ideas. In his opinion, however, WQM technical information was generally beyond the technical understanding of most committee members. In fact, he felt that the people who serve on the PAC represent such narrow self-interests that there was no need to include them in the WQM planning process. In his opinion, the only true spokesmen for the public as a whole are local elected officials.

All three citizens felt that local elected officials were not sufficiently involved in the process. Each expressed concern that lack of local interest might seriously impede final plan approval and implementation, since the area is generally opposed to regionalism and fairly unfamiliar with the types of issues the WQM program raised. They also felt that failure to address the chemical waste disposal issues would diminish the WQM study's credibility.

C. Local Elected Officials

Two local elected officials were interviewed; both were representatives of sub-basin committees of the PAC. According to one official, the issues raised at PAC meetings were appropriate but the manner in which they were presented clouded their meaning and disguised their political and economic consequences. This frustrated many committee members and discouraged local elected officials' participation. All committee decisions to date were made on a consensus basis with little (if any) controversy. He anticipated more debate and possibly more interest, however, when actions involving trade-offs come into focus.

The second elected official was not actively involved in the public involvement process, nor did he feel the need to be, since his community was already highly developed and therefore would not be effected by land use controls or other anticipated WQM outputs. He also felt that his community was too small (1.6 miles) to be of consequence in the total water quality management scheme. As far as he was concerned, responsibility for water quality management rests in the hands of the County.

In general, both officials noted that antipathy toward regionalism was common throughout the designated area. Both felt that the WQM program was not producing or circulating sufficient evidence to convince local elected officials of the need to cooperate on water quality issues. They felt that air, for instance, was more widely acknowledged as a major problem, and that ameliorative programs in this area were, therefore, more likely to receive local political and financial support.

D. Appointed Officials

The Executive Director of the Middlesex County Sewerage Authority described his role in the WQM process as one of overall cooperation and active technical support to the WQM staff and consultatnts. The Director indicated that EPA Region II had originally considered the MCSA the most logical candidate for WQM planning since it had conducted most of the area's 201 planning, possessed the most complete water quality and land use information in the area, and was already empowered with regional management authority. However, since the MCSA's enabling legislation would have to be changed inorder to conduct WQM planning, the MCPB was selected instead.

The Director indicated that he was pleased to have been of assistance in WQM planning. He expected that MCSA's advisory role would continue into the management phase in the form of:

- Review of population projections;
- Identification of industrial pollution sources; and
- Sale and dispersal of treated effluent for industrial processing and cooling water.

He felt that WQM waste load allocations would influence plans for future waste water facilities but that 201 decisions would ultimately remain in the hands of the MCSA Board of Directors unless a substantial change in legislation was made. He also felt that WQM implenentation would mean more money for MCSA and more 201 work.

E. State Legislators

The State legislator selected to participate in the evaluation study was not available at the time of the site visit. His two legislative aides acted as spokesmen in his behalf.

The Senator's interest in WQM planning stemmed from his overall interest in environmental affairs and more specifically from his membership in the Agriculture and Environmental Committee and chairmanship of the Finance and Appropriations Committee. He made speeches on behalf of WQM planning at the time of MCPB's designation and continued to speak on the program's behalf throughout legislative discussions. The Senator was not directly involved in the WQM process but that he was kept in contact with the program through his aides who regularly attended sub-basin PAC meetings.

According to the aides, the Senator was the only State legislator to take an active interest in the Middlesex WQM program and, therefore, was about the only one aware of the program's intentions and activities. Most legislators are simply too busy to get involved becasue of their existing responsibilities and the number of other issues competing for their attention. As in most other States, New Jersey legislators tend to rely on the recommendations of special committees when decision-making situations arise.

In the opinion of the aides, water quality currently ranks low among the State's needs and priorities. Without improvement in the tax structure, they felt there was little hope for continuing State financial support of the WQM program.

F. State Water Quality Personnel

The current State Liaison to the Middlesex WQM project has begun to take an active role in the process. Unlike past Liaisons from the DEP, this Liaison attends WQM staff meetings regularly and is present at PAC meetings where he renders technical advice and explains State policies

when requested. He has found the WQM agency generally receptive to his suggestions but not as receptive as they are to EPA's guidance and directives. His implication was that he would like to change this situation and indeed felt more confident about playing a more influential role now that 303(e)'s were firmly underway. According to the Liaison, water quality planning had a low priority in the past but with WQM and heightened public awareness, he expected the State to take action in areas WQM agencies indicated.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The Middlesex WQM program is operating within a highly complex urban, industrial and institutional setting where continuation of water supply is threatened, recreation and aesthetic resources are disappearing, and demands for expanded facilities are constantly increasing. In the eyes of the Middlesex County Planning Board, therefore, the comprehensive scope of the WQM program was tailored to their needs. The MCPB designed a work plan that addressed a broad range of water quality problems, and both structural and non-structural solutions to these problems. The land use studies are particularly relevant to the comprehensive parent agency's county land use efforts.

The Middlesex WQM work plan clearly addresses all the program requirements ments and suggestions of EPA and the law itself. But the problem with the approach is that it may be too ambitious for the two year planning timeframe. Given the area's dearth of water quality data, magnitude of water quality problems, complicated institutional setting and general anti-regionalism sentiments, the program may have been wiser to focus on a limited number of problems; particularly those identified by the public as most important and worthy of immediate attention. The WQM project could then concentrate more time on management planning and local elected officials' involvement.

Problems with the WQM work schedule were already in evidence at the time of the interviews. Management planning had been set back because of late consultant technical reports. As a result of this delay, the WQM staff may have to limit its data analysis and management planning in order to produce a plan on time. Whether or not the staff can now complete all it originally planned to do is rather questionable, especially since it will have to reserve some time for plan approval.

To date, efforts to ensure plan approval have relied on the rise of policy advisory committees, surveys and newsletters. These mechanisms have been somewhat successful with special interest groups and industries, but have failed to reach local elected officials. The staff has tried to compensate for this problem by making a few direct contacts and by mailing newsletters and memos to public officials, but the interviews suggest that these efforts have proved less than successful. One local elected official, for example, felt that the designated area's water quality problems were too complicated to be effected by his town's action or lack of action. He seemed to expect that other towns or the

County would take positive steps thereby relieving his community of the burden. Judging by the attendance of local elected officials at PAC meetings, his sentiment is evidently shared by others.

The Project Manager acknowledged the problem but was relying on controversies surrounding the development of plan alternatives to arouse more attention from local elected officials. The program, however, may not be in a position to take such a risk since there is so little time at the end of the program to convince local communities to take affirmative and cooperative action. Widespread plan approval will be difficult to secure if the plan proposes controversial action such as stricter land use controls or further regionalism which preliminary studies have suggested. The likelihood of plan approval may also be hindered by the fact that the WQM study did not address the environmental/health consequences of toxic chemical waste disposal which is of primary concern to the area. Failure to speak to this issue may lower the credibility of the study in the opinion of some persons interviewed. As to plan implementation, the staff may be dismissing potential problems too lightly. There is little evidence now that more than a handful of towns feel enough immediate need to take action, especially since the incentive of 201 money is not a factor and since there is no financial planning to help local communities finance nonstructural solutions where additional funds will be needed. These and other unresolved problems, particularly those related to anti-regional sentiments, may make chances for implementation somewhat dim except in the most innocuous and most visible issues.

B. Public Involvement

The Middlesex WQM program has designed an elaborate public involvement program to involve the general public, public interest groups and local elected officials in the planning process through sub-basin Policy Advisory Committees, surveys and newsletters. The indication from at least some of the interviews, however, is that the program is not as effective as one might expect. The two surveys were involved because of misdirections and a low response rate; the newsletters have experienced irregular publishing and the committee meetings leave much to be desired. Citizen input on selection of program goals and objectives, for example, was untimely and too elementary to be of much use to the public or the WQM staff. Most of the PAC meetings have continued to be a one-way flow of information rather than a two-way exchange of ideas. Meeting agendas are still primarily pre-determined by WQM staff with little opportunity for the participants to raise questions. When questions are answered, some citizens feel that the staff is withholding information because they underestimate the technical capability of the public. The public participation person, on the other hand, is a junior staff person who, like other junior staff, has a compartmentalized view of the program and, therefore, is often unable to answer hard questions on technical issues or policies.

Although attendance at PAC meetings is still higher than at other advisory meetings sponsored through the MCPB, attendance is diminishing as the program progresses. The first to leave were most of the local elected

officials who responded to early invitations to participate. Only a few remain active in the PAC.

Despite the fact that the PAC's have only attracted environmentally-oriented interest groups and individuals and industries which stand to be effected by the plan, the WQM program continues to concentrate all of its public investment staff time and money on these sub-basin committees. The lack of local officials involvement in PAC has been one of the greatest failings of the public involvement program since there is no other method for soliciting their input. The Public Involvement Specialist has tried to keep them informed of program progress through newsletters, but this does not provide an opportunity for them to raise their questions or resolve their disagreements with the plan. This may present a problem at the time of final plan review and approval.

C. Current Planning Process

As noted earlier, the Middlesex WQM program is geared toward a comprehensive look at the area's water quality problems and possible solutions. Since it had little basic water data with which to plan, the WQM agency chose to concentrate a substantial period of time on technical studies. This action is understandable in that the agency needed this data to develop management alternatives and to gain credibility in the eyes of local communities. However, in trying to tackle such a wide range of issues, it couldn't study any problem in depth and it lost time from management planning.

Rather than hire in-house technical expertise, the agency decided to contract out for sampling and modeling. This decision was probably the most efficient view of the fact that the consultant already had a working model for the designated area. However, heavy reliance on consultants meant that a large portion of the grant and study was outside of the WQM agency's direct control. This has led to problems. Delay in technical studies, for example, has set back management planning thereby leaving very little time for plan approval.

The problem with the Middlesex WQM planning process seems to be that the agency has not been flexible as problems in the original work plan have become evident. If the agency can become more flexible over the remaining year, particularly by concentrating on a few issues of widespread concern and by making a more efficient public involvement shift away from the general public and into local elected officials, the program may still have time to register some successes. More specifically, the WQM program may influence a few immediate management practices and pave the way for continued, meaningful water planning.

D. Continuing Planning Process

The interviewees' attitudes toward continuing planning seemed to reflect their understanding of the program's intent and their attitude toward implementation. Those who perceived the WQM project strictly as a data gathering study to be stored on a shelf saw no need to continue planning beyond the two year period. Similarly, those who felt that the cost of plan alternatives would limit implementation considered further planning a wasteful extravagance since nothing additional could be done until more money was available for implementation. On the other hand, those who perceived of the WQM plan as a true management tool felt that the planning process should continue to analyze the data collected and to develop cost effective solutions for changing problems and needs.

The Project Manager was uncertain about the future of WQM planning. However, he suggested that if it did continue, the staff would concentrate on those issues which were not sufficiently covered during the first two years and which could not even be addressed at that time due to a limited budget and study timeframe. He hoped that local officials would become more active during continuing planning especially since more specific issues could be dealt with at that time.

E. Significance of Local Elected Officials Involvement

As noted earlier, local elected officials have not taken an active part in the public involvement process. All communities signed resolutions of interest to support designation of the MCPB as the WQM planning agency but this resolution was not legally binding and did not oblige local elected officials to become involved in the WQM study. Whether or not development of plan alternatives arouses their interest during the second year remains to be seen.

AGENCY: MID-WILLAMETTE VALLEY COUNCIL OF GOVERNEMENTS (MWV-COG)

REGION: X - (Seattle)

GRANT AMOUNT: $446,300

GRANT RECEIPT: June 6, 1975

STARTING DATE: November, 1975

STATUS AT TIME OF INTERVIEWS: Work plan approved. Consultants hired and working on technical and management task elements. Citizen involvement program had not yet been designed.

REASON FOR INCLUSION IN SAMPLE: This area has a significant number of nonpoint source problems, particularly ones related to agriculture.

I. BACKGROUND[1]

A. Area Description

The designated area includes thirty-three towns and cities and three counties in the State of Oregon. The first two counties constitute the Salem SMSA. The tri-county area comprises Oregon's Administrative District III. Geographically, the area lies mid-way along the Willamette River which stretches north to south in the Oregon, comprising part of a rich, fertile agricultural valley. Nearly 70 percent of the state population lives in the full valley. To the north lies the Portland area and to the south is the Eugene SMSA.

The 1970 Census population of the area was 226,871, with over half living in the county of Marion. Approximately 67 percent live in urban areas. The least populated portion of the area is Yamhill County. The rate of area economic and population growth is significant, with the latter over 3 percent per year, which is expected to double by year 2000.

Industrial activity varies widely by county. The largest industrial activity in the area is food processing, which occurs primarily in Marion County. Marion County also has a large amount of employment in metal fabrication and paper products production. Lumber and wood products provides the major employment in Polk County, while the agruculture economy is expected to expand. The area is one of high growth which is under significant development pressure. The timber industry obviously is related to building and development. Too often, however, people do not think of development in terms of its impacts. Fortunately, the area is well zoned and there is a growing understanding that land is one of the area's greatest assets.

There are two referenda on the November ballot which could have significant impact on the WQM project. The first calls for elimination of land use planning and the second calls for elimination of all COGs. The opposition is directed towards MWVCOG. The former referendum was prompted by the former LCDC Director's treatment of elected officials. The anti-COG referendum is a reaction to some actions taken by Portland CRAG to strengthen their powers. There is no general consensus about the outcome of these referenda, although some believe it will only depend upon the semantics in the referenda.

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1 Information for this Chapter was taken from designation application; work plan; Mid Willamette Valley Council of Governments Budget, 1976-77 and interviews.

B. Water Quality Problem

All twelve of the stream segments in the planning area have been designated Water Quality Limited by the State, in the River Basin Plan. In most cases, this is due to high coliform counts and low dissolved oxygen levels due to inadequate flows and changing periods of high summertime temperatures. In the North Santiam, the classification is used for nondegradation since this is a water supply source.

This area probably will face significant diffuse source problems in the future. Expanding agricultural land use will increase the use of fertilizers and irrigation water. In addition, project population increases will require land use controls and wastewater management techniques to prevent overload and degradation of Rickreall Creek and the Yamhill and Pudding Rivers. Point source control through allocations will be inadequate for meeting non-degradation since the increasing nonpoint sources will be uncontrolled by existing programs.

Some specific nonpoint problems in the area include combined sewer overflow in the Salem area, groundwater pollution in Labish Village and Turner, septic tank leakage in isolated area, construction runoff, and a variety of agriculture-related practices including irrigation and fertilization. The area's point and nonpoint problems are complicated by lowflow conditions in the summer.

The three areas of highest priority will be the Willamette, Pudding and Yamhill river basins because of their size and location to future populations. Of somewhat less importance are the Huckiamute River, Rickreal Creek and Ash Creek basins.

C. Designated Agency

The Mid-Willamette Valley COG was created in 1967 by the merger of two intergovernmental organizations which had been in existence for a decade. The Board of Directors is composed of the chief elected officials of each member government -- Chairmen of Boards of Commissioners for each County, Mayors of each city and elected chairmen of Special Districts -- plus an appointee of the Governor.

The COG provides staff and controls the administration of zoning and subdivisions for both Polk County and the City of Salem. It also provides planning services to seven other cities and towns and to a school district on a contractual basis. The COG conducts

planning in the following areas:

- Manpower;
- Criminal justice;
- Transportation;
- Aging;
- Human resources; and
- A-95 review.

The State recently passed a land use law establishing the Land Control Development Commission (LCDC). The LCDC prepared a set of 14 development goals and contracted regional agencies for implementation. MWVCOG is the agency contracted for the Mid-Willamette Valley area.

According to the Executive Director, these programs are all related. For example, he sees WQM as one way to help strengthen the areas' economic base. Most of the COG planning activities are coordinated through the Regional Planning Department. The WQM staff consists of a Project Manager plus three other professionals assigned to the three major subplans anticipated (point source, nonpoint source and management).

Before starting the WQM program, the COG prepared a Water Quality Management Plan which was designed to achieve a cost-effective methodology for evaluating sewage treatment and point source management systems. This plan was never adopted officially but was used by the State for granting permits. Another important and highly related COG activity is the recently established Urban Growth Boundary and Policy Program. This innovative program, which was accepted by the counties in 1974, created an urban growth policy for urban/rural structure up to a capacity of 330,000 to be contained within a definite boundary line. Urban service boundaries were asigned and will be used to help carry out the policy.

Program guidance is provided by two committees. The first, a Regional Planning Committee (RPC), consists of 13 members from City and County Planning Commissions, County Commissioners, Mayors, Soil and Water Conservation District representatives and two at-large members. The second committee (ATAC) is composed of 28 technical representatives from Federal, State and local agencies.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The most basic objective of the WQM program is to set up a strategy for the area to maintain its water quality. It is hoped that this will begin an assessment process for the entire range of environmental issues and provide a cornerstone for centralizing all environmental concerns. The specific goal is to ensure water quality for a 20 year period.

Water quality is not a high priority goal in the area because most people do not perceive a water quality problem. A statewide battle to save the Columbia River was fought in 1968 and most people believed that high water quality has resulted. Oregon has been known for its concerned attitudes toward its natural resources, and if any immediate problem became apparent, people would become committed to resolving it.

B. Technical Component

A second major task involves development of technical plans, particularly for municipal facilities. A series of technical memos describing existing systems and their assocciated industrail loads, present and future, will be generated. 201 plans and needs for two and five year increments will be indicated. Alternative structural and non-structural solutions for controlling wastes will be outlined to include financial, institutional and management procedures and priortization of future facilities. Each of these task elements will be summarized in a separate technical memo. A residual waste program also will be studied and designed. The second technical sub-plan involves urban storm runoff and combined sewer problems. The problem will be described and structural and non-structural alternatives evaluated. These sub-plans will comprise the point source plan.

Nonpoint sources will be addressed, particularly those relating to agriculture, silviculture and construction. A pilot study will be conducted in South Yamhill basin and management practices will be evaluated. Pollutant loadings from land uses and critical areas will be estimated as will land use conversions. Basin-wide priorities will be determined and results of the pilot study will be applied to these areas. Areawide application including cost will be analyzed. A second pilot study will be made of an area with septic tank failure problems. An areawide priortization analysis similar to that followed in the first pilot study will also be conducted. The

third study are will concern solid waste problems related to water quality and this will result in a management plan for future disposal needs.

For the point source sub-plan, two consultants have been hired, one to do the urban stormwater runoff analysis and the other to conduct the industrial wastewater analysis. A staff person will analyze areawide wastewater and residual wastes. The three counties have been contracted to product land use data, population projections and urban service boundaries.

Polk and Yamhill counties and the Soil and Water Conservation Districts have contracted collection and analyses data for the South Yamhill River basin pilot study. An environmental geology and groundwater firm will analyze the areawide problem for septic tanks.

C. Management Planning

The third task calls for developing an overall management plan. After compiling an inventory of existing institutional arrangements in the tri-county area, existing deficiencies will be calculated and a final plan combining both point and nonpoint sources will be delineated. This will include financial and regulatory alternatives. The output will be a series of technical memos.

A consultant firm has been hired for management analysis and, at the time of the interview, they were inventorying existing agencies and the financial capabilities of all communities. No new institutional arrangements are expected to be created, so the emphasis has been placed on developing workable relationships with, and support from, local elected officials towards a continuing planning process.

Management planning is being approached as a loose consortium of tasks within the entire workplan. Basically, the program will delve into a few concrete, issue-oriented areas. Management planning has lagged somewhat behind technical planning but the two are currently proceeding together.

Some specific management issues are beginning to surface. One relates to management of the four proposed regional treatment systems. A second relates to agricultural controls, primarily for sediments (currently, there are no State sediment standards). A third management issue relates to management of subsurface disposal. State laws do not go far enough, and the existing laws relate only to new tanks. A fourth management issue concerns the need for criteria pertaining to land disposal of sludge. The staff is beginning to set priorities for examining these and other issues.

D. Public Involvement Program

Currently, there exist three advisory committees point source, nonpoint source and management. Each committee has twenty members, all appointed by the Regional Planning Council. A fourth committee on public involvement has just been approved.

A nine member Ad Hoc Committee has been formed for the purpose of establishing a public involvement program. Although its members had not been appointed at the time of the interview, the committee representation was intended to reflect the impacted public. Its membership included representatives of an industrial lobby group, labor (cherry workers or cannery workers), small communities, the counties, environmental groups, the State Extension Service, the Regional Planning Council, the County Planning Department, and agriculture. The group will meet in a concentrated effort through September and October until a final program is designed.

E. State and Federal Involvement

The WQM feels that they have a good relationship with the EPA Regional Office but they are receiving little policy guidance. They are concerned about the EPA commitment to nonpoint source controls, and are unsure how to interpret guidelines for things they feel cannot be done. The Regional Office has not interpreted this national guidance for them. In general, most direct contact with the Regional office has been on a bi-weekly basis with the Oregon field representative. Other than a site visit from a group of Regional Office persons, contacts have been made chiefly by telephone and letter.

WQM feel their relationship with the State Department of Environmental Quality (DEQ) has changed recently from neutral to positive but, generally, they feel that State input has been minor. There is a feeling that WQM is giving a very low priority by the State because they have so much work to do. There has been no involvement from persons in a policy position within the State. The only involvement has come from the regional DEQ Administrator who has been particularly active and helpful on technical matters. The State Liaison believes he should play an advisory role in reviewing their outputs, but feels he should not become too involved.

Currently the State is trying to complete its 303 basin plans. There is considerable disagreement over these plans within the State and with EPA. It is hoped that the plans will be completed and available to the WQM by September, 1976. The State has not really started developing their State strategy but they have asked the WQM Program Manager to participate in its development. Presumably, this implies that they intend to incorporate the WQM work as

part of their program, however, they do not see a great role for WQM in either 201 or NPDES.

The next most commonly mentioned problem was the constantly changing EPA requirements. The staff feel there has not been enough guidance and direction by the Regional Office. The State has been even less helpful in terms of assisting with program design and enunciating statewide policy on water quality management. Given the complexity of the WQM program and the fact that there were no tested programs, EPA and State indecision frustrated the WQM agency.

F. Scheduled Outputs

The first task begins with project intiation (including the project control program; creation of areawide technical advisory committees; prioritization of water quality problems; description of goals and objectives; and processes for monitoring progress, expenditure and quarterly reports and interagency coordination). Data requirements were identified after project initiation. A technical memo will be generated and will explain whether field monitoring is necessary. The final sub-task will involve collection of this data.

The second and third tasks describing technical and management planning were described in Sections IIB and IIC respectively. Outputs include technical memos and three sub-plans (a full list of outputs as found in the work plans is shown in Exhibit I). Drafts of the technical sub-plans are scheduled to be completed by February, 1977 and the draft management plan completed by April, 1977.

The final output is expected to be a composite area-wide regulatory and management plan and a number of appendices in subplan and technical memo form. The subplan will be for sewerage, stormwater runoff, groundwater contamination due to septic tank effluents and nonpoint sources.

G. Achievements to Date

The starting date for the project was November, 1975. The staff was hired in January, 1976 and consultants have been hired since then. Approximately $160,000 of the $443,000 grant will be spent on consultant work. At the time of the interview, the WQM believed they were a few weeks behind on some of the work elements. This is not expected to effect the schedule of the final output. Interim outputs have been submitted and were considered helpful. The agency felt they would have preferred to have submitted copies of the technical memos to fulfill the interim output requirement,

OUTPUTS
WMVCOG

The planning effort is designed to develop a number of independent reports, studies, maps and sub-plans, all of which will be used to complete the final 208 plan. The following is a list of major outputs to be associated with program elements:

I. Project Initiation, Data Requirements and Data Generation

A. Project Control Program (Task IA1); estimated completion date, October 1975
B. Report on Areawide Economic Projections (Task IC1; estimated completion date, June 30, 1976)
C. Report on Areawide Population Projections (Task IC2; estimated completion date, June 30, 1976)
D. Report on Areawide Land Use Projections and Urban Service Boundaries (Task IC3; estimated completion date, June 30, 1976)

II. Technical Plans Development

A. Interim Report and Prioritization of Needed 201 Facility Plans (Task IIA3; estimated completion date, May 31, 1976)
B. Technical Point Source Subplans

1. Municipal Waste Treatment Element (Task IIA21)
2. Industrial Waste Treatment Element (Task IIA40)
3. Urban Stormwater Runoff and Combined Sewer Element (Task IIA36)
4. Residual Wastes Element (Task IIA31)

(Estimated completion date B1-B4, February 15, 1977)

C. Technical Non-Point Source Subplans

1. Agriculturally Related Element (Task IIB1-14)
2. Silviculturally Related Element (Task IIB1-14)
3. Construction Activity Related Element (Task IIB1-14)
4. Land Disposal Related Element (Task IIB15-28)

(Estimated completion date C1-C4, February 28, 1977)

D. Combined Technical Subplan

1. Combined Point Source Planning Alternatives (Task IIC1)
2. Combined Non-Point Source Planning Alternatives (Task IIC2)

(Estimated completion date D1 and D2, March 15, 1977)

III. Management Plan Development

A. Inventory of Management Data Base (Task IIIA)
(Estimated completion date Task IIIA, July 31, 1976)
B. Combined Management Alternatives (Task IIIB)

1. Institutional Arrangement Alternatives (Task IIIB1)
2. Financial Capability Alternatives (Task IIIB2)
3. Regulatory Alternatives (Task IIIB3)
4. Ongoing Wastewater Management Planning Process (Task IIIB4)
5. Draft Management Alternatives Memorandum (Task IIIB5)

(Estimated Completion date IIIB1-5, March 15, 1977)

C. Combined Management Subplan (Task IIIC)
(Estimated completion date, June 1, 1977)

IV. Wastewater Management Plan and Management System Selection -

Select and Prepare Final Draft Plan (Task IVD; estimated completion date, June 30, 1977)

V. Program Management

A. Public Involvement Study Design (Task VA3; estimated completion date, June, 1976)

B. Revise Final Draft Plan (Task VB3; estimated completion date; August 31, 1977)

SOURCE: Project Control Program, Areawide Wastewater Treatment Management Planning, MWV-COG, 1976.

rather than having to meet the nine month deadline.

The agency has not gone far enough into planning to have recorded specific achievements. Both the Executive Director and the WQM Program Manager noted that they are beginning coordination and dialogue between local elected officials over land use and water quality. They see WQM as a logical extension of all that the COG had done in the past. These relationships should provide a mechanism for action (one local official thought one major achievement was the fact that two counties, Polk and Yamhill, were involved in a regional activity for the first time).

The most common problem cited by the WQM staff involves getting people interested and involved in the program. Because the widespread impression that there are no water quality problems in the area, people, including elected officials, do not understand the need for planning. This will be one of the agency's biggest challenges througout the planning period.

III. EXPECTATIONS

A. Water Quality

The purpose of WQM in this area is to maintain existing water quality. Therefore, the "problems" to be solved involve gaining a better understanding of future potential problems so that pollution can be avoided. The most direct benefits probably will be in some of the smaller creeks. Two problems in particular were mentioned: failing septic tanks and sedimentation from agriculture and silviculture.

Everyone interviewed felt the 1983 "fishable swimmable goal" could and would be met, primarily because they are so close to meeting standards already. Notwithstanding an occasional problem, the goal should be met in all parts of the area.

B. Plan Approval and Implementation

Everyone interviewed felt that the likelihood of plan approval was 8 or 9 of 10 at the local level, and 10 of 10 at the State level. Most explained that the high chance for approval is due to both local communities and the State participation, consequently, any differences will be worked out within the final plan. One elected official thought it likely that other local officials would not understand what they are approving, but that they would approve the plan nonetheless. The WQM Program Manager felt the most essential officials in plan approval were the county and medium sized city officials, all of which are represented on the Regional Planning Council.

Most interviewees felt the likelihood of plan implementation was about 8 of 10. Everyone explained that implementation would depend on the final plan. Most persons felt that the degree to which implementation would occur would vary throughout the area. One elected official rated the three counties and Salem at 10 and other areas between 3 and 8. Similarly, the COG Director said the plan would be substantially implemented in most of the area but only partially implemented in others.

A local official noted that the most effective way to ensure implementation in his opinion, would involve the EPA linking future finding to the degree of compliance with the plan. The citizen interviewed saw implementation being limited only by mandatory requirements by EPA and the State. She felt that financing would be the most limiting factor for implementing point source plans. Nonpoint source control would be more difficult because it involves land owners' rights which have not previously been

regulated. She felt, therefore, that nonpoint source control was best achieved by a public educational process.

The WQM Project Manager was more modest in his assessment, putting the likelihood of implementation around 6. His main concern was that some BMP's may prove unworkable. Program emphasis will be on the continuing planning process and on establishing a trend toward control. He said eight of the elected officials are involved through the RPC and 18 are involved through the COG Board. In September, the Project Manager intends to begin lobbying elected officials on a one-to-one basis.

It is somewhat unclear as to which new State laws or local ordinances will be needed for implementation, since preparation of an inventory by the staff and consultant is not yet completed. Local ordinances were expected to be needed for the areas of stormwater runoff, residual management, agriculture, and soil conservation practices. Several persons mentioned that any silviculture regulations would have to come from State law. The State could also set BMP practices although there are already some exising laws in that regard.

A wide range of opinions was about the need for new laws and for possible local and state regulatory changes were voiced:

- The WQM Project Manager mentioned that the area could adopt a water conservation policy at the local level. Residuals management was most often seen as a joint State/local problem.

- One State legislator expected to see additional recycling laws for paper and other substances. (A State bottle recycling law currently exists in Oregon).

- The State water quality agency representative felt the most likely changes would be in methods of funding water quality management, such as through bonds or revenue sharing.

- The State legislature added that he thought the bulk of State action would be for financial assistance rather than new laws. He felt that the larger degree of public identity with the agriculture and the cattle industry prevents passage of laws that are too restrictive.

- The legislator also stated that he did not foresee new legislatiion without passage of additional State appropriations. The governor has said he would veto any legislation that calls for local expenditures, so the legislature is avoiding this situation.

- Finally, both legislators agreed that there is a growing feeling that they cannot be forced by the federal government to change their laws, given recent defiance of federal policy by the State of California.

C. Continuing Planning Process

Everyone interviewed anticipated continuing planning conducted by the COG and with State review and approval. Most saw continuing planning as a link to land use planning, especially through the State land use law. Most also felt that implenentation should remain local with continuing planning playing only an advisory role by overseeing implementation. One local official felt it was possible that the counties rather than the COG would be responsible for continuing planning.

Both State legislators were concerned that the referendum would pass and affect both implementation and continuing planning. One was concerned that implementation by locals would not occur and the State would jump in because of its enforcement powers. She felt the State had a poor record in planning, as evidenced by the way they had "bungled" health planning.

The WQM Project Manager saw the role of continuing planning as four fold. First, it would ensure uniform application of the pilot studies. He felt it was necessary to constantly monitor and motivate the implementing agencies. Second, it should provide a medium for a dialogue about water quality between regulators and those regulated. Third, it would provide a means for updating the plan and for annual certification. Fourth, continuing planning should serve as a watchdog for local interests over DEQ and State programs.

D. Relation to Other Water Quality Programs

There were mixed opinions concerning the effect that WQM would have on 201 facility planning. The COG Exeuctive Director felt WQM should be totally controlling. The State DEQ Coordinator felt there would be very little impact because most 201 planning was either completed-or already underway. Others interviewed felt 201 and WQM should be coordinated. WQM would set urban growth boundaries (this has already been done for Salem) and 201 consultants would have to use areawide population projections and allocations. Initiation of 201, however, would still be local, and its design would be controlled

by the State. One elected official hoped that WQM would document other problems, for example, proving it unnecessary to utilize tertiary treatment. The citizen interviewed expected that 201 would not welcome WQM, but that some local officials would use it as an excuse to do what they felt was needed. 201 agencies have been invited to participate in the WQM program and some are active. For its part, the WQM has commented recently on some 201 plans and they are currently establishing a review system. The State and the 201 consultant felt the WQM review role should be limited to planning, but the WQM hoped also to conduct some technical review.

There also was mixed opinion about the impact of WQM on the permit system. The COG Executive Director felt WQM should be controlling, while the State felt there would be no impact. So far, WQM has not become involved in permitting. There are some local opinions that permitting is too flexible (and, therefore, inequitable) and that possibly WQM could improve this. The State DEQ representative, however, saw no way for WQM to become involved in the permit program.

E. Local Definition of Success

Some of the interviewees defined success generally in terms of the guidelines:

- "Implementing something" (a state water quality agency;
- "Meeting the 1983 goals by 1983" (citizen);
- "Establishing a system with solid political support for dealing with water quality issues" (COG Executive Director); and
- "An indication of future wasteloads so they know what they have to handle" (city engineer).

The WQM Program Manager defined success in two ways. First it would be the establishment of and support for an ongoing continuing planning process for water quality and wastewater management in the tri-county area. If alternatives are unacceptable, they will be redone. Second, success would be an attempt at BMP, (i.e., any move toward regulation).

Interestingly, the most specific and thorough definitions of success came from the two elected officials interviewed. The County Commissioner hoped to see model ordinances and regulations for control of nonpoint sources beyond a voluntary level. He was particularly concerned about compliance in three areas-- agriculture, timberlands and maintenance of septic tank effluents. The City Councilwoman also saw three specific criteria for success. Her

first concern was that new guidelines be developed for road-building and subdivision practices. She did not think it necessary that these be uniform, but they must be consistent in all three counties. Second, she felt data must be generated which would identify the major sources of problems in the area. Third, she felt it was essential that the WQM continue its policy role. She was concerned about the State/WQM relation and felt the local agency, not the State, should be in charge of water quality management planning.

A number of indirect benefits to conducting WQM planning were described by interviewees. The WQM Project Manager felt that it provided a forum for discussions on equity and economics, for public awareness, and for persons to plead their case. He also felt that WQM planning served as a watchdog for EPA and the State. Basically, he felt the WQM would serve as a cornerstone for centralizing environmental concerns in the area.

One local elected official, a County Commissioner, felt that WQM would complement the comprehensive planning process by improving the compatabilty of development with the entire environment--beyond just a concern for water quality. He felt the WQM study would help locate areas for safe development. Most importantly, he felt WQM would give people a feeling that they could control their own destiny in all areas. He felt the costs of water quality management would be borne by rising development costs, and by the agricultural and timber industries.

The other elected official, a City Councilwoman, saw three chief benefits to WQM. First, it would augment an understanding of the valley as a single unit, regardless of political boundaries. She saw a growing regionalism, particularly in the cities. The second benefit was (hopefully) the development of new ways to build on hills and ways of building less costly homes. This was believed necessary to save the farmlands. The third benefit was a growing understanding by the farmer that he needs controls in order to fight urban encroachment. She saw the potential costs of water quality management coming in the form of increased housing costs, industrial costs, agricultural production (if insecticides and fertilizers must change) and costs for installing storm drains.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM planning effort holds a very high priority position within the MWV-COG structure. The Executive Director, who oversees a staff of nearly 100 persons, is intensely aware of the details of the project and how it is working. The Executive Director frequently speaks with numerous local elected officials and is aware of their feelings. At this stage, the Executive Director feels that many local officials are wary of the project, although none are blatantly opposed. He finds them questioning what their role should be.

The view most consistently held within the agency is that the chief priority of WQM is developing support for continuing planning. The Executive Director, Director of Regional Planning and the Project Manager all agree that they have undertaken an ambitious program, perhaps more than can be expected within two years. If they focus on setting up a continuing planning process, it will not matter whether everything is completed in two years. What is more important is "beginning a process to assess the entire realm of environmental issues."

B. Citizens

As no public participation program has been started, only one citizen was interviewed who, at that point, was involved in the WQM program. This person is the citizen on the MWV-COG Regional Planning Council. She became involved after losing a race for the state legislature when her opponent appointed her to the RPC. She also serves on the RPC Budget Committee.

This woman's main concern with WQM is with the public participation program. She feels participation from active groups (League of Women Voters, Agriculture, Chamber of Commerce) can be induced, but has noted the difficulties in reaching these people and groups. Public involvement also has been a problem in land use planning. It seems that a large-scale education program is needed.

The citizen described the experience of a Regional (15 county) Air Pollution Agency, which she felt could be relevant to WQM. The valley had established stricter standards than the State, and had some problems with the administrator. Subsequently, the program was proclaimed too expensive and duplicative of State efforts and ultimately, it was abolished. So far, she did not feel these were the attitudes about WQM, but it was something to consider when it

comes time for implementation.

C. Local Elected Officials

The two elected officials interviewed were knowledgeable about their area's problems well-informed about the WQM program, involved in its's planning, and highly committed to its's implementation. They were realistic about the problems to be faced, yet optimistiic about what could be accomplished by the program. They obviously are the leaders in the project and can be credited for much of what will be accomplished. Unfortunately, they were not considered as typical of the general populous.

The first elected official is a City Councilwoman from Salem and a member of the RPC. She participated in consultant selection, although she believed that staff should be used as much as possible, particularly for public participation. She is pleased that the City is involved through the urban stormwater study. She sees WQM as an implementing tool that complements the valley's goal of guiding growth through urban growth boundaries. She saw WQM as having some problems in getting all elected officials involved be cause these officials are involved in so many other problems that they are not fully aware of what WQM is all about, despite being informed constantly by the staff. The Council women rates the staff as high in both political judgement and water quality expertise (10 of 10 on both).

The second local official interviewed is a Polk County Commissioner. He is Chairman of the RPC, and saw WQM as tieing into all other planning programs. He also put high emphasis on WQM as a tool to guide development within the urban growth boundary, and as a tool to be used against those who want to lessen the boundary. He has been active in WQM, and spoke at the NARC Conference in San Francisco. He believes that sanctions are essential to implementation. For example, WQM compliance should be mandatory before receiving a federal grant or a SCS farm plan. He strongly believes that implementation must be more than just voluntary compliance. He rates both the staff and the contractors highly on their political judgement and technical expertise.

D. Appointed Officials

The appointed official interviewed is a Sanitary Engineer for the City of Salem. He is a member of one of the TACs (the City Engineer is on another one), and, therefore, was involved in the selection of consultants. He has been contacted by the consultant

and has supplied them with information. The Engineer found WQM as "one more demand on his time". He is somewhat hesitant about becoming too involved, but is continuing to attend meetings and will decide later whether or not to keep going.

The Sanitation Department is responsible for operating two treatment plants (one is currently being upgraded). Under the urban growth boundary policy, the Engineer said he expects his agency will be handling more of the area now served by septic systems. He hopes the WQM will be able to provide future wasteload projections so he knows what the city will have to handle.

E. State Legislators

The two State legislators interviewed were both knowledgeable about water quality problems and WQM, but they were much less optimistic about what could be accomplished than were the local elected officials. They both felt there was an excellent chance that the anti-LCDC and the anti-COG referendum would pass, which would seriously affect the WQM plan.

The first legislator interviewed was a State Representative from Salem who was running for Secretary of State. She feels there was always difficulty in getting the city and county to do anything progressive and that there is a habitual urban/rural split. She said she knows very little about WQM and their activities, and that most legislators don't even know it exists. Further, she sees a rising intolerance for Federal intervention. The Representative believes that planners are constantly getting local governments involved in Federal programs because of the lure of money, but there are so many strings attached, not fitting what they need or want, that the locals would be better if they did not get involved in such programs.

The second legislator interviewed is a State Senator from Marion and Lynn Counties. He was more familiar with what the State DEQ is doing than with the WQM project, but said he was aware of EPA requirements. The Senator was bothered by non-degradation aspects of PL 92.500, because he sees them as counter to this area's goal of redistributing the population into the less inhabited areas. Realistically, he does not see the locals doing much implementation which could mean water quality management will revert to the state because of enforcement aspects.

Neither legislator expected WQM to result in new State laws. The Representative felt nothing would be passed until dissatisfaction

with the land use law is settled. She felt existing standards and institutional arrangements were adequate to deal with most problems. She does expect continued investigation about use of fertilizers and residuals management. The Senator saw no new State laws, especially none that would require local expenditures.

F. State Water Quality Personnel

According to the State Liaison, WQM and the State Department of Environmental Quality are working closely together. The State has maintained an advisory role, reviewing the WQM work plan and outputs to make sure there are no conflicts with the State regulatory powers. The State has not actually started developing a State Strategy, although they have consulted all WQM Program Managers on what should be included.

WQM is seen as another in a series of format changes for dealing with water quality. As others also see it, the State is doing everything "backward" - 201, 208, 303. The 303 basin plans are still being completed, so they are only available in draft form for the WQM to use. River Basin plans were being done by a consultant who did not complete them, leaving DEQ to "pick up the pieces". DEQ was set farther behind the requirement to carry out the NPDES program.

The State Liaison is on the Point Source Technical Advisory Committee and another staff member is on the Indirect Source Technical Advisory Committee. He assumes that the WQM agency is keeping on schedule. He is pleased with his input so far. He currently spends about ten hours per month on the Salem WQM project, but expects this to increase as the committees get rolling.

The State Liaison feels WQM will have very little impact on either facility planning or NPDES permitting. He sees the greatest value in WQM as fighting pollution problems due to growth. He added that WQM should establish urban growth boundaries for the various areas, noting that, thus far, this has only been done in Salem.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The agency has undertaken a very ambitious program. The area of concern is geographically large and politically diverse. Several consultant firms, Soil and Water Conservation Districts, local governments, and the WQM staff are responsible for technical portions of the plan which include a wide range of point and nonpoint programs. This effort will involve extensive program management to insure that all outputs are on time and suitable as inputs into the final plan. As they are now at data collection phase, it is too early to judge the likelihood of meeting their schedule.

Acceptable management planning is the most important determinant in whether the plan will be approved and actually implemented. Because the main goal is to create an ongoing process for water quality (and environmental quality) decisions, WQM is concentrating on developing workable relationships and support from the local elected officials. This definitely has occurred with the two officials interviewed. They were more than just aware of what the staff is doing. They seem to see WQM as their own program and are very involved, not only in those portions taking place within their program, but also in the entire area. The elected officials were more in favor of strict regulations than others. It is encouraging that the management consultant is examining financial capabilities of each community. Most interviewees felt that elected officials in general did not understand the full implications of WQM, but that cost would be an important determinant in whatever happens. This is particularly so because currently, people do not perceive an exisitng water quality problem. The results of the planning program will be determined by its successfulness in educating citizens and officials about the need for further programs.

The urban growth policy which was recently adopted by the counties is an important aspect in any discussion of implementation in this area. An urban/rural boundary line has been delineated around Salem which would permit orderly growth within the urban portions but which still retains the rural portions. Most of those interviewed saw WQM as an implementation tool for this policy. This is an encouraging sign that people are thinking about their future in regionwide terms. The Executive Director did not see how other programs could implement areawide WQM without first establishing such a policy.

It is likely that nonpoint problems, specifically those dealing with agriculture and silviculture, will be among the most difficult to solve. This is why the elected officials believe control programs must adopt mandatory regulation programs rather than an approach of voluntary compliance. However, it is probable that controls will be implemented slowly, and only as their need can be documented.

B. Public Involvement Program

The public participation program is not yet underway. The WQM agency has chosen to begin with elected officials who are involved through the RPC, and with operating agency officials who are involved through the Technical Advisory Committees. The public involvement program will be designed in early Fall by a committee of "affected groups". It is unclear whether they will pursue a program of educating the public, of involving them, or some combination. To the extent that WQM problem areas have already been determined, it is less likely that the public can have a role of involvement beyond being informed and reviewing outputs.

C. Current Planning Process

The goals and objectives of the project have been determined and defined in the work plan. Ultimately, the hope is to develop a process that involves consideration of the entire realm of environmental concerns starting with water quality. A second objective is to keep this assessment at the local level.

Currently, the project is at the stage of technical and management data gathering. Data gathering is being conducted by a variety of consultants working with the staff and other public agencies. The project has not reached the analytical stage and consequently has not formulated alternatives or assessed impacts.

The technical and management planning process concentrates on in-depth analysis for selected problem areas that represent the range of problems in the area. A regionwide management program will be extrapolated and designed from these problem areas.

D. Continuing Planning Process

The continuing planning process should include an overseeing role to make sure the regulatory program is implemented. The COG will most likely be the continuing planning agency, as they have this kind of authority. The COG does not have implementation authority and does not anticipate seeking it. In the overseeing role the COG expects to serve a watch-dog function for local operating agencies

and the State. The plan will be updated and certified yearly as required.

E. Significance of Local Elected Officials' Involvement

The two local elected officials interviewed obviously were very involved in, an committed to, the WQM project. Each will be invaluable in seeing the project implemented. One represents the urban central city; the other represents a more rural county. Their support demonstrates that the WQM project can be of value to a range of jurisdictions within the designated area.

Just because some local officials were attracted to supporting the WQM project does not mean others will be in the future. Interviewees repeatedly described local officials as unaware and sometimes even uninterested. Competing demands of exising problems for staff and financial resources were believed to consistently outweight the importance of planning for some possible future problem. Despite this pessimism, the local officials did approve the urban growth policy program and WQM is one way of implementing that policy. By stressing the complementary nature of the two programs and by pointing out the short and long-term advantages following a WQM strategy, it should be possible for the agency to increase interest and support from officials.

AGENCY: Municipality of Seattle - METRO

REGION: X - (Seattle)

GRANT AMOUNT: $850,000

GRANT RECEIPT: June 19, 1975

STARTING DATE: January, 1976

STATUS AT TIME OF INTERVIEW: Work plan approved. Contracted with City of Seattle, King County, and Puget Sound Council of Governments for certain work tasks. Committees in operation.

REASON FOR INCLUSION IN SAMPLE: This agency has had a considerable amount of experience in conducting water quality studies. Main emphasis of the study is an examination of urban runoff problems.

I. BACKGROUND[1]

A. Area Description

The designated area boundaries include the Cedar and Green River Watersheds within King County and encompass much of the greater Seattle area. The area is located on and drains into Puget Sound. The area also includes Lake Union, Lake Sammamishard and Lake Washington, famed in recent years for its dramatic clean-up. Not included are portions of Lake Washington lying within Snohomish County (part of another designated area) or the sourthwestern portions of King County (Tacoma SMSA). Approximate population of the area was 1.1 million in 1970.

Industrial activity and employment are concentrated in the urban areas and is dominated by manufacturing, principally aircraft and shipbuilding. Other major industrial activity includes food processing, machinery and fabricated metals, and lumber and wood products. METRO currently administers pre-treatment requirements and an industrial cost-recovery program to 120 industrial dischargers who discharge into the METRO system. The few industrial dicharges not now connected are scheduled to do so in the next few years.

B. Water Quality Problem

Interest in waters for recreation pruposes is particularly high, and yet these same areas are threatened by increased urbanization. An in-depth study of the area's water quality problems and alternative solutions known as RIBCO, has recently been completed and is an important backdrop to understanding the current WQM work plan.

RIBCO completed detailed water quality analysis for most of the designated area. Although it has not all been implemented, some of subjects treated in the RIBCO study which will be expanded upon in the WQM study include:

- Identification of anticipated municipal and industrial treatment works for twenty years; RIBCO studies involved a computer simulation water quality model to describe physical, biological and chemical processes in the aquatic ecosystem. A land use activity allocation model was used to determine cost effective treatment facility locations and service areas for a twenty-year period. This work will be adopted without extensive additions by the WQM.

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[1] Information for this Chapter was taken from the Seattle-METRO Work Plan, Designation Plan, Prototype Plan, and Community Involvement Plan, 1976; and interviews.

- Planning for Step II and III facilities grants over five years; this task was completed through 1979 under RIBCO and will be updated through 1981 under WQM.

- Identification of required urban stormwater control systems; RIBCO completed this for flood control. WQM will do more detail for water quality needs.

- Establishment of construction priorities for five and twenty years; RIBCO has identified and prioritized needs for municipal and industrial sources. WQM will identify non-point source priorities in relation to traditional construction priorities.

- Establishment of a regulatory program to control point and nonpoint sources; point sources are already controlled by the METRO system. RIBCO has identified nonpoint sources. WQM will designate implementing agnecies and mobilize local governments to accomplish areawide control.

Seven of the eight water quality segments in the Green and Cedar River basins are classified as water quality limited. Limitations are due to a variety of causes including: combined sewers; agricultural and urban runoff; warm low flow temperature; saltwater intrusion; construction and land development practices; and natural and induced eutrophication.

Under the METRO system, municipal and industrial systems deliver their wastes to METRO for treatment and disposal. Component agencies contracting with METRO for this service include thirteen cities and towns, eleven sewer districts, two sewer and drainage districts, two water districts and a State park. METRO operates four primary plants which discharge into Puget Sound and one high secondary plant which discharges to lower Green River. METRO believes there is no measurable effect from these discharges and has repeatedly appealed for exemption from the 1977 requirements.

Stormwater has been recognized as a major problem in the area. The RIBCO plan defines the problem and developes alternative designs for twenty-seven sub-basins, but work is needed to make these plans implementable. Seattle has recently separated sewers in much of the city but there are still combined sewers in the City of Seattle as well as in Auburn and Kent.

Other area problems which are more localized in nature and effect include: agriculture runoff; saltwater intrusion (in the Dewanish); small lake eutrophication; and boat seepage. No major groundwater problems have been identified.

C. Designated Agency

METRO was first created in 1958 as the result of a citizen effort and referendum to clean-up Lake Washington. At that time, METRO was given planning, implementation and operational jurisdiction for waste water management. In 1972 METRO's authority was extended by popular referendum to include planning and operation of public transportation. Finally, METRO has planning authority for water resource management, urban drainage management, and solid waste management.

METRO completed a comprehensive areawide waste treatment management plan in 1964 and a public transportation plan was adopted in 1972. More recently, METRO completed a three-year study and an Integrated Environmental Management Plan (RIBCO).

The WQM planning effort is under the general direction of METRO Executive Director and the Director of Operations and Planning of Treatment Facilities. The WQM staff has six professional members but also draws on many of the METRO service departments for support (e.g., community involvement). Outside consultant work is minimal but a number of contractural agreements have been made with local agencies to do parts of the work program; specifically, the City of Seattle, King County and Purget Sound Council of Governments.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

There is an extremely high commitment to maintaining good water quality. In fact, METRO's life revolves around this goal, having first been created to clean-up Lake Washington. The community has consisentely backed up this commitment through bond referenda obligating funds to control pollution. The Regional Comprehensive Plan is behind schedule and has not been incorporated fully into the WQM. However, the two appear to be compatible and water quality has been something of a driving force in the current planning effort.

Individuals in the area have a variety of development goals ranging from encouraging new industry (Tukwila); to pro-growth with only "clean" industry (in Bellevue); to some non-growth attitudes (Seattle). However, there is a consistent commitment to the high quality of life and water quality.

Because there have been a number of previous studies in this area, the WQM project's chief objective is the establishment of management controls. These are being tried on a demonstration basis in Juanita Creek and Thornton Creek/Lake Union. In addition, the WQM will prioritize water quality problems for the first time.

To some extent, METRO and residents of the area are questioning carefully the cost of additional clean-up. For example, the requirement for secondary treatment is consistently opposed because it is so costly and would result in little known benefits.[1] In general, the area's water quality is fairly high and, without a particular "crisis" or significant demonstrated pollution, it will be difficult to sell more regulations.

B. Technical Component

The work plan cannot be divided appropriately into a technical water quality and a management planning component. Because so much of the technical studies were conducted under the RIBCO program, the present effort uses RIBCO data and attempts to fashion management systems in particular areas. Monitoring is a continuing function of METRO.

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[1] Another area that people question costs versus benefits is combined sewer overflows. This condition might occur four to six times per summer. In winter it is more often, but this is not a contact recreation time. Cost of clean-up might be as high as $200 million, plus high operating expenses with little measurable benefits.

C. Management Planning

Basically, the entire program focuses on establishing a management system which matches needs to the existing management resources, both staff and financial. All work plan tasks intertwine around the management outputs so that management planning begin immediately. METRO does not expect to be the management agency except for wastewater treatment facilities. In fact, they expect very few changes in the existing institutional structure. Management planning, therefore, involves detailed examination in two demonstration or "implementation" areas. These areas have been selected because they are typical of much of the rest of the area's: socioeconomic characteristics, institutional setting, and type of water quality planning. A management approach will be tested in each area. In the meantime, a full inventory of existing management/institutional infrastructure will be made of the entire designated area and a full set of recommendations will be made based on outcomes of the two detailed study areas. The final management plan ("Action Plan") will include specific bullets indicating legislative requirements and management authorities keyed to particular problems.

This approach is a collaborative effort that involves the potential management agencies (City of Seattle and King County) rather than use of consultants. These contractural agreements are considered to be one of the greatest strengths of the program because, if successful, they promise potential fuller implementation. The City of Seattle is conducting a management study of the Lake Union/Thornton Creek area and has already tested their approach on the weed problem. King County will conduct a demonstration study in Juanita Basin. In each case, an analysis of existing management structure will be made and a management system implemented.

In addition to these two "implementation" studies, the League of Women Voters will investigate a case study on financial and institutional settings that led to citizens turning down a stormwater control system in Bellevue. Finally, the Puget Sound Council of Governments contract includes an analysis of management studies related to land.

D. Public Involvement Program

The METRO area has had extremely active public participation and many citizens have been involved through several past programs. Involvement is so great that when METRO started the Citizens Water Quality Advisory Committee (CWQAC) it took applications for positions. This committee began in the Fall of 1975, but prior to this, an Interview Committee was established to recommend an approach to citizen involvement including proposals for membership of the committee.

There was considerable political action before the final committee membership was formed, being determined finally by the METRO Council. This committee, which meets twice monthly, will be a permanent committee within the METRO structure.[1] The full staff is fully committed to citizen involvement as an element in planning. In part, this citizen interest stems from a very recent experience with RIBCO when they got "stung". The plan was accepted but never approved. The level of citizen frustration at that point, was high.

At the staff level, public participation is organized within the Public Services Department. The three member Community Involvement Section serves to organize committees, to provide staff support, and to serve in an Ombudsman position. A separate section of the agency specializes in maintaining close contact with local agencies and, particularly, with local officials. These two sections have only recently begun to work together and there is still a clear delineation of function between the two.

The Citizen Water Quality Advisory Committee was formed to examine jointly WQM and facility planning in an umbrella approach. So far, they have concentrated on acquainting the Committee with goals and issues, with understanding federal requirements, and with the "208/201 tie-in". They have been trying to receive feedback on specific area concerns; on the degree of public on the commitment to water quality and on the economic commitment. The bulk of the work so far, however, has focused on 201 planning. In part, this is because the 201 planning deadline is earlier (April, 1977 versus January, 1978), but it is also because the public finds it more tangible and, therefore, easier to understand. The committee has formed three Task Forces which report to the full committee, to staff and to the METRO Council. These task forces have considered Treatment Methods, Sludge and the Prototype Plan. Only the last is directly related to WQM. The committee structure provides an ongoing group that is reliable, informed and can question METRO intelligently; but does not normally reach the general public.

A variety of techniques is being tried to increase awareness of water programs. A series of monthly progress reports and brochure mailings has begun using lists of over 20,000 names developed from the voters list. The first brochure included a survey which prompted over 700 responses. Next, a paper culled from the first three months of citizen involvement was prepared. For further education about the program, a film "Clean Water Watch" was produced. Over forty requests for talks were received as a result of these efforts and a speakers bureau has been proposed. A second survey is projected and a workshop ("Congress") to discuss what also can be done about water quality has been proposed for the Fall. Finally, a program aimed at "future voters" is presented in the school systems.

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[1] METRO has a similar citizen group for its transportation planning.

Although METRO staff agree on the importance of public participation, they express frustration over the difficulty of recruiting interested individuals. Attaining public involvement is most successful when aimed at a specific person or group. General participation is much harder. METRO believes they have made every attempt to cover all bases.

E. State and Federal Involvement

The agency and EPA Regional Office seem to have a relationship of mutual respect. Representatives of the Regional Office have visited on a monthly basis and they attend committee meetings. Telephone contacts are made at least weekly. Most guidance has been administrative and little is technical. The agency's only feeling is that EPA should play less of a regulatory role and be more involved in the planning process.

Currently the State agency is in a state of flux. They have been engineer-oriented and only recently have become oriented to handle WQM work. Thus, they have allowed the deisgnated areas to function somewhat independently while State participation has been limited. They do, however, provide some technical help and serve as a political force which reflects their potential usefulness.

Historically, there has been some animosity between METRO and the State (see Section IV F). The State is dissatisfied with its position and will try to improve their situation. Right now, their biggest concern is inducing METRO to clarify what outputs can be expected from them.

F. Schedules Outputs

Work tasks described in the work plan fall into three major headings but they can all be described as management-oriented. First, is a detailed examination of management alternatives, selection and implementation of nonpoint source controls (urban drainage and storm runoff) in two sub-basins. These sub-basins are Thornton Creek/Lake Union, which is a densely developed area that is unlikely to have land use changes; and Juanita Creek, an area whose problems stem from urbanizing residential patterns and rapid land use changes. The Thornton Creek study will address the financial, legal and organizational problems in controlling storm-water runoff in a developed urban area. The Lake Union implementation area will address the problem of lake pollution caused by combined sewer overflow discharges. The Juanita Creek implementation area represents a condition in which unstructured urban growth has taken place and, therefore, management solutions are more appropriate than structural ones. These two sub-basins have been selected because their political and socioeconomic characteristics are considered to be typical

of areawide patterns and, therefore, their experiences can be extrapolated and used for other areas.

The City of Seattle has been contracted with to conduct the Thornton Creek/Lake Union study. King County has been contracted to do the Juanita Creek study. The general approach is to develop management alternatives and test them in the sub-basins. Specific institutional characteristics of these sub-basins will be identified and correlated with situations throughout the area as identified in an areawide institutional analysis. This approach was selected because it is believed that, although problems may be areawide, they are also sufficiently unique to merit individual attention. This inductive study approach will be tested by an institutional impact evaluation analysis.

Phase I of the implementation studies includes data collection of institutional factors of all sub-basins in the area. Phase II deals specifically with the two implementation sub-basins. Phase III integrates the findings of the detailed sub-basin studies with the known institutional settings for the rest of the area and generates a general areawide management/implementation strategy.

Lack of data

The second major work plan element is an evaluation of management alternatives for abating problems caused by surface water runoff. The third major work plan element will "establish an overall management program for an areawide program to meet total water quality objectives". According to the Project Director, the final management plan ("Action Plan") will itemize specific bullets for legislative requirements and will have management authorities designated for specific problems. Although it itemizes nearly 60 "outputs", the work plan is very conceptual in nature. The State and EPA Regional Office has experienced some dissatisfaction about METRO not clearly stating their expected outputs in writing.

G. Achievements to Date

The project starting date was January, 1976 and, therefore, is in its second quarter. According to the work plan outline, the program is considered on schedule, however, the State feels it is hard to follow METRO and is not sure whether or not they are on schedule. Because work is tied so closely with the 201 planning, it is often difficult to separate tasks to determine timing. For example, a joint 201/WQM Citizen Water Quality Advisory Committee was established and has met several times. In actuality, it has spent most of its time on 201 issues. Therefore, it is hard to assess realistically the accuracy/relevancy of a specific schedule of tasks.

Interim outputs have not been submitted because they are tied so closely to the 201 planning and did not fit that schedule. Of the two already completed, no comment on either was recieved from either DOE or EPA. Consequently, the group feels they performed a bureaucratic exercise and is not in a hurry to complete the others. So far, both a consultant monitoring procedure and a prototype plan have been developed and circulated. Furthermore, under the public participation program, an advisory group has been meeting, a newsletter set up, several leaflet mailings (with questionnaire) sent out, and a report written on what was learned in the first three months.

The WQM Project Director listed three specific achievements to date. The first was completion of the Prototype Plan, a bound volume where format resembles the expected final plan; (that is, a description of the kind of issues that will be includes behind each heading). The Prototype Plan served at least two purposes: it provided the staff with an opportunity to assimilate the entire outline well in advance; and secondly, because it was widely distributed, it has given people an opportunity to react from the outset of the process. By its nature, management planning is a difficult concept for most citizens and elected officials to grasp. The Prototype Plan should ease this understanding by providing a concrete vehicle for input.

The second achievement cited by the Project Director was the testing of a management approach to the weed problem in Union Bay. WQM actually has achieved something, and its success helps spread the WQM name in a concrete and positive way. Finally, the project will be used as a test example for final proposals.

The third achievement cited was the level of community involvement and an increased understanding about the program. Although increased involvement was listed as an achievement, it was also mentioned as the most difficult problem in conducting the WQM so far. This is due to a variety of reasons.

First, because the waters are of such high quality, people do not understand why there is a need for improvement. The people feel they have done much in the past, particularly in cleaning-up Lake Washington, and feel they have solved their problems. Second, it is difficult to separate the many water related projects - RIBCO, 201, WQM. Third, management planning is so intangible, that most citizens find it hard to understand. The agency experienced some initial start-up problems. For example, it took a long time to establish a cooperative climate and to draw-up memorandum of agreements with the three other government units. Initially, there was disagreement over whether the grant should go to METRO or PSCOG, since one a condition of the grant was that PSCOG would be involved.

According to the Executive Director, the main problem has been in sorting out WQM and 201 designated areas of involvement. Combined sewer problems, for example, fit into both categories. There was general agreement that it would have made more sense to do WQM first, but because the EIS for METRO's discharge permit is due to the spring, efforts have concentrated on facility work.

III. EXPECTATIONS

A. Water Quality

The general feeling of those interviewed was that WQM would serve an antidegradation or maintenance function in protecting the high quality of waters already found in the area. One citizen felt that avoiding problems which will result from projected population increases would be one positive result of WQM. Water quality problems that are already known are localized and WQM will help control these problems. The major problem being addressed by WQM is urban stormwater runoff and combined sewer overflow. However, "solving" this problem through use of structural solutions would be so costly that it would take years before it could be implemented throughout the area. Management solutions to urban runoff are not well enough understood at this point, and therefore they are rarely mentioned as an expected aid for solving water quality problems.

Everyone agreed that this area already meets the 1983 goals of fishable, swimmable waters. The Executive Director of METRO noted that the two areas that do not meet the goal, namely Lake Union and the Lower Duwamish, will be helped by the WQM study. There was also general agreement that, since WQM was serving a maintenance role, it could not be accredited solely with accomplishment of the goal. The State water quality agency coordinator said that chief credit goes to the local program, to the Lake rehabilitation program, and to the State's shoreline and solid waste programs. WQM is only attacking one part of the problem (urban runoff and combined sewer overflow).

B. Plan Approval and Implementation

Persons interviewed agreed unanimously that there was excellent likelihood of plan approval by the State (everyone gave a 9 or 10 out of a possible 10). Some went so far as to say that State approval would be a "rubber stamp", based on a similar experience in obtaining State approval for the Shoreline Plan. The State Department of Ecology coordinator agreed, saying that approval was assumed. He is, however, somewhat uneasy because he does not feel that he has been given adequate information about what the State is doing.

Opinions about approval at the local level were more varied, but still fairly high (around 8 or 9). Most people said it would depend mostly on plan content. If the plan recommends taking functions away from locals, it will probably not be approved. Persons considered most essential to plan approval were the "movers" on the Water Quality Committee who will take it before the METRO Council.

The WQM Project Director predicted substantial implementation would be accomplished (8 of 10). He hastened to add that no time constraint could be put on measuring the implementation rate and that it would be accomplished as funds become available. He noted that there are 25 drainage basins in the area and it would cost $150,000 for each basin to do planning and design for controlling urban runoff and combined sewer overflow. Obviously, these would have to be done on a prioritized basis.

The WQM Project Director felt that the people most essential to plan implementation are the local elected officials who sit on the METRO Council. After them, in order of importance to helping plan implementation are officials of appointed agencies who will do the implementing (Planning Commissions and Zoning Boards), special interest groups who lobby (Audubon, Washington Environmental Group), staff and general citizens (especially professionals). All others interviewed predicted an unclear picture for implementation, usually giving a 5 or 6. Everyone agreed that the biggest constraint would be financial. One citizen was concerned that each jurisdiction has its own interests and does not always do what is best for the whole region. The Executive Director of METRO said he rated implementation at 50-50 because they were facing such tough questions regarding who will be doing what (e.g., zoning, rate changes, etc.).

There was agreement that few State laws would be needed for implementation. One State legislator felt it would not be impractical for the State to try to do anything about storm runoff without providing a way to raise the money. Raising the money, however, would be an even tougher problem. The same legislator felt that no State law changes regarding either waste treatment or residual waste management would occur until there was some technological breakthrough. For most other problem areas, State laws were considered adequate but the process of enforcing existing laws needs improvement. The mood in the legislature is toward obtaining experience with their already progressive laws before passing any more.

C. Continuing Planning Process

Dreds of $

There was a variety of opinions about whether planning would be continued after the two years, by whom and what topics would be covered. The citizens and the local elected officials felt planning would not continue unless additional funds were made available. One citizen felt that there would always be more problems and never enough funds, so there would always be a need for this kind of planning. Most of the others were convinced planning would not continue regardless of funding availability. The METRO Manager of Special Water Quality Projects expected WQM to become a METRO long-range planning staff.

Everyone agreed that METRO - and not the State - was the appropriate agency to conduct continuing planning. The local elected official felt the State is too weak and that the METRO engineers are more qualified to make decisions. The DOE coordinator agreed that METRO was too powerful for the State to take away the planning function. He added, however, that the State wants more say in what goes on in designated areas. For this reason, the State will probably not designate any other areas.

Most interviewees felt WQM would generate new policy in the area of growth and land use. However, one citizen indicated skepticism about this. She explained that there is constant fighting over land use by local government members in the Puget Sound COG, most of whom are members in METRO. Most interviewees agreed that WQM should become the basis for NPDES permitting and 201 facility planning. Siting of 201 plants was mentioned as one place where WQM plans could have input. Those who were unsure of the 201/WQM relationship mentioned that the influence of WQM and 201 would depend, in part, on whether EPA makes compatibility with the WQM plan a 201 grant stipulation.

The WQM Project Director felt it was absolutely necessary to continue planning because one of the major outputs is the recognition of a need for coordination of management at a regional level. The scope of planning might change but management would not. The METRO Executive Director expected the continuing planning process to address (first) the issue of land use and (second) the issue of how much more are they willing to pay for clean water.

The estimated cost for continued planning is placed between three and four hundred thousand dollars per year (approximately the current level). It was believed that $100,000 would suffice. This is in addition to the $1 million spent yearly by METRO for monitoring. Expected sources of funds are local, through normal revenues and new grants. The local elected official was interviewed and is concerned about cost because he felt people would not stand for a new rate increase. The two State legislators interviewed felt it unlikely that money would be appropriated to support continuing planning, except for normal funds going to DOE. One legislator felt they may be able to get about 25 percent funding, but in general the legislature is against new programs, against King County, against Seattle and and against METRO. There was a feeling that METRO can take care of itself.

D. Relation to Other Water Quality Programs

WQM is expected to have only limited effect on 201 facilities planning. 201 has been ongoing for many years and the treatment plants are already built. The WQM/201 process is definitely out of sequence. In order to comply with 1977 requirements, METRO is now conducting a 201 planning project through year 2005. Although many of the elements are coordinated, 201 is, in fact, the leading force. Combined sewers is the issue where the two are most related. The WQM Project Director noted that if allowed to do what it should, WQM could re-prioritize funding. One of the

citizens felt that WQM should determine plant siting, and locations at which to extend the system. But again, this would not happen for current projects.

Interviewees were unclear what effect WQM would have on permitting, except possibly to tie it to a more realistic schedule. In Washington, the State has the authority for permitting. Review and initial drafting for minor permits is done in the four Regional Offices. Major permits (pulp, oil, aluminum, major idustries) are done directly in Olympia. METRO has been delegated the permit authority for all dischargers into their system (which will be all dischargers in the area within a few years). Some industries - but not many - need a pre-treatment permit as well. The DOE coordinator felt that some permits would change, in order to get Statewide consistency, but that WQM's influence would be limited by the State political process.

E. Local Definition of Success

When asked what constitutes success, all the citizens answered in terms of sewer/land use relations, which probably reflects the issues that have been discussed in the Advisory Committee. In particular, there is a feeling that success for WQM would include: forcing accounting for land use when planning for building of interceptors and treatment plants; and applying further land use controls before the region's resouces are lost. Several people defined success in terms of management needs. One citizen said there must be a reasonable way to deal with their problems. Going through either a totally local channel or through only a state bureacracy would be unacceptable.

The METRO Executive Director felt that success would include plan approval by local officials, a high level of understanding of institutional changes, a sorting out of roles and some implementation. He said the final measure would be the willingness of local elected officials to invest money in solutions along with their willingness to take restrictive actions. The recent passage of a user charge system for high users (e.g., dairies, restaurants, etc.) and an industrial cost-recovery program are evidence to him that this kind of success is possible.

Region X has required that all designated agencies show how they intend to implement at least 30 percent of their program by 1977. The WQM Project Director, however, feels success should not be tied to time but rather to quality of that being implemented. His definition of success was in terms of reaching agreement on the solutions and then "moving to implement".

The DOE Coordinator's opinion of success differed from most others. He felt success would be first, if a management program for urban runoff is implemented in the two demonstration areas and second, if a

process is designed for applying these institutional and management arrangements to other areas.[1]

WQM is seen generally as one more program in a continuum of programs to achieve a better environment and a better quality of life. People take pride in METRO and its accomplishments and see WQM as a continuation of this good work. One citizen felt that an improved environment means that people will migrate to Seattle. Young people attracted to this king of environment and are going into the city, improving homes and making the city more vibrant.

The other indirect benefit of WQM planning mentioned was also a continuum function: WQM is seen as a educative tool, focusing awareness and education in the area of nonpoint source pollutants. Because the solution to future water quality problems rests with convincing people to use best management practices, broad-based education is considered essential.

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[1] The coordinator explained that a similar "demonstration" approach has been taken in the other two designated areas of the state. In Vancouver, the two demonstrations are in a lake rehabilitation process and in water quality problems of the "rural fringe" where rural agricultural lands are becoming urban and facing the associated problems (density, taxing, open space conversion, septic tank problems and urban runoff). In Snohomish County, the demonstration projects are establishing BMP for small dairies, problems in lowlying agricultural drainage areas, and problems of urban and industrial runoff and drainage. The stage hopes to come up with a text book approach by which problems similar to those being investigated by the designated areas can be faced in the rest of the state.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

METRO is simultaneously conducting a major 201 project with its WQM study. The two are sufficiently different (one deals only with point sources, the other with nonpoint sources) to warrant separate staffs. However, their subjects overlap to the extent that it is improtant that all departments in the agency should be aware of what is occurring in the others. Both 201 and WQM, for example, are concerned with the issue of growth. Facility construction has a large influence on the amount, location and type of nonpoint sources generated. Stormwater runoff and combined sewer overflow can be seen as either a point or a nonpoint source problem.

201/WQM overlaps in several other ways. Organizationally within METRO the three service departments (finance, engineering, public service) serve both water and transportation departments. Public involvement for all programs is coordinated through two staffs -- one primarily concerned with local officials, the other concentrating on citizen involvement. Similarly, there is one department for research and one for engineering that is shared by all projects. In order to ensure that all departments are aware how projects are advancing, a coordinating committee has been created and meets biweekly. Members include the Director of Water Programs, the Manager of Special Projects in Water Pollution Control, the WQM Project Director, Supervisor of Community Involvement, Director of Engineering and the Head of Research. Because everyone is informed of others' activities, METRO staff presents a uniform view of what is happening.

The Executive Director of METRO oversees all programs. He explained that WQM holds a high priority within METRO, although he acknowledged that 201 is currently receiving more emphasis.[1] He feels that, in the future, the Steering Committee, which now consists only of staff, may be expanded to include City and County officials. The Executive Director sees water issues as becoming more and more politicized. Right now, the METRO Council is worried that the 201 study may force an increase in the sewer rate; an increase they fear would not be tolerated. He expects the WQM plan will have even more of a political impact because it takes on even tougher questions of land use, zoning, permitting, development and, more importantly, looks at who should make these decisions. Although there definitely will be some implementation, he notes that WQM is actually talking about major institutional changes.

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[1] This is because there is more money involved and because the timetable is shorter. (April, 1977 versus November, 1977.)

The Supervisor of Community Involvement also sees the WQM project as having wide implications beyond the initial two year study period. This is one reason that the Citizen Advisory Committee was established as a full-time METRO committee. Conscious of the frustrated citizen effort in the RIBCO program, she finds her biggest problem is developing a workable programmatic methodology that identifies and solves water quality problems. She feels that plan implementation, however, must involve much more than citizen participation. Specifically, local officials as policy-makers must be involved. A workshop to initiate this involvement will be held in the Fall followed by a "Congress" of citizens and local officials to talk about what can be done.

B. Citizens

All three citizens interviewed are members of the Citizen Water Quality Advisory Committee and have been active in other METRO programs and in other community planning programs.

The first citizen interviewed first became involved because of a concern about the West Point Treatment Plant. She has been active in water quality activities for three years and has been on committees including the Sludge Task Force for one year. She also was involved in the committee to create METRO and has been on other METRO committees. This citizen feels that METRO has been conscientious in asking for and using citizen input. Similarly, she feels that local elected officials are equally responsive but it is too early to tell if how citizens will influence the 201/WQM process. She sees WQM as a long-range planning effort, concerned primarily with runoff pollution and with sewer separation. She feels WQM's biggest concern is in enforcing a management system. Because METRO is not an enforcement agency and because local general purpose governments are overly concerned for their own automony, she is pessimistic about lasting results. She does, however, see everyone giving, at least, "lip service" to maintaining high water quality.

The second citizen interviewed was Chairman of the CWQAC. He first became involved with METRO because of his conservation work with the Magnolia Community Club. Also,he was active previously in RIBCO and in the Water Treatment Advisory Committee. He strongly believes that an active citizen group is an essential spark to getting things done. He explained that, at the first committee meeting, citizens discussed whether to "take a bite or nibble". At first there was some concern that "briefings" might be interpreted as brainwashing sessions. The committee, however, now trusts the staff and feel they know what is happening. Since the outset, the committee has sent six resolutions to the METRO Council. One was a goals report that tabulated anything that resembled a community goal. Another resolution was on sludge treatment and the latest resolution was on treatment sites. The Chairman feels that the citizens should not be involved in the management/institution

analysis. Because of the backward timing of 201/WQM, he doubts that WQM will handle many point source problems. He feels having perfect water is an impossibility, but that, hopefully, WQM will provide reasonable solutions to problems at minimum expenses and aggrivation.

The third citizen interviewed first became involved in water issues by opposing a development construction in Bear Creek. Due to this effort, she promised to help work towards comprehensive planning for the county. Since then she was on the Policy Development Commission for King County which drew up the goals and objectives for a comprehensive plan. She has also been on an Ad Hoc Committee that studied stormwater controls, flood hazards, forest and alpine lands, and agricultural lands. Her greatest concern is for eduring implementation including regional land use controls. She is concerned that EPA financing of 201 plans undermines much that WQM should be doing. She is also concerned that no one looks at the cumulative effects of all polluting sources on Puget Sound. For this reason she disagrees (and is the only interviewee who does) with the request that METRO be excused from the secondary treatment requirements. She added that in her opinion, METRO's exemption would set a terrible precedent.

C. Local Elected Official

The local elected official interviewed is Chairman of the King County Council and a member of the METRO Council. As a Council Member he has been involved in water issues for a long time, including sponsoring a 1974 ordinance on stormwater retention. He attended an early WQM conference in Williamsburg and is familiar with PL 92-500. He feels that congressional staff have come down hard on the Regional Administrators who, in turn, have become inflexible. Consequently, most members of the community, especially industry, have come to dislike EPA. The Councilor urges greater communication and more reasonable time schedules.

The Councilor feels stormwater is the biggest county problem but notes that there is not enough money to study the entire area. He agrees with the WQM approach to study the management problem in one area while estimating costs for the rest of the area. Beyond the narrow area under study, solutions for the rest of the area will be planned only. According to the Councilor, implementation will be possible only if money is available and, if this is limited to local funds, it will be greatly restricted and possibly dropped altogether.

D. Appointed Official

The appointed official interviewed is Manager of the 201 project for METRO. His connection to WQM has been through the METRO Steering Committee, a staff committee that meets biweekly and consists of six

other METRO staff connected with the WQM and 201 projects. The purpose of the committee is to discuss the WQM/201 interface and to keep everyone informed of what is happening. The manager sees the two related most through combined sewer problem.

The manager feels the purpose of WQM is to address nonpoint source problems and to protect the area from any degradation. He see WQM's problems as more political than technical and feels that the existing management structure should probably have been changed as little as possible to avoid conflict. After two years, he expects WQM to become the long-range planning staff for METRO.

E. State Legislators

Two state legislators were interviewed; one from Seattle and one from Pasco in the eastern part of the State (this interview was conducted) by telephone). The Pasco legislator did not know anything about WQM. He felt there is an attitude in the legislature that water quality must be improved, but that DOE was the only agency needed to achieve this purpose. In the rural areas, the water issue of greatest concern is return flow of irrigation water. The legislature is working to give irrigation districts the authority to deal with this issue. He felt the State law is adequate for handling urban stormwater but was less concerned because it is not a rural problem.

The Seattle legislator was on the Natural Resources Committee and now is on the Ecology Committee.[1] He felt that the 1970 legislature passed a record amount of environmental legislation but that current priority of additional legislation is low. Experience and better guidelines for working within existing laws is needed now. Rather than more sweeping laws in the area of urban stormwater controls, he felt it was impractical to act prior to raising the necessary funds. He doubted that much money will be available from the legislature for local agencies to do this as the State is already unable to pay for their committed problems. Although this legislator is owner and manager of seven neighborhood newspapers in Seattle, (and knowledgeable about many environmental problems) he is not aware of WQM.

F. State Water Quality Personnel

The Supervisor of Water Quality Planning for DOE, who is also the WQM Liaison, was interviewed. He has been involved in the project since the

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[1] The National Resources Committee was reorganized and is now the Ecology Committee.

time of designation but now feels he is having difficulty ascertaining METRO's specific outputs. There is some feeling that METRO is like a headstrong child. The staff are well qualified, knowledgeable and have good government contacts but they have been used to working independently. In the meantime, the State has been understaffed and less able to participate effectively in the process. That situation is changing and there are nine statewide WQM positions (six for the designated areas). The State prefers to play a larger role, particularly because the State must approve the plan. These plans eventually will become part of the Statewide plan. The State feels METRO has been funded to do only parts of two of sixteen required program elements. The State wants to know what minimum level of detail will be needed on the other items in order to guage METRO performance and to know whether or not to certify the plan.

The State has delegated permitting authority to METRO for industrial dischargers into the METRO system, which means there continues to be a close relationship between these permits and WQM. The State does not see a particular WQM/201 relation developing because so much facility work has already been done and there is little in the work plan dealing with 201. Nonpoint sources are seen as a shared State/local responsibility. The State has an interest, but they recognize it is necessary to have local jurisdictions responsible for implementation when land use is involved.

In the State's view, WQM should be developing a textbook approach for dealing with problems that will have transfer value for other areas. Management approaches should involve applying and testing a process in certain areas. The States' concern must be with geographic areas more than with particular problems.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The plan has an excellent chance of being completed on time. METRO has extensive experience in water quality planning and in supervising consultants and should be able to keep the work schedule. Much data is available from the RIBCO plan, some of it still unanalyzed, which WQM can build upon. The RIBCO plan, although officially accepted, never realized many of its highest hopes, and METRO is a bit timid about trying to bite off too much. There are scars from the public experience which left the populous highly frustrated. WQM must live with the reputation of this controversial effort.

In part, because METRO decided to involve other public agencies so heavily in the planning process, they will be dependent on others for meeting the project outputs. The City of Seattle and King County have had responsibility for the "implementation area" studies. The Puget Sound Council of Governments is responsible for the economic, demographic and land use projections as well as for much of the analysis and impact assessment work. Furthermore, the point source work is being conducted by a separate staff within METRO who are developing a strategy for how the agency will meet the 1977 goals of the Act.

The concurrent 201 planning program restricts those areas the WQM can handle. The agency is more comfortable in planning sewers and is cautious about infringing upon anyone's domain. The WQM is hesitant about presenting any plan which might look like they are encroaching upon local powers due to the recent disagreements within the Puget Sound COG which led to its dissolvement. Finally, the WQM is somewhat defensive about their attempted accomplishments with nonpoint source controls. Past efforts, particularly in restoring Lake Washington, were dramatic. But the "big dragons have been slewn", according to one individual. WQM must tackle problems that are not only less understood, but whose solutions are much less ovbious, sometimes intangible, or of questionable benefit, and are more likely to influence people and their lifestyles directly.

It is perhaps for several of these reasons that METRO has chosen a somewhat modest work program. Specifically, they are aiming at the problem of urban runoff and combined sewers. More generally they are looking at "nonpoint source problems". This vagueness regarding outputs is currently of concern to both EPA and the State. Plan approval will depend heavily on the outcome of the two demonstration projects (Lake Union/Thorton Creek and Juanita). Should these two test implementation areas fail, it will be difficult to recommend an acceptable management plan. Everyone will know what they don't want, not what they would want. If the two

tests are considered successful there is a good chance that the plans will be approved and implemented. At this point, everyone is taking a "wait-and-see attitude". The project to control weed growth in Lake Union is considered successful so far, but the staff, understandably, is cautious about describing this as an accomplished "success" in case the project falters.

The entire focus of this WQM effort is towards a management system. METRO will most likely not be the managing agency. Rather, the plan will mostly involve dissiminating more information to authorities in existing agencies. To the extent that the status quo is unchanged, there is a greater likelihood of implementation. Further, the City of Seattle and King County are serving as implementors of the two demonstration projects and should help achieve implementation in other parts of the area. Several of the key elected officials are on the METRO Council and must approve the plan. It is these same officials who will implement it within their own jurisdiction.

One problem in selecting combined sewers as a prime target area is that its solution is so costly. It is possible that, even if everyone agrees on what should be done, the action may not be financially possible. It is for this reason that the agency reacts to any success definition that includes the two year time period. The plan will be implemented to the extent that funds, both Federal and local, are available. The more funds there are, the more that can be done.

B. Public Involvement

The public participation program is well underway in this area. It was designed by a highly professional community relations staff and by an Interim Committee composed of citizens. Based on experiences in the RIBCO program, the Interim Committee recommended keeping the citizen committee to a limited size of eighteen. The final appointments were made by the METRO Council (all elected officials) which is significant because the chief purpose of the committee is to make recommendations to the Council. It was also decided that the committee would be a full-time committee of METRO to last beyond the two years. This can be seen as a symbol METRO's commitment to citizen involvement. In this way, they are more than just fulfilling an EPA requirement. The ongoing mandate of the committee makes it easier to get citizen involvement and should be an invaluable aid in overseeing implementation of the plan.

Citizens had to apply for membership on the committee and final selections were made by the METRO Council. The result is a group of professional citizens who have been actively involved in a wide range of previous programs, many water-related, many planning-related and all community-based. These people are familiar with the system and competent in overseeing the staff. Their input is thorough and well-studied. For example,

one of the Task Forces examined "goals". As most of these people had been involved in previous community programs, they were familiar with the community's goals and how WQM cound and should fit in. On the other hand, it could be that there is a need for "new blood" in the system and that these individuals' input would have been assimilated whether or not they were committee members.

There was also a decision that the Committee should jointly handle WQM and 201. On the surface this is a logical approach that avoids duplication. In fact, it has meant that the Committee has concentrated on 201, the more tangible program, using the excuse that its deadline comes earlier. All of the citizens recognize that this is the reverse of the logical order and they do not understand why all 201 work cannot be halted until the WQM plan is finished.

One disadvantage of the emphasis on the citizen committee is that there is less success in reaching the general public; perhaps the more difficult task. The community involvement staff acknowledges that they concentrate most on the identified interest groups such as the Sierra Club and Washington Environmental Council whose support will be necessary for plan approval. There have been and will continue to be speeches, brochures, surveys and newsletter mailings; but the feeling seems to be that these have not been overwhelmingly successful. The staff seems to feel they have considered all variables and that no one can fault them for not trying. For some reason, however, it has not brought about the interest and support they deisred. WQM lacks a popular, major dilemma, and therefore, does not command widespread public attention.

At the staff level, commitment to public participation is high throughout, from the Executive Director down. There are two staff assigned full time to the citizen committee plus a Supervisor (who also supervises transportation committee work). Technical personnel attend committee meetings and public hearings on a rotating basis so they too are familiar with issues raised by the public. Public concerns are aired and discussed at the biweekly staff meetings.

The METRO Council, which oversees the WQM, is composed of elected officials. They offer general philosophies for METRO and expect the staff to carry out the specifics. So far, no elected officials have been involved in WQM beyond their role as Council members. Everyone acknowledges the importance of involving local elected officials, but, up to this point, the staff organization has separated citizen and elected officials. It is unclear how, if at all, this will change.

C. Current Planning Process

METRO has begun its planning process through implementation of the two demonstration areas. The results of these management attempts will become data input into formation of alternatives. Most of the water

quality data is already available, but additional institutional data will be collected on existing conditions.

The area is already fairly well committed to its land use goals and policies. WQM, in fact, provides feedback on these land use patterns. WQM will discover which authorities are missing and will try to enlist their aid. Because planning is a collaborative effort with at least two of the potential managing agencies involved, there is constant data analysis and reaction to possible alternatives.

A Prototype Plan has been written which should help everyone, staff, elected officials, State, and EPA alike, understand WQM's ongoing activities. So far there has been some confusion about the prototype, what it is and whether it means that a final decision about the plan has been made. However, once its purpose is better understood, it should become an effective tool for developing a final plan.

METRO is incorporating an environmental assessment into the plan and has developed preliminary guidelines as to how this should be done (it involves a checklist type approach). The guidelines were developed from past experience and were deisgned to satisfy the State EIS requirements which are stricter than NEPA's. This move is, in part, a defensive one since it is believed that they will be challenged to prepare an impact analysis if one does not already exist. There have been threats to sue EPA in this Region for not requiring full analysis of all sixteen parts of a WQM plan as outlined in the guidelines.

D. Continuing Planning Process

In all probability, METRO will continue to do WQM planning. Depending on METRO funding and their experience in the current effort, this planning will include either nonpoint sources or be limited to the more conventional facility planning and, possibly, to separation of combined sewers. METRO has recently approved a user surcharge for high uses as well as an industrial cost recovery system. They have not specifically considered any alternatives for funding continuing planning. It is possible that funding could come from general expenses, although probably at a reduced level than currently enjoyed.

E. Significance of Local Elected Officials' Involvement

Local elected officials involvement has been limited to those officials who are members of the METRO Council. The Council has been involved since the early stages of designation and some officials were involved in supporting passage of PL 92-500 (establishing the WQM program). Local officials seem satisfied that the METRO staff is carrying out their directives in appropriate ways, although there is constant concern about high costs.

Two jurisdictions, the City of Seattle and King County, are involved heavily because they have contracts for "implementation area" studies. For the most part, local officials of the other communities are not yet involved. METRO intends to start more active involvement by holding a workshop in the fall.

So far, elected officials' commitment extends to the planning process. Only a few individuals, realize what WQM could entail (the Executive Director calls it the "208 iceberg"). The commitment to implement policy will be tested next year as more financial and political problems arise.

AGENCY: NASSAU-SUFFOLK REGIONAL PLANNING BOARD (NSRPB)

REGION: II - (New York)

GRANT AMOUNT: $5,207,000

GRANT RECEIPT: June, 1975

STARTING DATE: January 1, 1975

STATUS AT TIME OF INTERVIEWS: NSRPB is undertaking data collection and modeling efforts.

REASON FOR INCLUSION IN THE SAMPLE: Nassau and Suffolk Counties were chosen because of their groundwater quality problem. The quality of groundwater is particularly critical as groundwater is the Island's sole source of water supply.

I. BACKGROUND

A. Area Description

Nassau and Suffolk counties, with a combined area of 1,372 square miles, comprise all of suburban Long Island. Familiar natural characteristics of Long Island include its streams, lakes, rivers, ocean, bays and sound frontages which exceed 1,000 linear miles. These natural water resources offer unique resort and recreational opportunities for millions of residents and visitors to the Island.

There are approximately 2.6 million people who reside in Nassau and Suffolk Counties. Approximately 1.5 million persons live in Nassau County and 1.1 million live in Suffolk County. It is projected that the population of the Counties will grow to at least 3.3 million residents by 1985. Most growth will occur in Suffolk County whose population will exceed that of Nassau before 1985.

The topography of Long Island is uniform and contains a gentle to moderate downward slope from the north to the south shore. There is a glacial ridge which runs east and west through Nassau County and reaches an elevation of about 300 feet above sea level. North of this ridge the topography becomes abrupt with an overall slope to Long Island Sound. South of the ridge is a long gentle slope terminating in the marsh and meadow land which borders the bays on the south.

The major land uses are 45 percent residential, 33 percent vacant and 8 percent agricultural and 8 percent roadways. Commercial and industrial acreage account for only two percent of Nassau and Suffolk's land use.

Nassau and Suffolk Counties are comprised of 13 towns, 92 villages and 2 cities. Each municipality controls its own planning and zoning for land use. Major water related industries are commercial and shell fishing, tourism and duck farming. Commercial fishing is a $3.3 million industry per year, or 6.6 percent of the nation's catch. Long Island leads the nation in hard shelled clams with a $5.5 million business annually. There are 400,000 acres of active shellfish areas. The scallop catch can vary from $100,000 to $700,000 depending on the survival conditions. The oyster industry has declined 99% in the past 50 years, from a $50 million to one-half million dollars. The following human factors are major reasons for this decline:

- Bacteria from seepage;
- Nutrient pollution from duck sludge, fertilizer and sewage;
- Destruction of wetlands;

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[1] Information for this Chapter was taken from Existing Land Use, NSRPB, in 1968; The Status and Potential of the Marine Environment, NSRPB, 1966; and various interviews.

- Spraying of DDT; and

- Dredging of shellfish bottom.

Another industry which is dependent on wetlands, and that has had a detrimental effect on water quality is duck farming. This industry is a $15 million operation in Suffolk County. The tourism industry brings in $150 million annually. Long Island's coast line is a major attraction for both residents and non-residents.

NSRPB is recognized as a reputable planning agency, an example of which is the acceptance of the comprehensive plan for the region. All interviewees had a generally positive attitude about the benefits of regional planning and the activities of NSRPB.

B. Water Quality Problem

Long Island is bordered on the north by Long Island Sound and the south by the Atlantic Ocean. The Island is "fenced" off from ocean by their barrier beaches creating the Great South Bay, approximately 75 miles in length. Four main watersheds are located in Suffolk County. These are: the Nissequoque, Connetquot, Carmans and Peconic Rivers.

The water supply is obtained entirely from ground water. Natural replenishment of this supply consists of approximately 42 inches of annual precipitation. It has been estimated that approximately 50 percent of the precipitation is lost due to evaporation, stream flow and other factors.

The estuarian marshes and the off-shore waters abound in a variety of shell and fin fish. The fresh waters, particularly in Suffolk County, have an abundance of trout and bass.

The Island's water quality probelms are primarily a result of human habitation, rather than industrial pollution. Great South Bay has the major water quality probelms. Causes of this pollution are runoff, duck farming and boating. Additionally, the Bay has limited flushing action.

A major concern on Long Island is the preservation of groundwater quality because it is the sole source of water supply for both Counties. Groundwater pollution has occurred as a result of the use of detergents, pesticides and fertilizers, the leaching of heavy metals, and the runoff of petroleum products and landfill contaminants. In most of Nassau and Suffolk Counties, the upper aquifers are contaminated in certain areas. Recharge is a major issue on the Island. To date, Nassau County has sewered much of its groundwater out to sea. The County is presently facing salt water intrusion problems in both streams and wells.

C. Designated Agency

The NSRPB, established in 1965, is the regional planning agency for Long Island. Membership consists of the two counties which make up suburban Long Island - Nassau and Suffolk. There are 14 members on the agency's Board of Directors. The Counties are represented equally, each having 3 lay persons, 2 elected/appointed officials, the Commissioner of Public Works and the County Comptroller. Other programs at NSRPB include HUD 701 (land use and transportation planning) and a CZM demonstration grant which entailed coordinating coastal zone planning with regional planning. Programs which pass through the New York Department of Environmental Conservation for the Tri-State Regional Planning Area (New York, New Jersey & Connecticut) are Air Quality Maintenance, Transportation and Solid Waste Planning.

NSRPB employs 34 full-time employees, of which an average of 25 have worked in WQM. The core of the WQM staff consists of an Executive Director (the WQM Director)[1], a Program Administrator (contracts) and Environmental Engineer and 2 Demographers.

Major water quality studies by NSRPB include:

- Comprehensive Development Plan (with a Water Quality Element), 1970;
- Comprehensive Water Supply Study for Suffolk County, 1970;
- 14 Marine Studies under the Sea Grants Program;
- Coastal Zoning Management Planning (just completing planning effort), and
- Oil Spill Studies under the Coastal Zone Management Program.

[1]The current Executive Director of the agency is also the WQM Staff Director-

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

WQM is seen as a comprehensive planning effort to improve/maintain surface and groundwater quality. The Executive Director stated that there are no priority elements in the Nassau-Suffolk WQM study. The knowledge of the limits and implications of growth seems particularly important because of the unique nature of the Island's limited source of water supply -- groundwater.

B. Technical Component

The technical work elements of the study are contracted to private consultants and one local government. Approximately 92 percent of the funds ($4.8 million) is allocated for data collection, sampling, modeling and analysis under 20 separate contracts.

The surface water quality for Nassau County is well documented for South Shore Bays and less so for North Shore Bays. Current data for Suffolk County is not sufficient to support the required technical evaluations concerning effluent disposal alternatives. In all cases, storm water runoff data is not sufficient to support the technical evaluation. Much of the groundwater data exists in the offices of the United States Geological Survey, Suffolk and Nassau County Health Departments, Suffolk County Deaprtment of Environmental Control, private water companies and the Suffolk County Water Authority.

Existing models will be used in four modeling efforts. The steady state and time variable will be used for marine waters and a two dimensional digital model will be employed for fresh water. The finite element digital model, developed by Princeton University Water Resources Program, will be utilized for groundwater for the South Fork of Suffolk County and a 5 layer electric analog simulation model developed by USGS will be used for the rest of the Island.

The Peconic and Carlls Rivers in Suffolk County have been selected for the fresh water modeling because they appear to be viable receiving waters for treated effluent or ground water recharge. It is expected that extrapolation to other major streams in Suffolk and Nassau Counties will be possible. Marine water quality modeling efforts will be undertaken in seven sites - four on the northern side of the Island, two on the south and one on the east between the Suffolk County Forks.

C. Management Planning

A range of 7 legal, adminstrative, management data collection activities are scheduled for WQM to provide a basis for alternative development. These include:

- Existing land use controls and land management authority at various levels of government;
- Erosion-runoff control ordinances and practices relating to agriculture and construction;
- Agricultural chemical and agricultural waste management practices,
- Irrigation water management practices;
- Design, construction, and maintenance practices for discharg-recharge basins, wells, and ponds;
- Landfill siting and operating practices;
- Application and storage practices for highway deicing chemicals;
- Well development, operation, and abandonment standards and practices; and
- Septic tank/leachfield standards and design.

These alternatives are then evaluated for final selection of land use and legal alternatives.

D. Public Involvement Program

NSRPB has established a citizens and a technical committee for obtaining public input throughout the planning process. These committees form the primary vehicles for public involvement in addition to a newsletter published by the citizens committee.

The Technical Advisory Committee (TAC) is composed of representatives from the Nassau County Departments of Public Works, Planning and Health, the Suffolk Departments of Environmental Control and Health, and the Suffolk County Water Authority. Other agencies on the committee include United States Geological Survey (USGS), the U.S. Environmental Protection Agency,

the Tri-State Regional Planning Commission, the New York State Department of Environmental Conservation, and representatives of the Citizens Advisory Committee (CAC).

The CAC is composed of a voting membership of 20 persons, however, attendance has reached up to 60 persons at some meetings. A variety of interests are represented including environmentalists, the League of Women Voters, Long Island Business Association, agricultural interests, and elected officials.

The Executive Director stated that one of the most difficult aspects of WQM was melting together the various personalities of the committees. He felt that this problem had been overcome, and that both committees were working well together and having significant input into the process. An example of such input was the issue of the inclusion of viral studies under WQM. Apparently, the CAC was very active in their demand despite initial EPA disapproval. The Executive Director stated that the citizens' persistance was a major factor in gaining approval for the viral study.

E. State and Federal Involvement

The State of New York has a contract with NSRPB for lab work and coordination. The State has assigned one full-time person to work with the Nassau-Suffolk WQM. The staff reported that the State had been very cooperative and has supplied all available data.

The State reported that it had been the source of technical assistance in plan development, definition of the problem and general start-up activities. The State Liason presently sits on the TAC and is actively involved in the planning process in order to insure compatibility with statewide plans and monitor WQM plan progress.

NSRPC also maintains very good relations with the EPA Regional office. The Executive Director stated that EPA has been extremely helpful, particularly in its advice on consultant selection for the modeling work.

F. Scheduled Outputs

Exhibit I lists the work elements of the NSRPB work plan. The Executive Director stated that the planning effort is on schedule and that no revisions in the work plan are presently anticipated.

EXHIBIT I

NSRPB Work Plan Elements

1.0 Determine Marine and Fresh Surface Water Quality

- 1.1 Review Existing Marine Surface Water Data
- 1.2 Marine Surface Water Data Collection and Analysis
- 1.3 Fresh Surface Water Data

2.0 Determine Ground Water Quality

- 2.1 Review and Evaluation of Existing Groundwater Data
- 2.2 Location of Saltwater/Freshwater Diffusion Zones (Eastern Suffolk County)
- 2.3 Aquifer Transmissivity Determination

3.0 Identify and Evaluate Point Pollution

- 3.1 Evaluate Existing Point Source Data
- 3.2 Identify Storm Water Point Sources

4.0 Identify Nonpoint Pollution Sources into Ground Water and Surface Water

- 4.1 Evaluate Existing Nonpoint Source Data Including Septic Tanks/ Cesspools/Leachfields
- 4.2 Identify Landfill Related Pollution

5.0 Evaluation of Water Quality Surface Waters (Marine & Fresh) and Ground Water

- 5.1 Marine Surface Water
- 5.2 Fresh Surface Water
- 5.3 Hydrogeologic Modeling: USGS-PWR
- 5.4 Hydrogeologic Modeling: South Fork Suffolk County
- 5.5 Evaluation of Ground Water Quality

5.6 Statistical Interpretation of Water Quality Data

6.0 Establish Probable Future Pollution Loads

6.1 Review and Update Existing Land Use Data

6.2 Review and Update Zoning of Vacant Land and Probable Land Use Changes

6.3 Develop Corrected Household/Population Projections and Revise Projections of Districution of Economic Activity

6.4 Develop Future Pollution Loads

7.0 Evaluate Existing Wastewater Treatment Facilities

8.0 Identify Cost and Evaluate Technical Alternatives for Water Treatment, Effluent Disposal, Sewage Sludge Disposal, Refuse Disposal, and Stormwater Control

8.1 Develop and Evaluate Engineering Alternatives for the Control of Point Pollution Sources Including Municipal and Industrial Wastewater Discharges, Major Storm Sewer Discharges and Significant Private Waste Water Discharges

8.2 Identify and Evaluate Technical-Feasible Engineering Alternatives for the Control of Nonpoint Pollution Sources Including Neighborhood Storm Water Discharges, Agricultural and Land Use Sources, Highway and Miscellaneous Sources

8.3 Identify and Evaluate Technical-Feasible Alternatives for the Treatment and Disposal of Sludge

8.4 Identify and Evaluate Technical-Feasible Alternatives for the Disposal of Solid Wastes and Hazardous Materials

8.5 Identify Cost and Evaluate Technical-Feasible Alternatives for Treatment, Renovation and Distribution of Public Water Supplies

8.6 Identify and Evaluate Surface and Ground Water Quality Targets

9.0 Identification and Evaluation of Legal, Administrative and Management Alternatives

9.1 Review and Evaluate Existing Land Use Controls and Land Management Authority

9.2 Review and Evaluate Runoff Control Ordinances and Practices Relating to Agriculture and Construction

9.3 Review and Evaluate Ordinances and Management Practices Relating to Agricultural and Animal Wastes

9.4 Review of Irrigation Water Management Practices

9.5 Review and Evaluate Ordinances and Practices Relating to Landfills, Well Development and Abandonment, Septic Tank and Leachfields and Highway Deicing Chemicals

10.0 Develop Water Quality Management Plan for the Nassau-Suffolk Region

10.1 Develop "Best" Set of Engineering Alternatives & Establish Engineering Subplans. Develop Regional Facilities Plan

10.2 Develop "Best" Set of Legal, Management and Land Use Alternatives. Identify and Establish Preliminary Regulatory and Compliance Programs

10.3 Economic & Environmental Evaluation of Selected Plan and/or Subplans

10.4 Revision of Land Use Plans

Source: NSRPB Work Plan, NSRPB, 1975.

G. Achievements to Date

The Executive Director stated that the viral sampling being undertaken by NSRPB will be a technical achievement of the WQM study. He added that the study is somewhat limited in terms of depth, but will provide a major step toward defining the problem.

The Executive Director also felt that the working structure of the WQM Committees was a major achievement, and an effective example of bringing a variety of interests to work together to solve a common problem.

III. EXPECTATIONS

A. Water Quality

All interviewees stated that the most significant achievement of WQM is the preservation of groundwater quality. There is an acute awareness on Long Island of the dependence on groundwater for water supply and the delicate balance among the marine, fresh and groundwater systems.

The Executive Director also looked to WQM to effectively eliminate local point sources of pollution and to provide the knowledge of the implications of growth on Long Island. He also thought WQM would provide methods for prevention of future degradation of the Island's waters. In addition to the preservation of groundwater, the staff expected significant improvements in marine waters as a result of WQM, and expected to see the marine water improvements much sooner than groundwater improvements.

The State official thought that WQM would provide a sound base of information for treating water in problem areas and maintaining water in high quality areas. He also expected to see a new emphasis on the prevention of groundwater pollution.

Local reactions centered around finding a solution to the recharge issue. The appointed official mentioned recharge in connection with the possibility of altering the ecosystem if the groundwater was not preserved. Local elected officials were concerned primarily with the issue of water supply. The citizen had an interest in preserving waters for shellfish life and swimming, in addition to preservation of groundwater.

No interviewees expected to meet the 1983 goals in all areas by 1983. The Executive Director stated that goal achievement in the Long Island area was dependent on New York City's wastewater management. For example, the practice of bypassing the sewage treatment plant after 0.4 inches of rain will continue to affect Long Island's water quality. The local appointed official said that most waters already meet the goals, but that nonpoint source controls would result in a significant clean-up in the shellfish areas. The citizen thought that the 1983 goals would not be achieved on Long Island, but that they were reasonable goals.

B. Plan Approval and Implementation

Most interviewees were extremely confident that the plan would be approved with little difficulty. The citizen had no comment as she felt it was too early to judge the likelihood of plan approval. Interviewees were more hesitant to comment on plan implementation. The staff and the local appointed official expected that the plan would be implemented, however, this task was considered more difficult than obtaining plan approval. Others

did not have comments on plan approval.

The Nassau - Suffolk region is characterized by a relatively simple institutional setting. The executive Director stated that the management agencies already exist within the county structures. These groups are actively involved in the WQM planning through membership on the TAC. The ratification of the WQM plan by the Board carries with it an implicit understanding of its implementation in the existing county structures. NSRPC does not have to deal with a prolification of operating agencies. Existing county management agencies apparently have all the necessary powers to implement WQM. The state official indicated that most of the legal aspects of WQM will be handled by upgrading existing legislation.

C. Continuing Planning Process

Most interviewers saw the need for WQM planning to continue after the two year period. Most also thought that the likelihood of continuing planning was dependent on the provision of Federal funds.

The Executive Director stated that the cost of continuing planning would be approximately 10 percent of the WQM grant, or $520,000. He thought that the money should come from the Federal government, however, he was hopeful that NSRPB would find a way to fund necessary planning functions if Federal funds were not forthcoming. The anticipated functions of continuing planning are:

- Selling of the plan to local jurisdictions;
- Updating of the plan;
- Coordinating with other programs related to WQM; and
- Monitoring of growth.

The Executive Director stated that the selling of the plan after plan approval was an extremely important function in order to insure plan implementation.

Both local elected officials thought that planning should continue, particularly if the present work indicates that ongoing planning is essential to the preservation of water quality. One local elected official thought that the State would be a likely source of funds, while the other expected Federal funding. The citizen felt that a lot of people are committed to ongoing planning, but thought that funding was doubtful. The State official considered updating to be an essential aspect of plan implementation, and thought that the State would play a joint role in the ongoing planning process.

D. Relation To Other Water Quality Programs

Most interviewees perceived that WQM would have a significant impact on the Construction Grants Program. No interviewees expected WQM to have a significant influence on the permitting program.

The Executive Director thought that WQM should guide 201. He believed that this transition would be smooth, as those engineers responsible for 201 plans are members of the TAC and will play an active role in plan development. The Executive Director was not sure what the impact of WQM will be on the NPDES.

The local appointed official and citizen felt that WQM should guide 201 and that 201 should be held in abeyance until WQM was completed. The citizen added that 201s in critical areas should continue without waiting for WQM.

The State official said that 201 was virtually waiting for WQM because of the dearth of facility funding at this time. He did think that future 201s should be guided by the WQM plan.

E. Local Definitions of Success

The local definitions of success were primarily seen in relation to plan development. The Executive Director expected a plan for responsible growth which would not destroy the existing ecosystem, while enhancing the ammenities of Long Island. The local appointed official looked for a comprehensive plan which addressed wastewater issues from an environmental, economic and social perspective. Both local elected officials wanted growth parameters and guidelines clearly laid out for decision-makers. The citizen hoped that better long-range planning and regional decision-making would be made possible by the EWM efforts. The State official expected an increase in the cooperation between the counties, a determination of economic and evironmental feasibility of wastewater recharge, the implementation of a groundwater policy and the development of nonpoint controls to improve marine water quality.

The major benefit expected from WQM was the preservation of Long Island's sole source of drinking water - groundwater. The Executive Director added that the most cost-effective solutions should result from WQM, while the citizen also looked for the preservation of marine life and swimmable waters of the Island.

IV VARYING PERSPECTIVES OF WQM

A. WQM Staff

The NSRPB was extremely confident of their ability to develop a technically and politically reasible plan which meets the wastewater management needs of Long Island. The time constraints of WQM were considered significant in all staff interviews. The staff felt, however, that they had developed a flexible, innovative work plan that would achieve WQM objectives without cutting corners. Achieving these objectives was considered possible only because of a dedicated, hard working staff that was willing to operate with significant time and financial constraints. The Executive Director stated that the strengths of the NSRPB effort were the exceptionally qualified consultants for the technical work and the support of local governments for the agency and its work.

B. Citizens

One citizen was interviewed who represented the League of Women Voters on the Citizens Advisory Committee (CAC). She felt that the CAC had significant input on the study and had been particularly effective in getting approval for viral and trace organic studies under WQM. She also stated that effective communications had been established between the TAC and the CAC despite different perspectives of WQM.

In her opinion, WQM had not encountered any substantial problems to date, nor were problems expected with plan approval. She was looking to WQM to insure the preservation of the Island's water supply and recreational resources.

C. Local Elected Officials

Two Suffolk County legislators were interviewed for their opinions on WQM. One is a voting member of the CAC, while the other attends CAC meetings to keep informed of WQM activities.

The CAC member became involved in WQM because the County legislature had approval entering into WQM planning, and because she is an environmentalist. Additionally, there was some concern in her district about WQM holding up a most needed 201, and her membership on the related committees (WQM 201) resulted in an active role in WQM. Her primary concern was for the development of the sewage treatment plant regardless of WQM because of her community's pressing need for the facilities. She does look to WQM, however, for future growth guidelines and a plan for preserving the Island's water supply.

The other local elected official became involved in WQM because he is a member of the County's Environmental Committee. His town was basically a bedroom community and had little awareness of local water quality issues. He hoped that WQM would provide local decision-makers with the growth parameters, relative to the water supply, but emphasized that solutions that would have to be funded by local sources would not be possible. Additionally, he wanted the WQM plan to be merely an advisory document.

D. Appointed Officials

The local appointed official was a member of the TAC. Additionally, the Environmental Department of his town was contracted for 50 percent of the WQM marine sampling because of a large environmental staff. This official relt he had significant input to WQM in the marine resources area, particularly sampling lab methods and sewage disposal. He saw the recharge issue as an essential aspect of the Study. As most Long Islanders are environmentally conscious, he felt those recommendations requiring no capital outlays will be passed. There is not a willingness, however, to pay for environmental protection at the local level.

E. State Elected Official

A Program Associate in the Governor's Office who had been active in the designation process was asked about the role of the Governor in WQM. She did not consider it her responsibility to keep in touch with New York WQM agencies. Rather, she claimed it is the responsibility of the New York State Department of Environmental Conservation (DEC). A good working relationship exists between the Governor's Office and DEC in which the Governor's Associate feels that relevant matters will be brought to the attention of the Governor. She felt her responsibility lay in keeping avenues of communications open among the various State departments. The Associate stated that DEC's judgement and decisions provide the basis for the Governor's position because of the respect for the Department's previous work.

F. State Water Quality Personnel

The Chief of the Water Quality Division of the New York DEC had played a very active role in the early stages of NSRPB's WQM effort. There is also a full time Liaison who has ongoing responsibilities with Nassau - Suffolk and who is a member of the TAC. The Liaison was not available for interview.

The Chief of the Water Quality Division said that DEC personnel had provided technical assistance in plan development, problem definition, proposal review. Additionally, DEC helped to obtain permission to undertake the trace organic and viral studies. In addition to coordination and technical assistance, laboratory services are being provided by DEC as part of the contractual agreement.

The Chief stated that a good working relationship exists between DEC, EPA Region II and NSRPB. It was confirmed in all other interviews that WQM efforts had been highly cooperative among all levels of government.

Little difficulty was expected in the development of a quality plan because of the expertise of the NSRPB. The Chief also anticipated no difficulty with State approval because of the close working relationship between NSRPB and the State throughout the WQM process. He was satisfied with the Department's role to date, and felt that the State will continue to play a significant role in WQM.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval And Implementation

All interviewees were confident that an acceptable plan to all local State and Federal governments would be produced under WQM. Although the staff commented on the immense size of the undertaking in such a short planning period, the program was progressing as scheduled. Additionally, the staff was confident that all activities could be completed within the given deadline. No major plan revisions were foreseen at the time of the interviews.

Little problem was expected with the implementation of the non-structural (e.g., no-cost) elements of the WQM plan, however, a strong consensus among local interests exists that no local funds will be available for WQM after the two year planning period. The Federal Government is considered the logical source of these funds.

Two unusual aspects of the Long Island WQM are the trace organic and viral studies. These studies are a major step toward defining the extent of the groundwater problem on Long Island. An example of the high level of interest in groundwater - the preservation of the water supply - was the fact that the Citizens Advisory Committee (CAC) was instrumental in obtaining approval for the trace organic and viral studies to be included in WQM planning.

B. Public Involvement

NSRPB relies primarily on their committee structures for public input. This structure includes two committees: the Technical Advisory Committee (TAC) and the Citizens' Advisory Committee (CAC). The TAC is composed of representatives of local operating State and Federal agencies. The The CAC is composed of representatives of various local interest groups (e.g , business, environment and agriculture) and has been delegated the responsibility of publishing the WQM newsletter. Both Committee members and staff reported that the various interests have joined together for cooperative and productive work since the earliest stages of WQM.

C. Current Planning Process

The Nassau Suffolk planning effort requires a significant amount of technical work because of the unique and delicate hydrological conditions of the Island. Four separate models are being utilized under WQM. Two government models are designed to define specific conditions in relation to water movement in salt/fresh water diffusion zones and flow conditions typical of landfills, septic tanks, lagoons and other waste management practices. Separate models also will be utilized in selected fresh and marine waters.

The high degree of interest in the water quality of Long Island is based on the fact that the groundwater is the sole source of water supply. In addition, water is highly valued as a commercial and recreational resource. These factors have resulted in a variety of active interests which were readily channeled into the WQM planning effort. The water quality planning expertise of the NSRPB as well as this high level of interest in water quality have resulted in a quality planning effort that, at this time, seems both technically and politically responsive to the needs of the Long Island community.

D. Continuing Planning Process

AS NSRPC has a strong history in water quality planning, there is no reason to think it will stop after WQM. The Executive Director stated that a major element of continuing planning would be the selling of the plan to local communities after plan approval. This seems a logical function to insure the implementation of the plan. Additional functions in the Executive Director's opinion are updating of the plan, coordinating WQM with other related programs and monitoring growth. The Executive Director and all other interviewees looked to the Federal government as the source of funds for ongoing planning and estimated the annual cost at $520,000. He was confident, however, that if Federal funds were not forthcoming the monies would be available to undertake at least some of the above mentioned activities.

E. Significance of Local Elected Officials' Involvement

The most significant elected officials involved in WQM seem to be the elected County officials on the Board of the regional planning agency. The Board is kept informed regularly of WQM activities by the staff, however, they are not members of the Committees. County District Representatives make up 20 percent of the voting membership of the CAC, however, others attend in order to keep informed of WQM activities.

The Executive Director felt that the major link between approval and implementation was the Planning Agency Board because, implicit in their approval were directives to the respective county operating agencies. Additionally, these operating agencies have had significant input into WQM through membership on the TAC. Consequently, it seems that the structure for local input at NSRPB is designed to be responsive to their particular local institutions. Interviewees confirmed this and expressed satisfaction with their input into the process.

AGENCY: OHIO-KENTUCKY-INDIANA COUNCIL OF GOVERNMENTS (OKI)

REGION: V - (Chicago)

GRANT AMOUNT: $1.9 Million

GRANT RECEIPT: June 12, 1974

STARTING DATE: January, 1975

STATUS AT TIME OF INTERVIEWS: Official planning period ends December 31, 1976, although OKI is currently seeking an extension until July 1, 1977 for final plan review and approval.

REASON FOR INCLUDSION IN SAMPLE: This is a Tri-State area and, as an early designate, OKI did not operate under the EPA guidelines which directed later WQM projects. Consequently, the area's WQM effort reflects its own particular blend of technical and management emphases. OKI has received national attention for its technological approach to nonpoint sources.

[1]

I. BACKGROUND

A. Area Description

The ten-county OKI region includes areas in three States and centers around the Cincinnati and Hamilton-Middleton SMSA's. The ten counties contained in the OKI region are: Clermont, Warren and Hamilton Counties in Ohio; Dearborn and Ohio Counties in Indiana; and Boone, Kenton and Campbell Counties in Kentucky. The Ohio component constitutes the largest share of the region with 1.2 million of the 1.65 million area residents residing in Ohio. The area has a diverse economic base with manufacturing the leading component. Major wet industries include chemicals, paper, soap, plastics, textiles, steel, machinery, food processing and packing houses.

The areawide attitude toward economic development is one of controlled growth, particularly in the Cincinnati and developing areas. A planning commission member stated a concern for a planning process which would contain development. A spokesman for a county official felt that growth was determined by sewerage and consequently his primary interest in the WQM project was facilities planning.

B. Water Quality Problem

The Great Miami River empties into the Ohio River below Cincinnati and receives discharges from 42 public and semi-public wastewater treatment plants and 27 industrial sources, including paper, steel, chemical and metal fabricating. Although the WQM project focuses on point sources in the Great Miami River Basin, combined sewer overflow, rural and urban runoff, organic and nutrient loadings are also being assessed. The Great Miami is impacted by the Dayton area Miami Valley River Planning Commission (MVRPC) upstream from the OKI area. In its analysis, OKI makes the assumption that the MVRPC WQM project will achieve water quality standards. Further, coordination of MVRPC and OKI efforts will be attempted for phosphorus load reduction. On the east fork of the Miami River, OKI is approaching the Corps of Engineers to achieve flow augmentation which would reduce the required capacity in wastewater treatment facilities currently being designed.

Mill Creek flows through the most industrialized portion of Hamilton County to the Ohio River and is considered the most polluted. The large pollutant loadings contributed by combined sewer overflow are enhanced by the 182 industrial dischargers to combined municipal facilities. These industries discharging directly into Mill Creek, however, have achieved a good effluent quality. Mill Creek was noted to be virtually stagnant during dry weather flows with the lower portion having considerable benthic deposits on the river bed. Due to the severity of existing pollution, recharge of the Mill Creek Valley groundwater supply is inadequate for the Valley's needs, and groundwater quality is poor.

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[1] Information for this Chapter was taken from the OKI Work Program (Revised) April, 1974, Interim Reports and interviews.

The Little Miami River is of relatively good quality. It is a recreational resource which is designated as a scenic river by the State of Ohio. A portion of the Little Miami is also designated as a National scenic river. Although there are no major settlements along the Little Miami, the 46 dispersed wastewater treatment plants on the river are being studied for regionalization and required treatment. The river's municipal and few industrial point sources are considered insignificant, with most emphasis being placed on nonpoint source problems. The Little Miami has two reservoirs, Ceasar Creek and East Fork, for which the WPM project is completing cost-effective wastewater treatment plans.

Nonpoint sources are the major concern for the Licking River which drains a rural area. The river, generally has good quality except for a segment near urban areas where combined sewer overflow is a problem. Overall nonpoint sources of concern are surface runoff, nutrients and heavy metals.

Although not a primary concern of the OKI project, WQM planning for the Ohio River is being coordinated with the Ohio River Valley Sanitation Commission (ORSANCO), the Ohio River Basin Commission (ORBC) and the several States.

C. Designated Agency

OKI was established in 1964 and has broadened its functional responsibilities since its inception. Originally a regional transportation planning agency, OKI became a planning authority in 1967 and a Council of Governments in 1974. Today, OKI is designated as a regional planning and development organization with 219 member jurisdictions: 10 counties, 81 townships and 128 municipalities. The tri-state area overlaps the Ohio Substate Regional Planning Area, the Northern Kentucky Area Development District and Indiana Region 12.

In addition to its WQM planning responsibilities, the agency planning functions include HUD 701, general transportation planning, and A-95 review. The agency provides data base information and technical assistance to local communities for their planning activities. OKI's three divisions - Transportation, Regional Planning and Environmental Quality Planning - are coordinated by several mechanisms including staff meetings, a common data base and common advisory committees.

Harza Engineering Company is the primary contractor for OKI's water quality analysis and facility planning. The firm is also analyzing the combined sewer overflow problem in Cincinnati and coordinating the Step 1 facility planning being executed under five subcontractors. A total of 23 facilities are being planned and developed for the WQM area.

Top managers in OKI include the Executive Director, the Assistant Director for Environmental Quality Planning and a Water Quality Engineer. The WQM staff also includes two Land Use Planners and two Citizen Participation Coordinators. The land use data base and projects were completed in-house with assistance from the Aerospace Division of Bendix Corporation for NASA satellite imagery.

On OKI's initiative, contracts with the three State WQM agencies for administration and coordination were established. In July, 1975 OKI received additional funding from EPA for this purpose with $34,500 allotted to Ohio and $24,000 to Kentucky. No funds were requested by Indiana.

OKI is coordinating its efforts with other related activities in the area including: the Ohio River Basin Commission, the Miami Conservancy District, the Ohio River Valley Sanitation Commission, the Cincinnati Air Pollution Control Division and the MRVPC. Coordination with the upstream MRVPC is essential, as the two designated areas have overlapping basins. The MRVPC and OKI share reports, maintain staff contacts, and participate in each other's advisory committees.

OKI has previous experience in water supply/quality planning including regional sewerage plans and a 1972 Regional water supply plan. Basin plans are currently available only for the Little Miami (January, 1974) with the plan for the Greater Miami in progress. The State of Ohio has done waste-load allocations only for NPDES purposes.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

A highly sophisticated, competent technical base was seen as essential to the credibility and acceptability of WQM recommendations. Consequently, the OKI WQM Director focused the project on what was possible, technically. This resulted in an emphasis on facilities planning and a 'first-cut' analysis of combined sewer overflow and agricultural nonpoint sources.

Staff were largely responsible for formulating the problems and objectives the WQM project would address, taking information from various reports, and applying it in terms of their familiarity with the area. The WQM Director noted that all of the staff was drawn from the area such that a ready grasp of the region's problems and institutional arrangements was possible.

The WQM process is not part of an overall regional planning effort, but is expected to feed into an ongoing OKI planning process, particularly the detailed land use mapping and projections which had heretofore not been done for the area. The WQM Management Planner noted that problems may arise because WQM recommendations may not be consistent with regional goals. However, the transfer of the land use information and WQM land use subcommittee to the ongoing regional planning effort should enable necessary revisions and coordination with WQM implementation techniques.

B. Technical Components

From its outset, the OKI WQM project has had a three-pronged technical emphasis; facilities planning, combined sewer overflow and nonpoint sources in agricultural areas. OKI is producing 22 facilities plans for the area and making composite reports of all existing and proposed facilities plans for each of the ten counties in the area.

OKI is also making a preliminary assessment of the combined sewer overflow problem, although the WQM staff cited several limitations to problem resolution. First, data collection was viewed as insufficient for validation within the planning period. Second, EPA guidelines regarding the degree of problem correction required were not clear. Third, to remedy the combined sewer overflow problem requires a large-scale commitment of funds, particularly for the Cincinnati area. The WQM staff expected these limitations to shape the final recommendations and corrective steps which will be less than what Federal water quality standards would require.

For agricultural nonpoint source analysis, OKI has developed its own rural runoff model which has been endorsed by EPA. Supplementing data from other sources, OKI has been monitoring five rural watersheds since June, 1976. However, the WQM staff does not expect to achieve a sufficiently defined and validated nonpoint source analysis within the planning period. Determining the relative contributions of point and nonpoint sources is

one technical difficulty. Additionally, the WQM staff noted the problems of quantifying sediment, pesticides and fertilizers.

The WQM Project Director intends to address residual wastes other than sludge in the continuing planning program. These nonpoint source items were not treated in the initial planning period because of the need to focus the WQM project on other priorities. Moreover, the WQM Director believed delay of certain nonpoint source analysis (e.g. septic tank and leachate from sanitary landfills) was appropriate considering the presently limited technical capability for quantifying their contributions to the water quality problem.

The WQM project is using the same standards on all rivers and not incorporating an antidegradation element into the plan. The WQM staff noted the Ohio EPA's position that antidegradation was not an important issue. Consequently, the Little Miami, although designated a Scenic River, will not receive exceptional emphasis.

Data gathering was extensive for the land use inventory and projection completed by OKI. However, a WQM staff member noted that the relationship between land use input and facility planning is only a one-way determination. He felt more analysis of the interaction between land use patterns and water quality impacts would be in keeping with the WQM program intent. Further, the OKI process had not dealt with future industrial growth which was seen as an unknown. Rather, the WQM water quality analysis assumes NPDES compliance. A member of the Land Use Subcommittee felt "uncomfortable" about the projections because the tie between water quality and growth was not specifically addressed. The subcommittee member felt OKI should seek community input regarding preferred land use patterns.

C. Management Planning

Management planning began in October, 1974, with responsibility assigned to one OKI Management Planner. The approach for facilities plans has been to integrate management and technical planning within each basin. Technical alternatives are analyzed in terms of cost and institutional feasibility, and the appropriate operating agency is then designated.

OKI's management strategy for nonpoint sources is far more general. The limitations of data, unavailability of specific cost figures, and the controversial implications of nonpoint source controls required an "education" or "recommendation" approach particularly for land use and sediment controls as well as agricultural conservation practices. OKI did not inventory the existing land use controls in the area. In addition, the investigation of nonstructural techniques, (e.g. economic incentives) was a low priority due to the technological inability to determine the relative contributions and benefits of point and nonpoint sources.

D. Public Involvement Program

OKI has an established committee structure to serve the entire agency as well as the WQM effort. The Executive Committee is the policy-making body of OKI and is composed of elected officials. A technical coordinating committee and a citizen participation committee serve the entire agency as well as the OKI's Citizen Participation Coordinator's Office.

A Water Quality Advisory Committee (WQAC) has been established solely for WQM purposes. The WQAC is composed of elected officials and various interest group representatives with membership open to anyone requesting representation. The WQAC has overall review responsibilities and is divided into four subcommittees: land use, facility planning, nonpoint sources, and implementation.

In addition to regular meetings by the various committees, OKI has recently begun a monthly newsletter devoted to WQM activities. Facilities planning information constitutes the largest component of the newsletter. A January, 1976 OKI publication outlined a communication process based on input from the Implementation Subcommittee. The publication proposed strategies for involving the plan's various constituents including county meetings with officials and governmental administrators, slide presentations to community meetings, a phased information packet presenting major plan elements as they are developed, and the use of media and displays.

Citizen participation in the process has been problematic from several viewpoints. The approach taken by the WQM Director is that citizen participation should follow the technical planning component. Accordingly, he felt that it was premature to involve the various advisory groups in the inventory phases of the project. He noted that the several interim reports generated in 1975 were done at the request of the advisory committees who had wanted non-involvement in the process.

The WQM staff felt that involvement of local elected officials and operating agencies had been achieved, although a citizen participation coordinator did not feel the WQM Project Director and OKI Executive Committee were directing an extensive public involvement effort. Other than the facility plans, he noted that the project to date has not produced tangible outputs sufficient for public reaction. Although the community contact regarding several of the facility plans was increasing the workload of staff and consultants, all of the WQM staff believed the plans had generated increased public awareness of the overall WQM effort. The several citizens interviewed, including a planning commission official, were also concerned with the limited citizen involvement to date.

E. State and Federal Involvement

As an early designate, OKI has not operated under the EPA controls that later WQM projects have experienced. Initially, OKI received minimal guidance from EPA and later guidelines were not seen as helpful or clear. The WQM Project Director felt that the EPA Headquarters and Regional Office wanted to react to documents rather than interpret guidelines. Consequently, OKI ultimately

made its own interpretations and enjoyed, as the OKI Executive Director noted, a fairly full reign over the project.

The EPA Region V Project Officer has a good relationship with OKI. She attends WQAC meetings, makes frequent contacts by telephone, and is reportedly quick to review OKI contracts and reports.

The three States became involved in the OKI project about one year after the project was underway. OKI sought State involvement in 1975 following EPA funding authorizations for State participation. Receiving an additional $60,000 for this purpose, OKI contracted for coordinative services with Ohio ($34,500); Kentucky ($24,000) and Indiana (no funds requested). The tri-State coordination effort has increased staff workload notably including personal communications, meetings and paperwork.

OKI's relationship with the three States is diverse, although the WQM Project Director felt satisfied with the current level of State involvement. The Ohio Environmental Protection Agency (OEPA) provided a liaison person to OKI whom the WQM staff saw as aggressive and effective. However, at the time of the interview, the OEPA liaison had been suspended temporarily because of legal problems with State personal services contracts. Kentucky is involved to a lesser extent, and, reportedly is slow in review and reporting. The OKI staff felt that they had a rather neutral relationship with Kentucky. Indiana's participation has been limited to review of reports and attending WQAC meetings. The WQM Project Director noted that, although Indiana's State water quality function had not yet been clearly organized, Indiana and WQM staff have a friendly relationship.

The Ohio Environmental Protection Agency (OEPA) was the only State agency interviewed. Although the OEPA Environmental Planning Coordinator believed that two early designatees (OKI and MRVPC) had the greatest likelihood of success, he was dissatisfied with the limited State participation in the early designated WQM programs. Primarily, he felt that, as EPA in the WQM program's first year provided no vehicle for State involvement, the State has been excluded from areawide WQM efforts in Ohio. He did not feel that State input was being used by the WQM agencies, although the agencies were responsive to State comments. He also noted that EPA Region V project officers for these early WQM agencies do not make an effort to keep OEPA informed. He also felt that there was animosity between State and Federal levels of involvement such that the WQM agencies were uncertain as to "who they have to please".

OEPA has recently received funds for State WQM planning. Ohio has no completed basin plans but has determined wasteload allocations for NPDES purposes. The OEPA Environmental Planning Coordinator did not expect the State to assume the designated WQM agency's functions. Rather, he expected that State-local shared WQM responsibiilities would enable a review of construction grants and NPDES programs for compatibility with locally-established priorities. He did not feel that OEPA's role included recommending legislation.

F. Scheduled Outputs

As an early WQM grant recipient, OKI does not have the scheduling requirements of later designates. However, OKI has outlined an output schedule as shown in Exhibit I for the period July 1, 1976 to June 30, 1977. The work schedule assumes a six-month extension of the project's completion date which previously had been set for December, 1976. The WQM Director noted that the basic obligations to the original contract would be completed by December 31, 1976. The extension was required for adequate time for plan review, revision and adoption, and preparation of the ongoing work program. In addition, technical assistance for implementing agency activities was seen as essential during this period.

A draft final plan will be completed by December 31, 1976. For educational purposes, an executive summary will be developed. A final version, after review and revision, is expected by April 30, 1977.

Incorporated into the final plan will be management programs for each of the river and creek basins, the environmental assessment, and most of the 22 facilities plans being produced by OKI. Although an environmental assessment will be made for each recommendation throughout the plan, a summary chapter of all environmental assessments will be included. Nine of the 22 facilities plans produced as part of the project will be published and released as they are completed due to the need to expedite the construction grants process. In addition to the 22 OKI facilities plans, 35 other existing or ongoing facilities plans will be summarized in county composite reports contained within the final plan.

G. Achievements to Date

Although not required of early designates, OKI produced a series of interim outputs for the benefit of the several advisory committees who had expressed a need for more involvement in the decision-making process. To date, six such interim reports have been completed by OKI.

- Population Projections and Acreages by Drainage Area (June, 1975);
- Precipitation Study and General Climatological Information (June, 1975);
- Land Use Inventory (August, 1975)[1];
- Relationship Between 201 Local Facility Planning and Wastewater Treatment Programs (September, 1975);

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1 Under contract to OKI, the Aerospace Division of Bendix Corporation provided tapes from NASA's LANDSAT satellites and transferred data on 1.1 acre cells for land use inventory of rural and urban areas. Urban area information was supplemental to data gathered by WQM staff.

EXHIBIT I

WORK SCHEDULE
OKI

MILESTONES	MONTHS 1976 J 1	A 2	S 3	O 4	N 5	D 6	MONTHS 1977 J 7	F 8	M 9	A 10	M 11	J 12
INTERGOVERNMENTAL COORDINATION & CITIZEN PARTICIPATION (Governmental Consultations, Committees, Personal Contact, Presentations, Publications, Media, and Displays)	ON-GOING						ON-GOING					
WATER QUALITY MANAGEMENT												
1. A Process for Water Quality Management	●											
2. Characteristics of the OKI Region		●										
3. Demographic, Economic And Land Use												
Demographic		●										
Economic		●										
Land Use		●										
4. Approach to Water Quality Management			●									
5. Water Quality Management Program for the Great Miami River Basin		●										
6. Water Quality Management Program for the Little Miami River Basin			●									
7. Water Quality Management Program for the Mill Creek Basin				●								
8. Water Quality Management Program for the Licking River Basin					●							
9. Water Quality Management Program for Areas Directly Tributary to the Ohio River				●								
10. Residual Waste						●						
11. Environmental Assessment of the 208 Plan						●						
12. Management and Institutional Aspects of the 208 Plan					●							
FACILITIES PLANS												
1. Waynesville-Harveysburg-Corwin-Caesar Creek Reservoir Area, Warren County, Ohio	COMPLETED											
2. Bullitsville-Hebron-Burlington, Boone County, Kentucky	COMPLETED											
3. Middle East Fork, Clermont County, Ohio	●											

(Cont.) MILESTONES	MONTHS 1976						MONTHS 1977					
	J	A	S	O	N	D	J	F	M	A	M	J
	1	2	3	4	5	6	7	8	9	10	11	12
4. Glendale, Hamilton County, Ohio		●										
5. Florence, Boone County, Kentucky		●										
6. Loveland, Hamilton County, Ohio			●									
7. Felicity, Clermont County, Ohio		●										
8. Milford, Clermont County, Ohio			●									
9. Harrison, Hamilton County, Ohio		●										
10. Landen Farms, Warren County, Ohio	●											
11. East Middletown, Warren County, Ohio	●											
12. Owensville, Clermont County, Ohio		●										
13. Independence, Kenton County, Kentucky			●									
14. Taylor Mill, Kenton County, Kentucky			●									
15. Cold Spring, Campbell County, Kentucky			●									
16. Alexandria-Clairyville, Campbell Co., Ky			●									
17. West Middletown, Butler County, Ohio	●											
18. New Richmond, Clermont County, Ohio			●									
19. Walton, Boone County, Kentucky					●							
20. South Dearborn Regional, Dearborn County, Indiana					●							
21. Horner Run Area, Clermont County, Ohio				●								
22. Ridgeview Hgts.-Beech Grove, Kenton County, Kentucky				●								
23. Warren County, Ohio Facilities Plan: A Composit Report	COMPLETED											
24. Butler County, Ohio Facilities Plan: A Composit Report		●										
25. Clermont County, Ohio Facilities Plan: A Composit Report					●							
26. Hamilton County, Ohio Facilities Plan: A Composit Report				●								
27. Boone County, Kentucky Facilities Plan: A Composit Report			●									
28. Campbell County, Kentucky Facilities Plan: A Composit Report				●								
29. Kenton County, Kentucky Facilities Plan: A Composit Report				●								

(Cont.) MILESTONES	MONTHS 1976 J 1	A 2	S 3	O 4	N 5	D 6	MONTHS 1977 J 7	F 8	M 9	A 10	M 11	J 12
30. Dearborn County, Indiana Facilities Plan: A Composit Report					●							
31. Ohio County, Indiana Facilities Plan: A Composit Report					●							
208 PLAN												
1. First Draft Report						●						
2. Release First Draft Report for Final Review to: Ohio, Kentucky, Indiana, U.S. EPA, and local jurisdictions within the OKI Region, and committees (OKI Executive Committee, Water Quality Advisory Committee, and Subcommittees)							●					
3. Public Meetings on First Draft Report								●				
4. Secure Input from Public Meetings and all Reviews (from Items 0-2 above)									●			
5. Modify First Draft Report in Accordance with the Input from Public Meetings and Reviews										●		
6. Final Report												●
PLAN ADOPTION/CERTIFICATION												●
PREPARE PROGRAM FOR ON-GOING PLANNING												
1. 208/303(e)/NPDES										●		
2. 208/201 (Plan Update)									●			
3. Non-Point Source Management												●
4. Intermittent Source Management										●		
5. Institutional Restructuring											●	
TECHNICAL ASSISTANCE SERVICES												
1. Facilities Plans	ON-GOING						ON-GOING					
2. Intermittent Sources							ON-GOING					
3. Other							ON-GOING					

SOURCE: OKI Council of Governments, Work Schedule July 1, 1976 through June 30, 1977, July 13, 1976.

- Method for Assessing Rural Nonpoint Sources and its Application in Water Quality Management (September, 1975)[1];

- Assessment of Hydrological and Ambient Quality of the Region's Major Streams (October, 1975).

OKI has also produced a preliminary set of geographic and political boundaries to delineate facility service areas. In addition, the assessment of the Great Miami River Basin and its management strategy have been completed. Facilities plans for the Caesar Creek Reservoir Area, the Warren County Ohio Composite Report, and the Bullitsville-Hebron-Burlington, Kentucky area have been completed. The facilities plan for the Caesar Creek Reservoir has already been "worked through" with local participation in determining cost-shares and institutional arrangements. The facilities plan for the East Fork Reservoir is currently undergoing a similar process.

The WQM Director outlined several additional achievements of the OKI effort.

- The WQM project has generated the first detailed analysis of land use in the agency's history. The data base and projections filled a gap in the 701 planning effort and now provides information regarding the capability of land areas for development. The inventory, prepared using LANDSAT satellite imagery, is available to anyone and is particularly useful for environmental impact statement preparation. For example, the WQM Director noted that industry may now be allocated to sites where they can best be accommodated in terms of land use and water quality.

- The rural runoff model, developed by OKI and endorsed by EPA, enables a computation of surface erosion, sediment yield, nutrient and organic loadings and as well as load reduction achieved by various management techniques. Since June, 1976, OKI has been monitoring the quantity and quality of runoff from five rural watersheds.

- OKI has already achieved successes in completing and instituting the Caesar Creek Reservoir Facilities Plan. A cost-effective regional facilities plan, in cooperation with the Corps of Engineers, was developed and has been locally negotiated regarding costs and operating arrangements. A similar process is currently underway for the East Fork Reservoir area.

- Two outlying communities have been included in an existing facility service area.

- The WQM Director believed that 90 percent of the facilities plans would be implemented and that the development of the

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[1] The rural nonpoint source model endorsed by U.S.EPA is felt by the WQM staff to be a particular achievement and will be discussed below.

facilities plans has provided visibility and credibility to OKI's overall WQM planning program, including future nonpoint source management.

III. EXPECTATIONS

A. Water Quality

The main effort in the OKI WQM process is directed toward correcting the wastewater treatment problems of the area. The WQM staff believed facilities implementation would make considerable progress toward achieving water quality standards. All interviewees(with one exception) agreed that upgrading municipal facilities would make a substantial contribution to water quality improvement. Several interviewees noted that increased awareness of identified water quality problems would contribute to improvement.

No one expected resolution of the nonpoint source problem in the near future. The primary deterrents were costs and lack of public awareness. A spokesman for a county official felt that problems of construction practices, stream sedimentation, and septic tanks should be resolved, but only in terms of alternatives which enable profitable uses. An operating agency head doubted any improvement in nonpoint source control would occur due to lack of funding, problem awareness and legislative commitment. The OEPA Environmental Planning Coordinator felt improvement would be achieved through the review of construction grants and NPDES permits for compatibility with locally established priorities and he expected such review would institute a better processing mechanism available to both State and local efforts.

No one expected that the area would achieve the fishable, swimmable goals by 1983, although most expected goal achievement in certain segments, and some progress in other areas. One citizen believed that the 1983 goals would be revoked. Fishable, swimmable goals for Mill Creek were not seen as realistic by WQM staff, as clean-up would not be cost-effective. One citizen stated that the goals should be for selective and realistic clean-up efforts. The WQM Director and Water Quality Engineer saw intermittent and nonpoint sources as the major obstacle to 1983 goals attainment largely due to considerable costs and technological limitations. Consequently, the WQM Director believed that the goals may be achieved in 1990 or '95. Attention to toxics, which are outside of the WQM process, was seen as necessary although the technology is not currently available.

B. Plan Approval and Implementation

All of the interviewees expected the plan would be approved locally although cost implications of plan recommendations may be a potential source of controversy. Approval was seen to be assumed by the involvement of local elected officials on the OKI Executive Board and the WQM Water Quality Advisory Committee. Further, OKI staff expect the six-month extension of the project to allow adequate time for plan review, revision and approval. State approval was expected by the local interviewees as well as the OEPA Environmental Planning Coordinator.

The likelihood of plan implementation is far more speculative. Generally, it is believed that certain aspects of the plan such as the facilities plans will be implemented provided that the management proposals are acceptable. In this

regard, the WQM staff believes that the involvement of elected officials and operating agency heads has worked toward establishing the appropriate management linkages. However, officials' commitment to the planning effort is perceived (by the officials) as necessary in obtaining construction grants. The WQM staff notes a good level of public involvement for all of the facilities plans which OKI has taken to the communities for discussion, but this participatory process will not be possible for all facilities plans being developed within the time allotted. Outside of facilities plans, plan implementation is expected but only as several criteria are met: funding, federal backing, increased public awareness and the effectiveness of voluntary programs based on public education. In no sense gas implementation of nonpoint source controls expected to occur in the near future.

The WQM staff believed that certain nonpoint source controls may not be possible due to the lack of verified data, the standards for sediment and nutrients, and also due to the cost implications. Combined sewer overflow control was viewed as particularly cost-prohibitive. Consequently, the WQM staff expects plan recommendations to be general and to approach implementation by providing technical assistance to local agencies (e.g., drafting ordinances and land use planning). In agricultural areas, conservation practices traditionally have been undertaken on a voluntary basis. Accordingly, OKI intends to approach rural runoff controls by working through the SCS, ASCS and agricultural extension services and education programs. The WQM staff recommended that a State level interagency committee in Ohio could assist in nonpoint source control efforts. Further, the WQM Project Director believed that federal funds should be allocated to a nonpoint source program similar to the construction grants program or to the USDA for instituting controls in this area.

The various interviewees cited potential factors important to or limiting plan implementation:

- Costs were a major and frequently mentioned constraint. Two citizens felt implementation depended on Federal funding, including funds for developing compatible land use plans at the local level.

- Most of the interviewees believed public awareness of the water quality problem to be very low, with most attention centered on Cincinnati water supply issues of fluoride and carcinogen contamination. One citizen expected the plan would need considerable public exposure before any implementation was attempted.

- Two citizens cited potential problems with the building industry, especially if septic tank and package plant controls emerge from the plan and, thereby, imply a no-growth policy.

- An operating agency head stated that plan implementation depended on the acceptability of the management proposals. He expected some minor disruption of existing agencies. He added that the proposed regionalization of facilities and their management were only somewhat disruptive and may not be cost-effective solutions.

No new WQM agencies are expected to be established. The WQM staff, as well as the OEPA Environmental Planning Coordinator and a planning commission official expected implementation to occur through existing agencies, perhaps through cooperative agreements. In no sense did WQM staff view OKI as an implementing agency, but rather as providing continuing planning assistance for facility planning and for nonpoint source implementation, such as conservation planning. A spokesman for a county official expected implementation on a regional scale, possibly a substate regional office, although he was in favor of implementation mechanisms which were the most cost-effective and locally acceptable. An operating agency head saw the need to strengthen existing authorities, but did not want enforcement delegated to operating agencies.

The WQM Management Planner has identified the following gaps in authority which affect plan implementation:

- A lack of consistency exists among local ordinances;
- Existing authority at the county level is weak. Counties can regulate subdivisions although townships may opt for developing and enforcing their own controls;
- Ohio enabling legislation for land use regulation does not contain language requiring planning studies and environmental impact statements;
- There exists a lack of attention to storm drainage other than large-scale work done by the Miami Conservancy District;
- Septic tank controls are not enforced although Ohio enabling legislation is good. The Kentucky Sanitary Code is concerned with septic tanks as products rather than with their performance;
- There is no policy regarding sewer extensions or coordination between public facilities planning and programming efforts;
- Local sediment controls are necessary, however WQM staff believes local agencies are somewhat aware of this need.

No specific recommendations had yet been developed in regard to State legislative needs. The WQM Director viewed legislation for nonpoint source controls as part of the WQM continuing planning effort. Technically, OKI was attempting to correlate point and nonpoint source contributions for each water quality segment, and the WQM Director expected that, if nonpoint

sources become a problem relative to point sources, steps toward legislation will be taken. A planning commission official believed all necessary laws had been enacted and the main question was one of implementation. An operating agency head viewed legislative needs to depend on the agencies with legal responsibility for WQM and the disparity among the county and municipal ordinances.

The OEPA Environmental Planning Coordinator expected a need for extensive legislation although he had not yet examined what authority currently exists. He did not expect any legislative activity for at least one year and did not view recommending legislation as an appropriate State role. The WQM staff's view that the State should be working toward needed legislation was contrary to the OEPA's position.

C Continuing Planning Process

OKI's work schedule for July, 1976 to June 30, 1977 assumes favorable consideration of its request for a time extension beyond the original termination date of December 1976. The extension was viewed as essential for final plan review, revision and adoption as well as preparation for the ongoing WQM process. OKI has sufficient funds for the six-month extension due to extreme parsimony during the project period. The Work Schedule outlines elements of the ongoing process which are expected to require a minimum of two years. These elements are listed below:

- Coordination of WQM and basic planning programs with the States and review NPDES permits for consistency with the WQM plan;
- Rural nonpoint management strategy including a coordinative process for integrating WQM recommendations into SCS, ASCS and agricultural extension services, i.e., establishing priorities based on sediment runoff probabilities and proposing criteria for allocating funds to conservation districts for pollution control efforts;
- Intermittent source management including abatement activities related to combined sewer overflow and cost alignment;
- Institutional restructuring including OKI technical assistance to local operating agencies;
- Public awareness program; and
- Technical assistance including financial reports for facilities plans, incorporation of water quality criteria into land use decisions, consultation with State legislative committees (i.e., nonpoint source controls and septic tank standards), educational effort with building and development industry concerning urban runoff controls, advising operating agencies regarding sludge handling techniques.

OKI also wants to examine other residual wastes not addressed in the current time frame and to continue monitoring on the great Miami River.

To maintain staff for execution of the foregoing activities, the WQM project Director felt that, in the absence of Federal funding, continued funding (at a minimum of $300,000) possibly would come from several sources; State, local, and operating agencies which contract with OKI. At this time, none of these sources have made any financial commitments to the WQM process, nor have arrangements been pursued.

All interviewees expected the WQM planning process to continue at the regional level if federal funds are provided. Elimination or substantial reduction of the program was expected if local funding were required although a federal-local match was possible. One citizen interviewee noted jurisdictional problems of attempting uniform assessments throughout the area. One operating agency head hoped the continuing planning function would have a well-defined objective with built-in continuity and delineation of responsibilities. He thought "overagency" planning functions should include a review of district interrelationships to avoid duplication of effort.

All agreed that State assumption of continuing WQM planning responsibility was highly unlikely because of the tri-State nature of the area. The OEPA Environmental Planning Coordinator saw the WQM program as appropriately regional and not as a State function. However, the State of Ohio will share responsibilities with designated WQM agencies in the State's continuing planning process which the designated agencies had a major role in generating. Issues of a continuing nature were water quality standards, wasteload allocations, and plan updates among others not yet identified. The focus of the continuing process, in his view, depended on the success of the WQM effort.

D. Relation to other Water Quality Programs

OKI's WQM Project Director noted that the wasteload allocations were being determined for each basin and, depending on their use by the State, expected appropriate revision of NPDES permits. The ongoing planning process contains a work element for reviewing NPDES permits for consistency with the WQM plan.

The OEPA Environmental Planning Coordinator stated that most Ohio WQM efforts were out of phase in issuing the next round of NPDES permits. Generally, he did not expect timely input from the WQM agencies. He felt, however, that the WQM would institute a processing mechanism for reviewing the compatibility of construction grant and NPDES permit programs with locally established priorities.

The relationship between 201 local facilities planning and the WQM program is outlined in an Interim Report which OKI released in September, 1975. The report establishes an A-95 review procedure for ongoing facilities plans within the designated area to assure compatibility with the WQM

plan. Such review normally will occur in the early stage of the planning process. OKI will continue its involvement to a lesser degree through steps II and III.

OKI is putting substantial effort into facilities planning. OKI has already produced a preliminary set of geographic and political boundaries to delineate facility service areas. The WQM project itself is developing 22 facilities plans, nine of which will be published under separate cover to expedite the construction grants process. The remainder of the facilities plans will be part of the final WQM plan, along with composite reports for each of the area's counties. The composite reports summarize 35 other existing or ongoing facilities plans in the area.

After adoption of the WQM plan, the Interim Report provides that new facilities planning activities be supplemental to the WQM data analysis and that new construction grants be made to designated management agencies.

OKI has been negotiating institutional and financial arrangements toward implementing several facilities plans. The WQM Project Director saw an ongoing role for OKI in providing similar technical assistance to operating agencies as facility plans are implemented. He also viewed OKI as a possible consultant for Steps II and III, noting the sizeable cost savings of facilities planning at the regional level. He estimated that OKI completed plans for two counties as part of HUD water and sewer plans.

An operating agency head believed the WQM plan would reduce the scope of work necessary for Step I of the construction grant process although he felt some recommendations would be based on insufficient data due to funding constraints. He believed the recommendations may become obstacles to later necessary changes. He also felt that to avoid duplication of facilities and data collection/analyses, an overagency with general planning responsibilities was necessary. He did not expect WQM planning to affect Step II.

Three citizens agreed that the WQM plan would have some impact on the construction grants program including more efficient systems, proper staging of facilities, and reduced data requirements for future facility plans.

E. Local Definition of Success

Most interviewees defined WQM success, simply, as any effort which would achieve area-wide acceptance. Though one respondent defined success in terms of the 1983 goal achievements, others agreed that the WQM plan probably would fall short of the goals as expressed in the Act.

- Several persons agreed that the plan should not dictate or enforce policy, but rather should provide data and other supportive tools for local decision-making.

- One citizen stated that a successful WQM plan would function within the desired land use patterns of the area.

- The OKI Executive Director defined success as adoption and funding on a continued basis without compromising water quality standards.

- The WQM staff felt that the joint-community effort was a success for the program and cited achievements in the facility planning processes for Caesar Creek and East Fork Reservoirs.

- The OEPA Environmental Planning Coordinator defined success as achieving agreement on a plan/process which was both acceptable to the Governor and, for the most part, able to be implemented within six months.

In addition to defining success for the WQM effort, interviewees cited benefits arising from the WQM process:

- An increased awareness of the water quality problem;

- Land use/site decisions affecting future growth;

- More efficient use of available pollution control funds

- Institutionalization of pollution control related industries; and

- A coordinated and cohesive plan to achieve a certain level of water quality standards.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM Project Director generally viewed OKI's role as producing a technically credible plan. As discussed in Planning Strategy (Chapter II), the WQM Director strongly disagrees with EPA's overall programmatic emphasis on management. His approach is to consolidate support around a well-founded technical base. He views management primarily as developing a team of operating agencies which convinces the public of visible and productive WQM authority. WQM strategies are to be applied locally through OKI technical assistance to communities in the continuing planning process, both in terms of facility plan implementation and public "education" and/or recommendation of nonpoint source controls.

B. Citizens

The three citizens interviewed were active in two or more WQM advisory committees and, partially because of their backgrounds or interest group activities, had considerable knowledge of the project. All supported the OKI effort but expressed concern with OKI's public involvement.

- Two citizens were satisfied with their involvement on advisory committees. One citizen, however, was not satisfied and felt that OKI "fed" information to advisory committee members who she felt had little input in selecting alternatives. She also considered the large number of WQAC members to limit effective participation.

- Two citizens noted that the WQM program was so massive and technically complex that intelligent input was most difficult to achieve. Generally they felt the WQAC was asked to approve technical reports which are confusing and difficult to evaluate.

- Two citizens noted that public education regarding the water quality problem was not occurring and that the plan would need considerable public exposure prior to implementation.

- Two citizens were critical of particular aspects of the planning process such as: 1) OKI not considering future industrial development in forecasting future loads, 2) the land use data base and projections were not discussed locally for input regarding community needs and growth preferences.

Citizens expected costs to be the major limiting factor in implementation. One citizen hoped the plan primarily would provide data and background information which would be advisory to local government actions. He also praised OKI for using WQM project data in A-95 reviews.

C. Local Elected Officials

The OKI staff arranged interviews with a county planning commission member and an assistant to a county judge who also directed the county community development agency. Neither of these officials are elected, but they serve on the OKI Executive Committee. The Executive Committee's role in WQM is to monitor the process, review policies to meet objectives and review final reports and plans. One official also served on the WQAC and land use subcommittee.

- Both officials supported the OKI effort and supported WQM goals to protect water quality and control growth.

- Both officials considered obtaining funds for WQM implementation to be a sizeable problem. One official was not certain that people would voluntarily go along with tax increases and the other noted that his area did not have the revenue for WQM.

- Both felt the plan function to be educational and advisory to local elected officials. While one official felt the plan must be stronger than advisory, the other believed local support would be lost if the plan coerced local officials to take action.

- Both were concerned with the need for compatible land use planning. One official believed many planning commissions do not consider the environmental impacts of zoning changes. The other noted that his county has no land use planning and felt WQM plan implementation would depend on the development of a consistent land use plan.

D. Appointed Officials

The appointed official interviewed heads a two-country sanitation district and serves as chairman of the WQM Facilities Subcommittee. He did not expect the WQM project to affect his future activities other than perhaps add to collection responsibilities. He expected the WQM plan to reduce the scope of work necessary for Step I of the construction grants program. However, he felt the cursory level of analysis in the WQM plan will produce recommendations which later may prove faulty. The interviewee felt the WQM program had not clearly defined responsibilities for assimilative stream capacity, the interrelationship of WQM planning, basin planning and the construction grants program. He could not yet see how all of the facilities plans would be incorporated and was concerned that recommended changes in operating agencies might not be cost-effective.

Overall, he saw the need for an overagency with general planning responsibilities to oversee major systems, prevent duplication of effort and define responsibilities. He did not favor operating agencies as management agencies or management agencies with enforcement duties.

E. State Legislators

One of the two Ohio State Legislators interviewed was a State Senator and Majority Whip who also served on the Senate Energy and Environment Committee. He had no involvement with the WQM program and has not been contacted by any WQM agencies. He felt that his awareness of the program was limited. He also indicated that the Legislature generally is not aware of the WQM program or its objectives. He strongly recommended that the attention of Legislators might be gained if the program were presented to them in a documented form which highlighted the fact that related legislation may be required. He felt that water quality was not a priority issue in the Legislature.

A freshman Representative to the Ohio House of Representatives was also interviewed. She had not been contacted by any WQM agencies and was not aware of the WQM program. She felt it was the responsibility of the WQM agencies to keep Legislators informed. She felt it was OEPA's responsibility to suggest any needed water quality legislation, but noted present State administration's priorities for jobs and industrial development may conflict with water quality objectives. She felt that water supply contamination by carcinogens in Cincinnati had elevated Legislative awareness of certain water quality problems.

F. State Water Quality Personnel

Although OKI serves a tri-State area, the OEPA was the only State agency visited. The Environmental Planning Coordinator was dissatisfied with OEPA's limited participation in OKI's efforts which he felt were caused by EPA delay in providing a vehicle for State involvement. Although OKI was responsive to State comments, he did not feel that State input was being used. He also felt that there was animosity between State and Federal EPA involvement, such that the designated WQM agencies were uncertain as to whom they were responsible.

Although Ohio is just beginning State WQM planning, the OEPA Environmental Planning Coordinator expected continuing planning to be a State-local shared responsibility. He viewed the designated WQM plan based on locally established priorities to provide input to the construction grant and NPDES programs. He did not feel OEPA's role should include making legislative recommendations or to assuming designated WQM functions. He voiced several major criticisms of the WQM process. He said that U.S. EPA had not worked toward massive public education and participation and that this was essential, given the low level of awareness of the water quality problem and the limited ability of the agencies to reach the general public. He also felt that the relationship between water quality and water supply had not been emphasized and noted that State planning for nondesignated areas will encourage the incorporation of related water supply and solid waste elements.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

There is little doubt that the plan will be completed. Progress is being made toward completion by the December 31, 1976 deadline. With the six-month extension of the project until June, 1977, OKI has adequate time for plan review, revision and adoption.

The extension seems critical to gaining public and political support. The advisory committees have had limited exposure to plan components as they are generated, and it will not be until the plan is completed that they will have an opportunity to react to a totally integrated WQM strategy. The size of the plan and its technical nature will hinder critical review unless OKI develops executive summaries which clearly present the plan's assumptions and implications. Fortunately, OKI has the resources to complete the plan review process. The six-month extension of the project with full staff retention was possible only because of funds reserved by OKI through their efforts to cut costs. Further, much of their work was completed within OKI, which made tighter financial management possible.

The question of State and EPA approval is more difficult. As Ohio is just preparing for State WQM planning, OKI has a technical advantage over the State, whose perspective has not yet been developed. Although the OEPA Environmental Planning Coordinator currently expects to approve the OKI plan, it is not clear when the plan will be certified. The OEPA Environmental Planning Coordinator recently informed the EPA Regional Office that no WQM plans would be certified until November, 1978. Although the EPA Regional Office has not yet taken decisive action on OEPA's position, delayed State certification would disallow OKI input to the NPDES permit and construction grants programs.

Whether or not OKI's plan will meet EPA requirements remains to be seen. On the one hand, EPA approval would seem likely because tighter scrutiny of OKI appears inconsistent with the free reign it has enjoyed as an early designate. Usually planning far in advance of issued EPA guidelines, OKI has autonomously interpreted the intent of the WQM program and shaped its own best approach. In the case of combined sewer overflow, however, OKI has already anticipated that plan recommendations for corrective measures will fall short of achieving water quality standards. OKI is emphasizing point source control as a more immediate target for water quality improvement and has taken an "education" or "recommendation" approach to nonpoint source control which is to occur in the continuing planning process.

The outlook for OKI facilities plan implementation is good. By developing plans at a cost savings to local communities and becoming directly involved with determining cost share and institutional responsibilities, OKI has become somewhat indispensable to local public agencies. OKI expects to assist more local communities with cost and management determinations and also expects local agencies to seek OKI assistance in developing Step II and III plans.

Aside from the question of federal funding, three other issues may present difficulties to facility plan implementation. First, as one of the major facility operators noted, OKI proposal for reginalized facilities may not be cost-effective. Because the proposals only call for minor changes in existing management agencies, the costs of these changes may outweigh their benefits. Second, small rural towns which have not been directly involved in the WQM planning process may oppose plan recommendations which remove authority from their purview, and simultaneously impose higher sewer charges. Third, as the WQM Management Planner indicated, the OKI land use data base and projections provided the basis for facility planning without attention to the impacts of facilities on growth and land use patterns. Citizens had also criticized OKI for the lack of local input to the facilities plans regarding local preferences for growth and land use. As the areawide attitude seems to favor controlled growth, the investigation of managed growth options as related to facility planning would seem desirable. Some oppostion may arise if the facility plans imply growth or land use patterns in conflict with local/regional goals.

OKI will not be making specific recommendations for implementation of nonpoint source controls. OKI, as a voluntary association of local governments, does not have the implementing authority to coerce local compliance. At this juncture, the nonpoint source data is too weak to provide credible support of regulatory actions. Recognizing its data limitations, OKI hopes to use the continuing WQM planning process to verify data and work with local governments to incorporate nonpoint source controls into local ordinances and land use plans. Hence, it would seem that future implementation of nonpoint source controls would depend on the continuation of OKI's WQM planning and technical assistance capabilities. A variety of variables affect their capabilities: the presently unknown source of funding; the low level of public awareness of the water quality problems; the fragmentation of authority among municipalities, townships and counties; and the overall dubious receptivity of local governments to instituting nonpoint source controls. In addition, the disparity among or total lack of local land use plans complicates the outlook for plan implementation. If available, the local land use plans might provide some basis for determining local land use and water quality interactions. OKI's scientifically determined land capability analysis is not a substitute for locally determined land use patterns. The usefulness and success of the OKI plan is contingent upon its consistency and compatibility with local goals, as perceived by local decision-makers.

In agricultural areas, OKI hopes to achieve improvement in the nonpoint source problem through an educational approach. Rather than its own staff, OKI hopes to utilize the personnel of the SCS, ASCS and agricultural extension services which have considerable expertise in conservation practices and agricultural productivity, and also have rapport with farmers.

B. Public Involvement

Public participation is one of the weaker aspects of the OKI effort. Participation to date has been limited mostly to the WQM advisory committees. The committees' effectiveness depends on their commitment and capability to review the WQM process thoroughly on an ongoing basis. However, one interest group representative felt that many committee members were not particularly active because of other competing environmental interests. He felt it was unfortunate that the same citizens are performing advisory functions in all of the area's environmental activities. Further, several advisory committee members noted that the program was so massive and technically complex that obtaining intelligent citizen input was difficult. A citizen had voiced concern that committees served as "rubber stamps" to end products, and criticized OKI for not discussing growth implications and preferences at the local level.

The Project Director believed that the appropriate time for citizen participation was after the completion of a technically competent plan. Rather than soliciting citizen input on an ongoing basis, the Project Director seemingly preferred to develop a technically convincing plan which can be "sold" to the public. Contrary to this, however, OKI Citizen Coordinators believed that a more extensive public involvement effort should have occurred throughout the planning process. All agreed that OKI was focusing on the plan review period to solicit citizen input. Following plan completion, OKI intends to disseminate summaries of major plan elements, hold public meetings and county-level briefings for officials and agency heads, and use various media techniques designed to increase public awareness. The Project Director was fairly confident that public comment would not require significant changes in the plan.

Although the WQM staff believed that local elected officials and operating agency heads had been sufficiently involved, there was general concern that their commitment extends only to the participation required for construction grant eligibility. This concern prompted citizens serving on the Implementation Subcommittee to push for more representation of local elected officials.

C. Current Planning Process

As an early designate, OKI has had few State and EPA directives. Consequently, OKI has had fairly free reign over its WQM project. OKI developed an approach to the water quality problem in terms of what OKI could manage technically and politically within the planning

period. In the initial planning period, OKI emphasized facilities planning. By successfully consolidating support among the area's operating agencies, OKI hopes to gain the problem-solving credibility necessary for tackling the more time-demanding and technically complex water quality problems; i.e., isolating the relative contributions of point and nonpoint source loads.

The WQM Director placed most project emphasis on producing a technically credible strategy and openly differs with EPA Headquarters on WQM programmatic emphasis on management. Management planning was the sole responsibility of one staff member who believed the task too great for one person. The thoroughness of the management analysis may be affected because existing land use authority was not inventoried nor were managed growth options explored. The seemingly limited interaction of land use and water quality concerns, together with the lack of local input regarding land use/growth preferences, is an issue to watch as OKI's WQM program reaches the approval and implementation stages.

D. Continuing Planning Process

From the outset, OKI expected to use the continuing planning process for strengthening its technical base and providing technical assistance to local governments. Given the present weakness of the nonpoint source data, analytically supported nonpoint source recommendations will not emerge unless the OKI WQM planning process continues. Many aspects of the plan's implementation, (technical assistance regarding facility plans) rely on an ongoing WQM planning role for OKI.

WQM project continuation beyond July, 1977 seems to depend on OKI's success in obtaining funding commitments from Federal and county sources. OKI is currently pursuing demonstration project funding for its planning components which have national implications. Counties are postulated as short-term funding sources because of their need for OKI assistance in facility planning efforts. The overall outlook for continuing planning, however, appears to hinge on the congressional indicators of longer term Federal support.

E. Significance of Local Elected Officials' Involvement

The OKI Executive Committee, or regional decision-making body, is the center of local elected official involvement. The Executive Committee purportedly has an impact on the shape and direction of the WQM plan and is responsible for final review. Although WQM data is already being utilized for OKI A-95 review at the Executive Committee level, and the officials interviewed seemed to be well-informed of the WQM

process, their commitment to the WQM project is unclear. As several interviewees noted, local elected officials were committed to the extent that their participation was required for construction grant eligibility.

The commitment of local elected officials is important to the implementation of plan recommendations. The areawide interest in growth control or selective development provides a political climate receptive to plan proposals affecting land use patterns. With technical documentation of land capability and water quality impacts, the OKI plan may advise local governments of considerations useful in, and supportive of, their decision-making process.

AGENCY: SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION (SEWRPC)

REGION: V - (Chicago)

GRANT AMOUNT: $2,607,000

GRANT RECEIPT: June, 1975

STARTING DATE: December, 1975

STATUS AT TIME OF INTERVIEWS: The program is completing the date collection phase.

REASON FOR INCLUSION IN SAMPLE: The SEWRPC is representative of a highly urbanized area.

I. BACKGROUND[1]

A. Area Description

The Southeastern Wisconsin Planning Region is comprised of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha Counties in southeastern Wisconsin. (See Figure I.) Exclusive of Lake Michigan, these seven counties have a total area of 2,689 square miles and together comprise about 5 percent of the total area of the State of Wisconsin. About 40 percent of the state population, however, resides within these seven counties, which contain three of the seven and one-half standard metropolitan statistical areas in the state. The region contains approximately one-half of all the tangible wealth in the State of Wisconsin as measured by equalized valuation and represents the greatest wealth-producing area of the state, and about 42 percent of the state labor force is employed within the region. It contributes about twice as much in state taxes as it receives in state aids. Region has been subject to rapid population growth and urbanization and, in the decade from 1960 to 1970 accounted for 40 percent of the total population increase of the entire state.

Geographically, the region is located in a relatively good position with regard to continued growth and development. It is bounded on the east by Lake Michigan, which provides an ample supply of fresh water for both domestic and industrial use, as well as being an integral part of the major international transportation network. It is bounded on the south by the rapidly expanding northeastern Illinois metropolitan Region and on the west and north by the fertile agricultural lands and desirable recreational areas of the rest of the State of Wisconsin. Many of the most important industrial areas and heaviest population concentrations in the Midwest lie within a 250-mile radius of the region, and over 35 million people reside within this radius, an increase of nearly 5 million persons over the 1960 level. Preservation of environmental quality is considered a desirable goal in the region because of the large numbers of bodies of water (a predominant State geographic factor) and because of the water's value as an economic asset for tourism and recreation.

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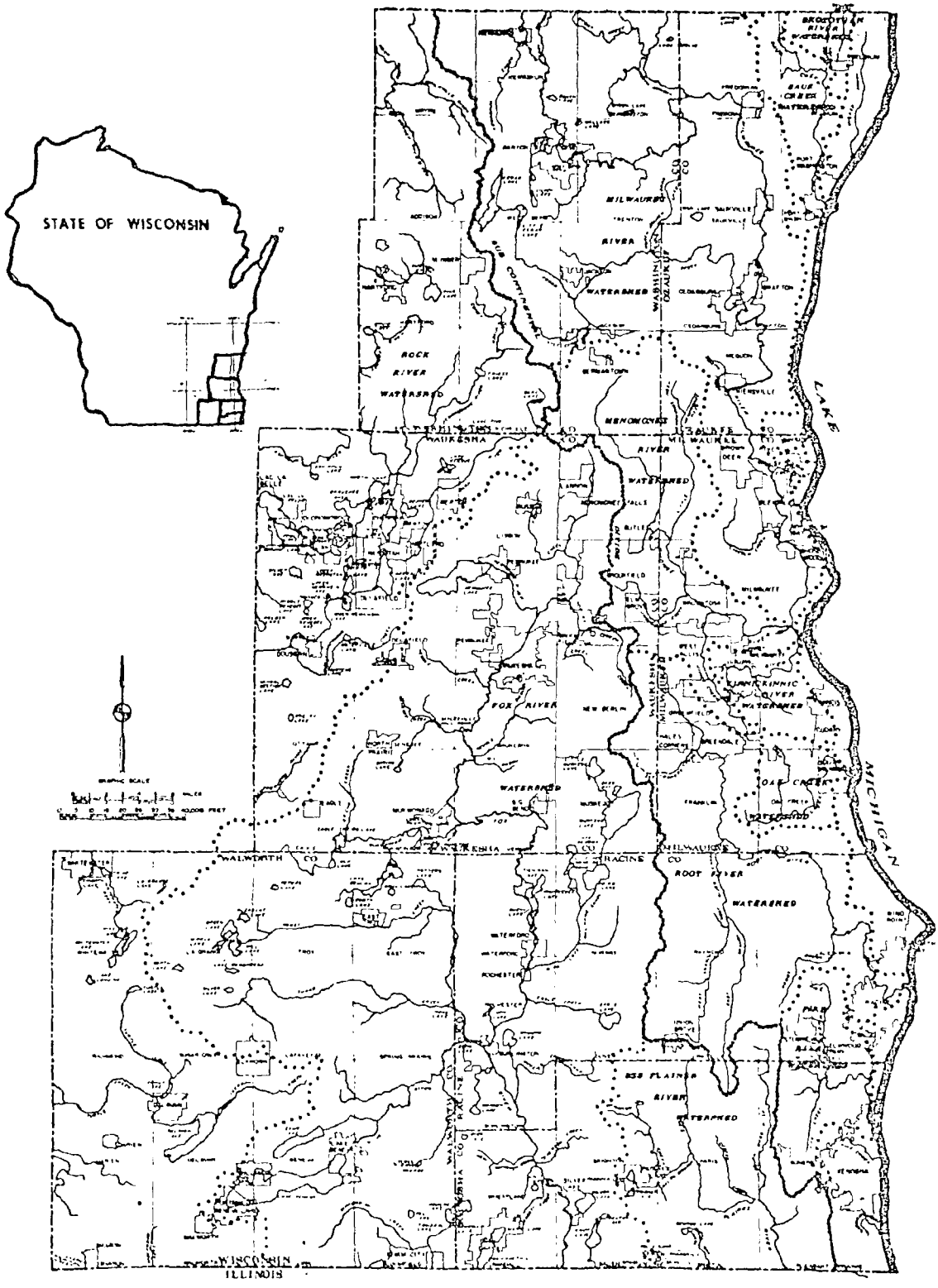
[1] Information in this Chapter is taken from The Study Design for Areawide Water Quality Planning and Management Program for Southeastern Wisconsin, 1975-1977; The 1974 Annual Report; and interviews.

FIGURE I

SOUTHEASTERN WISCONSIN REGION



Source: SEWRPC

B. Water Quality Problem

There are 11 major natural watersheds in the region, which is traversed by the subcontinental divide separating the Great Lakes - St. Lawrence River drainage system from the Mississippi River Drainage system.

The Commission's experience in significant water resource planning dates back to 1964. The natural watershed was selected by the Commission as the basic water and water-related resource planning unit. Comprehensive watershed plans have been completed for the Root, Fox, and Milwaukee River watersheds, and are under preparation for the Menomonee and Kinnickinnic River watersheds.

The basic purpose of watershed planning program is to permit public evaluation and choice of alternative water-resource development policies and plans and, through the preparation of a long-range plan for the development of water-related community facilities, to provide for the coordination of local, state, and federal water resource management programs within the region and its watersheds.

The watershed plans also serve to refine and adjust the regional land use plan, particularly in the riverine areas, and help achieve a more complete integration of land and water resource planning. Additionally, the Commission has completed a comprehensive sewerage plan for the region.

Extensive efforts in water resource planning make the WQM effort part of an ongoing, institutionalized planning process. The Chief Environmental Planner stated that the WQM study does not have priorities, but is looking at all regional water quality factors. In terms of major problems, he stated that:

- A water supply problem exists for suburbs;
- Eutrophication of lakes is more of a problem than stream water quality;
- A clear delineation of the relationship between public and private sewage treatment facilities will be a important factor of the study; and
- A solution for the agricultural runoff problem will be a difficult aspect of the study.

C. Designated Agency

The Southeastern Wisconsin Regional Planning Commission (SEWRPC) was established in 1960 upon unanimous petition of the seven county boards concerned. There are 154 general-purpose local units of government, of which all except three (or 98 percent) are participating in the work of the Commission. The

three non-participating local units of government are the village of Wess Milwaukee and the towns of Vernon and Saukville.

The authority of the Commission rests with its 21 members - three from each county. The Commission is assisted in its work by a full time staff of approximately 90, and by 22 technical, citizen and intergovernmental coordinating committees. The advisory committees include both public officials and interested private citizens who provide major input to both the formulation and execution of the Commission's programs.

WQM planning is seen as a one element of a comprehensive regional planning system which includes land use, recreation, air quality and transportation planning. WQM planning is considered one of the two most critical programs - the other being Land Use/Transportation planning. The nature of air quality problems is not critical in the region.

The WQM staff consists of a Chief Environmental Planner, who heads the Environmental Division of the Commission, and who was responsible for the Study Design. A WQM Coordinator interprets the study design and directs activities. There is a Water Quality Analysis Coordinator who has administrative responsiblities, and is responsible for contracts and the direction of research aids. Additionally, there are three Junior Planners and the equivalent of 20 part-time staff. A technical staff which consists of two Senior Engineers, five full-time Junior Engineers/Planners and five part-time staff is responsible for the in-house modeling work elements.

Although strongly held preferences for local (small) government still predominate, there is a sense of regional cooperation in southeastern Wisconsin. The openess toward regional water quality solutions seems to be due to the local respect for the SEWRPC staff and their technical expertise. Consequently, there is a high level of public acceptance for the type of activities being undertaken under WQM planning.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

WQM planning is seen as a tool for updating, extending and refining previous studies and plans done by the Commission, while meeting the requirements of the FWPCAA, 1972. WQM planning is intended to provide for:

- The full integration of water quality management planning with regional land use planning;
- The conduct of a refined areawide water quality monitoring and modeling program;
- The preparation of an areawide point and nonpoint source pollution abatement plans;
- The preparation of a practical areawide water quality management plans;
- The conduct of sub-area facilities planning for five years following the completion of the WQM plan; and
- The establishment of a continuing areawide water quality planning and management program for southeastern Wisconsin.

B. Technical Component

The SEWRPC work plan contains an extensive inventory component. The technical aspects of the ninteen inventory products can be grouped into the five major categories listed below (see Exhibit I for entire listing).

- Base Mapping and Aerial Photography;
- Status of related water planning programs;
- Socio-Economic, Land Use, Natural Resources Data Base;
- Water Quality Data Base (Quality and Use for surface water and groundwater);
- Point and non-point Source Inventory.

In some cases, the effort requires gathering exising data for use in WQM alternative development. In other cases, data will be gathered either to supplement or create a new information base. Technical elements of the work plan include:

- o forecasting growth and change;
- o water quality simulation modeling;
- o wastewater needs; and
- o land use and environmental constraints.

The SEWRPC staff was particularly proud of the modeling effort. They felt the modeling was a state-of-the-art endeavor, and was enabling the region to clearly define its water quality problems. This modeling data will indicate the percent of time particular segments will be out of compliance with the Standards.

Approximately 40 percent (1.1 million) of the grant will be utilized to hire various consultants. About seventy-five percent of this amount will be for technical aspects of the study. Most of the tasks are shared by consultants and staff. Some of the work elements requiring contractural work are water quality sampling, mapping and modeling.

Seven Soil and Water Conservation Districts have entered into cooperative agreements with SEWRPC for providing vegetative cover and domestic animal data in addition to assisting in the development and evaluation of alternatives in both urban and rural areas. The Wisconsin Department of Natural Resources has been contracted for lake studies and USGS for flow and water quality monitoring. Sewerage and land use inventories are being done in-house.

C. Management Planning

The management planning will be based on an inventory of:

- o The state-of-the-art of wastewater management;
- o Public financial resources;
- o Wastewater management institutional structure;
- o Land management institutional structure; and
- o Legal considerations.

Additionally, the analyses and forecasts for management work elements include:

- o Sewage sludge management needs; and
- o Waste management institutional structure analysis.

The work elements of the state-of-the-art of Wastewater Management ($50,000) and the sewage sludge management needs assessment ($250,000) are contracted to consultants. It was considered too early to discuss likely management systems, as alternatives had not been developed from the technical data base.

D. Public Involvement Program

Three advisory committees have been established to assist the Commission in conducting WQM planning. These are a Technical Advisory Committee, the Intergovernmental Coordinating Committee on Water Quality Management Planning and the Citizen Advisory Panel on Public Participation.

The technical Advisory Committee was established early in 1975 and provided assistance in the preparation of the project grant application and study design. This Committee continues to be actively involved in WQM through technical level representatives and elected officials, the various governmental, business, industrial, agricultural, and university interests in the Region, and assists the Commission in determining the basic technical policy involved in the conduct of the program.

The Intergovernmental Coordinating Committee on Water Quality Management Planning, was established for the basic purpose of reviewing those aspects of WQM planning having important intergovernmental and interagency policy implications. This committee is charged with the specific responsibility of reviewing intra-regional priorities for the fundings of wastewater treatment and related sewerage facility construction, and for integrating and coordinating these intra-regional priorities with those established for other regions within the State of Wisconsin. The committee includes senior level representatives from key Federal, State and local wastewater management agencies involved.

A Citizen Advisory Panel on Public Participation was created in order to provide guidance to the Commission in conducting the public participation program. This panel provides a vehicle for representatives of citizen interest groups to become familiar with and influence WQM planning. Membership on the panel includes organizations such as the League of Women Voters, the AFL-CIO, the Metropolitan Milwaukee Association of Commerce, the Sierra Club, the Environmental Educational Council of Greater Milwaukee, and the Restoration Councils for the Rood River, Cedar Creek, the Milwaukee River, and the Menomonee River. The panel meets approximately quarterly. These quarterly meetings provide a basis for briefing on the progress of the program, and will offer an opportunity for members of

citizen interest groups of all types to raise questions about and to thereby influence the basic direction of WQM planning program. The panel will also be requested to react to proposed public involvement efforts designed to secure effective citizen participation in WQM planning effort.

Additionally, the University of Wisconsin extension (UWEX) has been contracted for one full time staff person to develop and coordinate the public involvement program. The public involvement program involves:

- Working with the citizens advisory panel;
- Establishing direct working relationship with each county UWEX office;
- Utilizing UWEX State and Area Specialists;
- Enlisting support and cooperation with the Soil Conservation Service, Soil and Water Conservation Districts and Agricultural Stabilization and Conservation Service Personnel; and
- Providing materials and information when the above mentioned groups are working with their publics.

The media will be a primary vehicle for information dissemination. Survey questionaires, public opinion polls and fact sheets with response postcards will be used to obtain public input. The staff also considers the contractual data gathering efforts with various local groups to be an effective means of keeping the various publics involved. The SEWRPC staff also constantly attends local meetings of various groups throughout the region in an effort to facilitate communication with the Commission.

E. State and Federal Involvement

The Wisconsin Department of Natural Resources (WDNR) has provided one full-time Liaison in-house and one full-time position at DNR. Additionally, a good working relationship has been established with the district DNR. Relations are characterized as friendly. The Chief Environmental Planner reported that SEWRPC is not in need of technical guidance, but has a coordinative relationship with DNR whereby both agencies are aware of the others activities and may use all available data. All state data has been provided for WQM planning, but the Environmental Planner also said that the State often utilizes SEWRPC for conceptual and technical work.

The SEWRPC staff felt that the EPA Regional Office is giving WQM high priority. SEWRPC reported that a good relationship exists with the region, but feels that SEWRPC has headed little guidance because of its extensive experience in WQM planning.

F. Scheduled Outputs

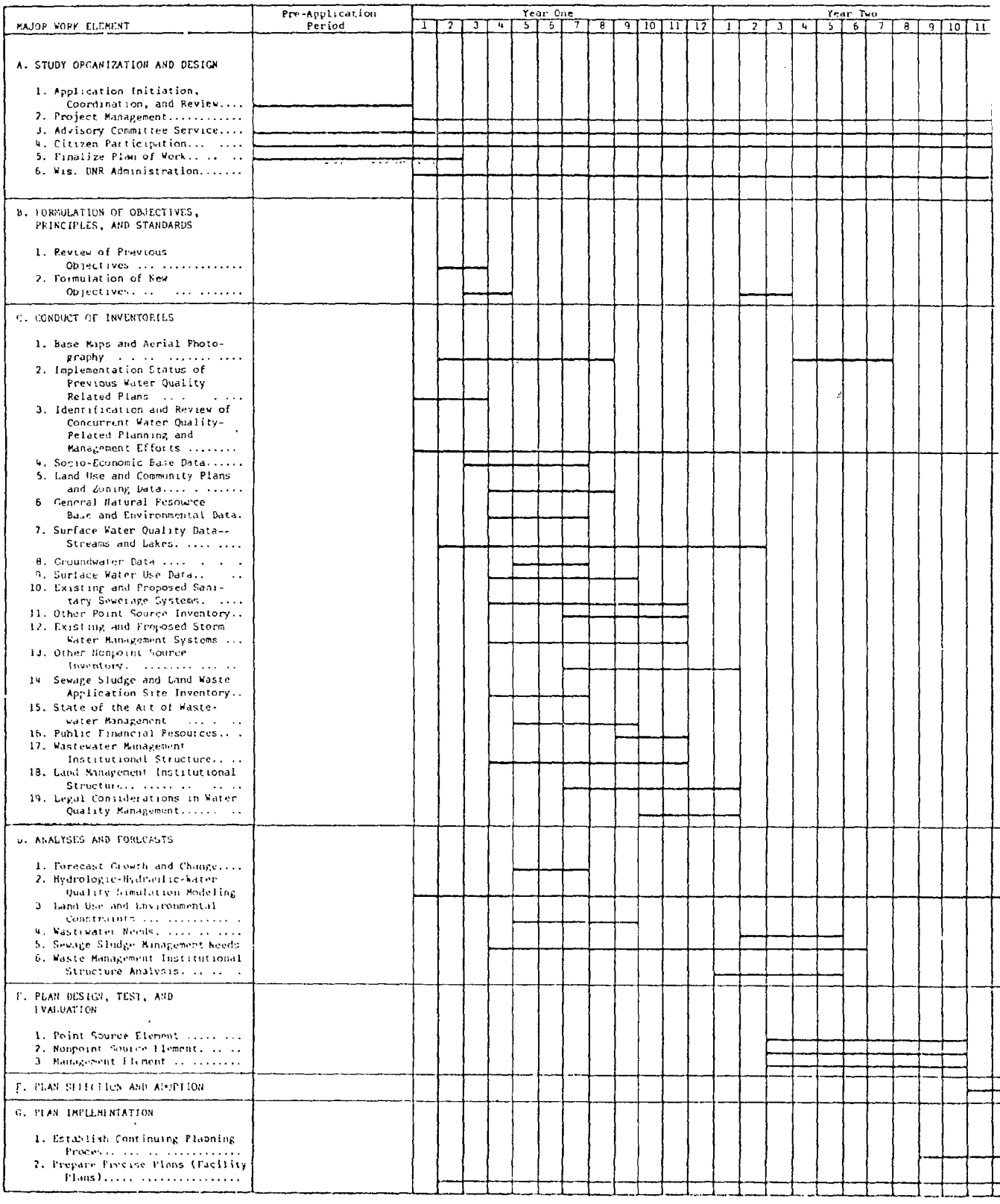
Exhibit I indicates the schedule of outputs for the WQM planning effort. At the end of the fourth quarter of the first year, SEWRPC had expended 62 percent of the projected program funds for that 12 month period. This situation is attributed to time delays in getting the project fully under way and achieving full staffing levels. The staff's scheduling of the project was based on the assumption that inventory efforts could be conducted independently of analytical effort. This assumption proved incorrect, as early analytical results necessitated modified inventory efforts. The effect of the above cited factors was an over estimation of the amount of work to be done in the early stages of the project. The staff is currently of the opinion that the goals of the study can still be accomplished within the deadline. However, having identified these scheduling problems, the staff intends to reevaluate the schedule by refining assumptions and considering additional information which has become available in the ten month period. In addition, review of the scope of work and the budget will be undertaken. None of this work had been completed at the time of the site visit.

G. Achievements to Date

The Chief Environmental Planner stated that the Menominee River Watershed study which was recently completed in preliminary form, is a state-of-the-art effort in nonpoint source pollution control. The study contains data and controls concerning stormwater, urban and rural runoff. The study also includes land management practices for water pollution control on a watershed scale.

EXHIBIT I

TIMING OF MAJOR WORK ELEMENTS OF THE AREAWIDE WATER QUALITY PLANNING AND MANAGEMENT PROGRAM FOR THE SOUTHEASTERN WISCONSIN REGION



Source: SEWRPC.

III. EXPECTATIONS

A. Water Quality

The WQM staff's expectations were generally stated in terms of meeting the standards for fish and acquatic life. One local appointed official hoped to minimize the impact to receiving waters by eliminating wastewater plant discharge and dealing with the combined sewer overflow and nonpoint pollution. Another local appointed official hoped for a plan which prioritized wastewater facility development. Two local elected officials expressed a strong desire to see local waters cleaned up, especially for recreational purposes. The other local elected official said that recreation was not a water use in his area, and that his major interest was obtaining sewers in his city. This citizen was also anxious to see the area's water cleaned-up, and hoped for a new policy for looking at resources.

In reference to achieving the 1983 goals, all levels of the SEWRPC staff indicated that goal achievement could be expected in most areas. Reasons for not achieving it in all areas were that the facilities will not be in place by 1983, and that there are not enough available funds for solving the combined sewer overflow problems. One local appointed official stated that goal achievement by 1983 was impossible. He stated that by 1985, plant discharges could be eliminated, and that by 2000, combined sewer overflow could be eliminated. He added that the nonpoint source pollution problem was too large, and that it was too early to predict when the region would get a handle on it. Another local appointed official was hopeful of meeting the goals in his area. The citizen, a resident of the city of Milwaukee, did not expect that the goals would be met in her lifetime. Local elected officials tended to be familiar with the ongoing water quality planning processes of SEWRPC, but not specifically with WQM planning. Generally, they were aware of the specific goals of PL92-500.

B. Plan Approval and Implementation

An extremely high level of confidence for both plan approval and plan implementation characterized all interviews. Both the Executive Director and the Chief Environmental Planner were assured of plan approval because of the effective public input throughout the process. Additionally, both referenced the fact that all of the Commission's watershed studies had been accepted at the state and local level. The Chief Environmental Planner said, however, that plan implementation is dependent on funding - particularly the cost of eliminating combined

sewer overflow. Local elected officials and the citizens also thought the plan would be accepted and implemented with little difficulty. The citizens added that there may be some difficulty with approval in rural areas, and that plan implementation may cause some animosity among developers.

It was considered too early to discuss the likely legal aspects of WQM planning. The SEWRPC is in the inventory state which anticipates an update of Water Law In Southeastern Wisconsin. It was also too early to discuss likely management structures, as alternatives will be dependent on planning results yet to come.

C. Continuing Planning Process

The estimate for the annual cost of continuing water quality planning was listed as $150,000, in the 1975 annual report. Twenty percent of the Commission budget is allocated for environmental planning. The Executive Director delineated what he considered to be basic functions:

- Monitoring,
- Reporting,
- Plan reappraisal,
- Plan implementation, and
- Research.

Outside of the Commission, all expected SEWRPC to continue its ongoing efforts in water quality planning for the region.

D. Relation to Other Water Quality Programs

WQM was perceived to have no significant effects on 201 or NPDES. The Executive Director stated that both 201 and permitting had been done for the region. The Chief Environmental Planner's reaction was that WQM and 201 type activities have always been related through the regional comprehensive sewerage plans. No other interviewers perceived major effects on 201.

In reference to NPDES, the Chief Environmental Planner did not perceive WQM as having any control over the permitting system, but thought that WQM would provide more specific information for permits, which would provide more justification for there issuance. Others interviewed did not perceive a significant relationship between the two programs.

E. Local Definition of Success

Local definitions of success were generally in the areas of plan implementation and public education. The Chief Environmental Planner considered a success to be finding a way to implement agricultural recommendations. A local elected official looked for a definitive plan for the development and construction of sewage treatment plants. This official also thought that by virtue of having this plan, it should make the Federal grants process more expedient. One local elected official hoped that WQM would prove educational for the public in ways to keep southeastern Wisconsin beautiful. He also thought that the region would have alternatives presented in other than pure economic terms. Another local elected official was looking to obtain sewers for his community, with or without WQM. The citizen expected WQM to lay out a regional plan for sound environmental development.

A wide range of benefits were expected from WQM. The Chief Environmental Planner hoped that the public would have an increased understanding of the benefits of water resource planning. He also thought that each jurisdiction would be made aware of its water quality responsibilities, and that better regional water quality decisions would be made as a result of WQM. The local appointed official stated that a major benefit which was already in evidence was improved communications among the various levels of government, and increased interest in WQM planning. A local elected official felt that WQM would facilitate obtaining more money from EPA. Another local elected official expected recreational, aesthetic and environmental benefits for the streams in his community. Clean water and a new way of looking at resources were considered benefits of WQM by the citizen.

IV. VARYING PERCEPTIONS OF WQM

A. WQM Staff

The SEWRPC staff sees WQM planning as part of the ongoing water quality planning process established by the Commission in 1964. Water quality planning is considered one of the two most critical programs at SEWRPC, the other being land use/transportation planning. This is not surprising because water is a major natural and economic resource in southeastern Wisconsin.

The SEWRPC's staff view themselves as expert water quality technicians with strong community support for their assistance and advice. The staff entered WQM with a strong data base. Consequently, the staff sees the SEWRPC WQM undertaking as a state-of-the-art endeavor designed to refine and analyze data. This is particularly true with their work with the Hydrocomp as a pilot text in southeastern Wisconsin.

B. Citizens

Only one citizen was available for interview. She was a member of both the Citizens Advisory Committee and the Policy Advisory Committee, and represented the League of Women Voters. Her work on the Technical Committee was in the area of combined sewer overflow.

She was happy with her involvement in WQM, but stressed the necessity of involving the general public from the earliest stages of plan development. One concern which surfaced was that the same groups were active in all of the Commission's planning process. The staff's explanation for this was that all interested groups had been contacted for involvement in WQM, but gaining the interest of the person on the street was a loosing battle.

C. Local Elected Officials

Three local elected officials were interviewed for their opinions on WQM. One was a County Supervisor of a rural county, the other two were mayors of towns with populations of 44,600 and 28,400.

The County Supervisor is a member of the Technical Advisory Committee, and is on a sub-committee for consultant selection. He was an active and knowledgeable participant in the process, having extensive experience with Soil Conservation Districts in southeastern Wisconsin. He felt that long-time practices of the Soil Conservation Districts had a chance for

more extensive implementation under WQM. WQM was also seen as a process to educate the public to environmental concerns. He did state that he was not in favor of regional government, but was in favor of the advisory role of SEWRPC. Apparently, his sentiments were similar to the residents of his county - that the township was the best form of government because it is most responsive to its residents.

One Mayor was most interested in an ongoing watershed study which encompassed his city and the impending choice for wastewater facility alternatives. He is a member of the Intergovernmental Committee, which had held one organizational meeting. Consequently, he was not versed in the WQM program per se, but was very active in an ongoing watershed study which encompassed his community. The Mayor held high opinions of the SEWRPC staff and their work, but stressed the importance of building concensus among local governments, rather than forcing regional alternatives. He was looking for a clean up of his community's waters for recreational and aesthetic purposes.

The other Mayor was not directly involved in WQM, but was a member of an advisory board to the Milwaukee Metropolitan Sewage District. His primary interst for his town was obtaining sewerage hook-ups. He did state that the cooperation from SEWRPC was excellent, and that his city utilizes SEWRPC for technical assistance. Although a strong advocate of local control, he welcomed input from SEWRPC on local decisions.

D. Appointed Officials

Three appointed officials were interviewed for opinions on WQM including the Chief Engineer of the Metropolitan Sewage District (MSD), the General Manager of Water and Wastewater Utilities of a city of approximately 93,500 and the Public Works Director of a city of 12,000. All had very different expectations from WQM.

The Chief Engineer of the Metropolitan Sewerage District is the Chairman of the Technical Advisory Committee. He felt that the group assembled to provide technical advise representing a variety of professions and interests, and that the Committee had been given many opportunities for significant input into the process. As a result, he felt that communications among the various jurisdictions and levels of government involved in the wastewater process had improved significantly. He is very confident that WQM will result in more cooperation beteween regulatory and operating agencies, and in a significant improvement in the region's water quality. His agency had undertaken public education efforts, supportive of WQM objectives, to show the cost of unplanned development. A very cooperative relationship was evidenced between SEWROC and MSD.

A city's General Manager of Water and Wastewater Facilities is a member of the Intergovernmental Coordinating Committee on Water Quality Management

Planning. To date, this committee had met once, primarily to disseminate information, and had not had input into WQM planning. This official was looking for WQM to eliminate confusion in the building of wastewater facilities, in terms of providing a plan and clarifying Federal regulations.

The other local appointed official, a Public Works Director, has been involved in WQM through the provision of data, but was not actively involved in the WQM planning process. His city contracts SEWRPC for all planning, and thought highly of the technical expertise of the regional planning staff. The official did state, however, that there are anti-regional and anti-county government sentiments in his area because of the strong belief in local government.

E. State Legislators

No State legislators were contacted on this site visit.

F. State Water Quality Personnel

The State WQM Liaison was unable to make his scheduled appointment, and could not be reached by telephone for comment on WQM.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

The SEWRPC staff is confident of their ability to complete the essentials of WQM planning, despite the upcoming revisions in the workplan. The stated need for revisions is that a heavy scheduling of inventory at the earliest stages of the process proved somewhat untimely. Two factors explain the scheduling problem. First, it took longer to locate key staff positions than was initially expected. This delayed the start of initial inventory activities. The second factor was that the heavy scheduling of the inventory at the early stages of the project was based on the assumption that inventory and analytical work could be conducted separately. Early analytical results, however, necessitated modified inventory efforts. Despite the need for these plan modification, it seemed that EWRPC's advanced data base and an experienced technical water quality staff are indications of timely completion of a quality plan.

All interviewees were confident of plan approval. The staff's confidence was based on the fact that all previous water shed studies had been accepted by the respective communities. The local confidence seemed to be based on respect for SEWRPC's previous work. An additional factor which the staff felt would pave the way for plan approval was the effective utilization of public input through the committee structure and local contracts. Locals and staffs foresaw no problems with plan implementation; however, one staff member pointed out that the implementation hinges on funds which will not be available at the local level.

B. Public Involvement

The Southeastern Wisconsin residents are aware generally of water quality issues because water is a major resource of the region. SEWRPC has already helped increase this awareness through watershed studies which were initially undertaken in 1964. The workplan provides a framework for input from the various groups interested in WQM either through committee structures or a general public input.

There are three committees of each having varied roles in the process. A Technical Advisory Committee, composed of both local elected officials and technical representatives, has provided a forum for local technical direction of the program. The Intergovernmental Coordinating Committee

on Water Quality is a body established for reviewing policy with intergovernmental implications, such as wastewater facility priorities. This committee has met only once at the time of the site visit, and was just becoming involved in WQM planning. The third committee is the Citizens Advisory Committee (CAC) which is designed to provide guidance on general public involvement and a forum for input from interest groups.

The strong emphasis placed on local involvement was evidenced in both staff attitudes and local knowledge of the program. These factors, coupled with SEWRPC's involvement in local planning efforts (contract and technical assistance work) are indicative of a plan that will relfect the variety of interest in WQM.

C. Current Planning Process

SEWRPC entered WQM with a history of experience in water quality planning. Comprehensive watershed studies for six of the eleven watersheds in the region have been completed, as well as a comprehensive regional sewerage plan. Consequently, WQM is seen as another step in an ongoing, institutionalized WQM process.

SEWRPC is undertaking a comprehensive planning effort which includes a major inventory to further define point, nonpoint and institutional problems and solutions. The technical effort includes a state-of-the-art endeavor in modeling, which consists of a pilot application of the Hydrocomp in southeastern Wisconsin.

Both technical and management inventories are being conducted presently. The Technical Advisory Committee has played a very active role during the designation period. Additionally, SEWRPC has included local governments in the process through data collection contracts. The high degree of interest in water in the region has provided significant incentive for a variety of interests to become involved in the process. SEWRPC has established an open process which facilitated these active roles in WQM.

D. Continuing Planning Process

WQM is seen as part of the ongoing planning process at SEWRPC, therefore, the interest in continuing planning in the region is assumed. Budget requirements forecast in the 1975 annual report are approximately $150,000 per year for water quality planning. The following possible functions were outlined by the Executive Director:

- Plan monitoring;
- Reporting system;
- Plan reappraisal;

- Plan implementation/service; and
- Research

The fact that water quality planning has been ongoing in the region since 1964 seems to be a reasonable indication that planning will continue after the benefits of the present WQM effort.

E. Significance of Local Elected Officials' Involvement

SEWROC's committee structure provides opportunities for local elected officials to become involved in the policy and/or technical wastewater decision-making processes. The latter group has been extremely active in the WQM process to date, and the former is just beginning to assume a significant role. Additionally, local elected officials have had the opportunity to become involved in water quality issues through the watershed studies conducted by SEWPRC.

Local elected officials interviewed displayed an awareness of a variety of water related issues depending on the priorities of their community. One official wanted to preserve the wetlands in this predominantly agricultural county, and establish sound soil and water conservation practices. Another's interest was in cleaning up local waters for recreational/aesthetic purposes and developing an agreement for wastewater treatment facilities, while another's single priority was obtaining sewers. Despite strong feelings for local government, all interviewed displayed an awareness of the need and a willingness to cooperate to solve the region's water quality problems.

AGENCY: SOUTHERN KENNEBECK VALLEY REGIONAL PLANNING COMMISSION (SKV)

REGION: I - (Boston)

GRANT AMOUNT: $380,000

GRANT RECEIPT: June 9, 1975

STARTING DATE: June, 1975

STATUS AT TIME OF INTERVIEWS: The project was entering its second year of planning and beginning to refine final plan alternatives.

REASON FOR INCLUSION IN SAMPLE: The Augusta/Cobbasee Project was selected because of the high degree of State cooperation and involvement in the program.

[1]

I. BACKGROUND

A. Area Description

The Augusta-Cobbassee designated area lies approximately 30 miles inland from the central coast of Maine. It includes the capital city of Augusta and eighteen surrounding communities in the southern Kennebec River Valley. The area is dotted with a series of small lakes and ponds which are interconnected to form the Cobbossee Chain watershed. The designated area also includes the Togus Pond drainage area and a segment of the Kennebec River from Augusta to Richmond.

The Designated area is approximately 500 square miles in size with a population of 55,000 people according to the 1970 U.S. Census. With the exception of Augusta, the area is sparsely settled, rural in character and not part of an SMSA. The major source of employment is the State government, which is headquartered in Augusta. With recent strains on the State's budget and the State's generally depressed economy, however, the number of government employment opportunities have diminished. Tourism and related employment opportunities, on the other hand, have been rising over the past decade as more people are attracted to the area's lakes and woodland recreation grounds. Development along the lakes has increased rapidly as a result.

There are also a few large industrial plants along the Kennebec River, but the area's economy relies more heavily on seasonal tourism and support industries.

The heavy dependence of the local economy on the quality of the lakes is widely recognized by the general public and local elected officials. Many have directly witnessed how their land values and summer cottage rentals have been affected by lake pollution, while others have felt the threat of contaminated drinking supply. Finally, a good number of people are long-time residents of the area or have chosen to retire there because of the area's aesthetic qualities. These persons take a very provincial, possessive attitude toward the lakes and resent any interference with their water quality.

The State of Maine has been very active in statewide efforts to protect its waters and regulate their use. In the Augusta area, several local watershed associations have been formed in response to a perceived critical need to take immediate preventative action, especially in view of the recent degredation of several important lakes in the area. Since there are no air or noise pollution problems in the area, environmental attention is clearly focused on water concerns.

The entire WQM area is incorporated into individual townships, each with its own Board of Selectmen. The townships hold very active and effective town meetings in the true New England tradition. Each town has the authority to

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[1] Information for this section was taken from the SKVRPC Work Plan, and interviews.

plan and regulate land use although many do not have zoning codes or subdivision regulations.

The area also has a number of special districts (usually consisting of a few towns) empowered to construct and operate wastewater treatment plants and ensure municipal water supplies. Presently, there are two wastewater treatment facilities in the region. Those communities not tied into these systems rely on private septic systems or collect and dispose of untreated domestic waste into nearby lakes, streams or rivers. The public water supply for the three largest communities in the designated area is the lakes in the Cobbassee Watershed drainage area. Some of them have been used in the past to receive untreated waste or poorly treated effluent.

Recognizing that the coordination of local communities on matters of waste collection, facilities planning and land use controls is clearly essential, the region has already taken some steps toward cooperation and joint problem-solving. The State enabling legislation for the Regional Planning Commission provides an institutional framework for coordinated waste treatment planning and management throughout the area. Three communities have already agreed to implement a coordinated areawide treatment system and a Cobbossee Watershed District was created, in part, to coordinate land use planning and implementation in a portion of the WQM area.

B. Water Quality Problem

As previously noted, the designated area's water resources consist, most notably, of the southern portion of the Kennebec River and the Cobbossee Chain of lakes. Although the area is chiefly rural, it is rapidly developing, creating significant point source and major nonpoint source problems which preclude the simple application of national effluent limits as a solution. The current water quality of the Kennebec segment within the study area is below the State's "C" classification, i.e., not suitable for swimming or fishing, while the Togus Pond and many of the lakes are classified "water quality limited" by the Maine Department of Environmental Portection. Several of these lakes are in advanced stages of eutrophication, and many more are beginning to show signs of extensive plant growth. Groundwater resources have been contaminated with salt in some areas affecting not only drinking supplies, but also surface water.

The Kennebec's pollution problems have been traced to its use or misuse as a dumping ground for mills and municipal wastewater treatment plants, as well as the catch-all for agricultural runoff and septic system leachate. A local woolen mill and paper products company are the primary industrial sources in the area. As for municipal wastes, Augusta's wastewater treatment plant is presently operating at a primary treatment level, thus emitting poorly treated wastes into the Kennebec. The city of Hallowell does not treat its wastewater but rather, channels it to an outfall pipe which deposits a continuous brown slurry in the river. Most homes, particularly those on the lake shores, still rely on individual septic systems.

A great portion of the river's pollution problems are generated upstream from the designated area. To reach class B-1 in the Augusta area, all industrial use of the river would have to end, according to the Project Engineer. Since this is an economically unacceptable alternative, efforts will be made to reach and maintain a Class C rating.

Reasons cited for lake pollution include natural runoff, agricultural runoff and septic system leachate. Septic systems were thought to be the primary source until the WQM studies showed that agriculture was a much more serious nonpoint source of pollution. A particular problem was faced with animal feedlot management during the winter months.

Although all persons interviewed were very much aware of the problems with the Kennebec, discussion centered primarily on the lakes. They are the focus of more immediate concern because of their clear relationship to the area's water supply, land values, tourism economy and general character. Also, they felt that their actions could make a substantial difference in the quality of lake water, whereas changes in the river would only be minor and too costly to consider, especially given the current status of Maine's economy.

C. Designated Agency

The entire WQM area is within the Southern Kennebec Valley Regional Planning Commission (SKVRPC) planning area. Governor Curtis designated the SKVRPC as the official planning agency for the area in 1972. Commissioners to the SKVRPC are appointed by local elected officials. The majority of SKVRPC representatives are councilmen or selectmen, city or town managers, planning board or conservation commission members. With the exception of three towns, all municipalities in the WQM study are presently members of the Commission.

The major factor which led to the establishment of the Commission in 1967 was citizen concern with water quality and a desire for cooperative effort across town lines. Since its inception, the Commission has assisted local communities in planning joint sewer system projects and has served as the focal point for other water-related studies conducted by individual communities and sanitary districts throughout the area. The Commission is also conducting housing, solid waste, transportation, land use, energy, medical care and public safety planning. The Commission is currently engaged in a coastal zone management study whose study area overlaps the easternmost portion of the WQM area. All projects are coordinated through reliance upon a common staff. As the major source of agency funding at this time, the WQM study holds top priority within the Commission, especially as it relates to future and current facilities planning.

In conducting the WQM study, the Commission has established a cooperative relationship with the Cobbossee Watershed District. The District is composed of eight communities in the Cobbossee drainage area which are empowered by State enabling legislation to plan and implement activities assuring water

quality and supply for the watershed. The Commission has allocated 35 percent of its WQM budget to the District for water quality sampling and lake studies by the District's staff and consultants. The watershed plan developed by the District will then be integrated into the regional WQM plan by a joint Watershed/Planning Committee.

The Commission is using another 35 percent of the WQM grant for in-house and consultant work on plans for the non-watershed towns in the designated areas. Part of this money has been used to help the Augusta Sanitary District finance a large-scale engineering study on trunk line deficiencies. The remaining 30 percent of the WQM grant will be used by the RPC staff to integrate the individual WQM plan elements.

The Commission's WQM staff consists of the Executive Director, an Engineer-Coordinator, a Land Use Planner and a Draftsman. The Executive Director is serving as Project Manager for the WQM program with an Assistant Administrator also working part time on the project. Intra- and inter-agency staff coordination are achieved through regular staff meetings, frequent inter-agency contacts and joint authorship of reports.

Approximately $100,000 of the area's total $380,000 grant is being used for outside consulting. Consultant assignments include facilities questions in WQM, limited aerial photography, legal and financial advice, and general assistance in monitoring and guiding the planning process.

At the time of the site visit, the Commission had entered its second year of planning and had expended approximately one half of its allocated grant. There have been no overexpenditures or major delays to date.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The problems, goals and objectives of the WQM study were defined by the SKVRPC staff in the work plan. The agency took a comprehensive approach in that its program is designed to address all areas of water pollution concern as suggested in EPA guidance. Many of the specific problems to be addressed in detail were defined in previous studies by the Commission, the State DEP, individual communities and the SKVRPC's Sewer and Water Subcommittee. The overall program objectives as identified by the Executive Director are to:

- Establish a framework in which to discuss a full range of alternatives for all water quality problems;
- Develop a data base to recommend regulatory programs and actions;
- Create a management system with communications between individual agents; and
- Support local planning efforts by increasing local communities' capacity to plan.

The priority goals are to remove effluent and septic leachate from the lakes and upgrade treatment facilities along the river.

An intentional decision was made by the Executive Director to delay local refinement of WQM goals until after an overview study of existing water quality problems and management agencies was completed. Local redefinition of goals and priorities to be reflected in the final plan were being formulated by the WQM Goals and Objectives Committee at the time of the site visit. This committee is composed of representatives from the Sanitary and Water Districts, trunkline groups, municipalities, the Cobbossee Watershed District, lake associations and citizens. The first priority identified by the Committee is to maintain local control over water quality management. This statement highlights the area's general distrust of Federal interference, an attitude strongly held by most citizens and local officials in the region. Other local goals expressed by interviewees included protecting the local economic base, preserving recreational amenities and avoiding increased local expenditures.

B. Technical Component

The final WQM management plan will be based upon a series of technical and management study sub-plan elements. In conducting technical planning, the WQM agency benefited greatly from a history of prior water studies and the

presence of 201 planning being conducted concurrently with the WQM project. The SKVRPC contracted with the Cobbossee Watershed Association for lake monitoring and water sampling and relied heavily on information supplied by engineers conducting 201-related planning for local communities and sanitation districts. Additional information on 201 issues was supplied by engineering consultants to the WQM agency.

The first technical sub-plan consists of an overview of existing water quality conditions, sources of pollution, projected water uses and long-range data needs. The second sub-plan focuses on current and projected land use and population patterns with an analysis of pertinent transportation and economic factors. Along with this study is a parallel effort to determine the capacity of the land to support various land uses. A study of the soils, geology and vegetation of the region constitutes a major part of the analysis.

The third technical sub-plan focuses on the issue of waste reduction with a particular emphasis on point source problems. The agency is emphasizing point sources because it is viewed as a requirement of the WQM program, because the current local system for dealing with point source issues is undermanaged and the area is facing a critical decision of whether to undertake large-scale sewering of lakeshore areas.

The sub-plan is geared toward:

- Delineation of service areas for treatment facilities;
- Projection of waste loads and flows for each area;
- Determination of the adequacy of operating and proposed facilities and the degree of treatment necessary to meet water quality standards; and
- Identification and prioritization of needs for collection systems, urban storm water runoff, systems and new facilites over the next 20 years.

Since many of the area's pollution problems cannot be remedied by structural solutions, the study is also examining nonpoint sources and controls, particularly agriculture, silviculture and rural housing. All technical planning efforts will result in the development of maps, aerial photos and reports on a regional and sub-regional basis. These products will be of use to other planning efforts beyond the WQM projram.

C. Management Planning

The WQM agency's management planning efforts are strongly colored by the staff's understanding of the local preference for maintaining local control. The agency's orientation is toward combining existing units into more effective mechanisms and supplementing them, where necessary, with additional

powers or authority. Management planning is being conducted by a consortium of planning consultants, the Executive Director and WQM staff.

The management sub-plan began with an inventory and analysis of existing laws, regulations, institutions and financial mechanisms relating to water quality and waste management at the Federal, State and municipal level. The WQM study will develop alternative management plans for implementing the technical control plan suggested in the Waste Reduction Analysis.

The approach to management planning basically is to bring together local and State decision-makers and present them with results of existing programs. The political actors will then hash out what they feel is the best set of alternatives. The underlying objective is to determine what is most effective and implementable so as to ensure success and foster a regional approach to planning and management.

D. Public Involvement Program

The WQM public involvement program is the responsibility of the Executive Director. Based on the agency's prior experience in conducting public involvement programs, the Executive Director chose to concentrate public involvement efforts on local decision-makers and public interest groups (particularly lake associations) rather than the general public.

The general public is notified of WQM activities through:

- Press releases and occasional mailings;
- Program reports made available by the WQM agency upon request; and
- Regular meetings and communications with public interest groups. groups.

Citizens were invited to share their views early in the planning process at individually sponsored town meetings. But the most significant avenues for public involvement are still the advisory committees and direct WQM staff contact with local elected and appointed officials.

In structuring its committee format, the WQM program utilized the RPC's standing committees for recommendations and plan approval functions, and then created its own WQM special committees for sub-plan reviews and technical recommendations. The SKVRPC Board of Directors serves in a policy advisory capacity to the WQM program and is responsible for final plan approval. Other standing RPC groups participating in the process are the:

- Water and Sewer Subcommittee;
- Land Use Subcommittee;

- Solid Waste Subcommittee; and
- Open Space Subcommittee.

Members of RPC committees are usually Selectmen, Sanitary District Commissioners, planning board members or other local officials in elected or appointed positions. The Executive Director feels that contact with local decision-makers through these committees and one-to-one discussions is the best way to get their involvement throughout plan development and to ensure their support at the time of plan approval and implementation.

The subcommittees for technical review include the following:

- Trunk Sewer;
- District and Cities without Districts;
- Nonpoint Sources;
- Water Quality;
- Public Works Department;
- Technical Advisory Committee; and
- Economic Development.

Committee membership includes technical staff persons from State agencies such as the Department of Environmental Protection and local offices such as municipal engineering departments. WQM staff and consultants also feed into the technical review process at this level.

Citizens, special interest groups and industrial representatives are beginning to take a more active part in the WQM planning process through the Goals and Objectives Committee. This committee was established during the late months of the first year of planning. Its purpose is to redefine local perceptions of water quality management goals and objectives vis-a-vis information gathered in first year overview studies. According to the Executive Director, the chief function of this committee is to provide a forum for discussion among polluters, environmentalists and regulators.

With the exception of the recently established Goals and Objectives Committee, the committees have met regularly as subplan elements and reports have been completed. Full copies of reports and accompanying executive summaries are always sent out in advance of meetings so as to facilitate meaningful discussion among committee members.

E. State and Federal Involvement

The State of Maine has actively supported statewide water quality programs for many years and, indeed, played an instrumental role in helping local areas become designated as WQM agencies. Maine had already prepared its 303(e) plans and collected substantial data on the Kennebec River before the start of Augusta's WQM program. The early and strong technical and programmatic assistance from the State Department of Environmental Protection (DEP) has continued into the planning period. Each designated agency has been assigned a liaison to provide technical assistance and facilitate data exchange wherever possible. Augusta's WQM staff maintains frequent contact with the State, particularly since the DEP is located in the same city. The liaison attends all joint staff meetings and most advisory committee meetings. Now that the State has begun WQM planning for non-designated areas, the Augusta WQM program feels a particular need for the State to move beyond technical assistance to actual program coordination. This element, however, still remains undeveloped.

The Executive Director's assessment of the Federal Role in WQM planning is somewhat less laudatory. He is unclear as to where the WQM program fits into EPA's total concept of water planning and is unsure of their commitment to continued WQM planning. He has characterized Augusta's relationship with EPA as two thirds cooperative and one third advisory. Although the EPA Regional Office has not hampered program operation, he feels it has failed to offer the kinds of technical and management assistance the agency has needed. In some cases, the EPA Regional Office has not been sensitive to local problems. In the area of public involvement, for example, the Executive Director feels that the approach commonly espoused by EPA is ill-suited to the designated area. He has had to convince the regional staff that his notion of "co-opting" Augusta's public is far more effective that EPA's idealized approach.

F. Scheduled Outputs

The following is a list of Augusta's scheduled WQM program outputs:

- Water Resources Data Availability;
- Land Use Trends and Projections;
- Demographic Trends and Projections;
- Existing Publicly Owned Facilities;
- Regional Facilities Overview;
- Planned facilities;
- Non-sewer Areas Review;

- Industrial Waste Overview;
- Preliminary Report on Nonpoint Sources of Pollution;
- Nonpoint Sources - Detailed Analysis of Land Management Areas;
- Nonpoint Sources - Waste Projections;
- Final Waste Sources Summary;
- Preliminary Waste Reduction Sub-plan;
- Regional Management Study;
- Management Alternatvies;
- Alternative Regional Water Quality Management Plans;
- Environmental Assessment; and
- Final Plan.

The WQM program is on schedule, having completed most of its technical studies, and is now moving into development and analysis of alternative plan recommendations. The Schedule has undergone only minor revisions since its initial writing -- principally in the form of combining related program sub-tasks and allowing slightly more time to develop recommendations for non-sewered areas. The staff does not anticipate any problems in completing the plan on time.

G. Achievements to Date

The WQM staff feel that the program has contributed to the region's planning capacity by assembling water quality and land use data into a form which can be used by the RPC and local planning agencies. The staff has assisted one town in developing a zoning code and will soon do the same for another. It will also help two municipalities in their comprehensive planning efforts. The Executive Director was also pleased to report that the WQM study will save a considerable amount of money for some lakeshore communities which contemplated sewering but have now learned that their lake eutrophication problem stems more from feedlot runoff than from septic system leachate. Land management procedures are far less costly and, in this case, will produce more effective results than sewering.

A number of local officials reported that the WQM project has caused more communities to acknowledge their need for regional cooperation. One industrial representative was particularly elated that a forum for rational discussion between manufacturers and regulatory agencies had finally been provided.

III. EXPECTATIONS

A. Water Quality

The general consensus was that the quality of the Kennebec River will improve as a result of WQM efforts, but that the water will never improve beyond a "C" classification, nor should it, considering its functional economic uses. According to the WQM Staff Engineer, making the river suitable for swimming or fishing would necessitate banning all industrial activity along its banks. Since industry is an important element in the local economy, and since the lakes are the focus of regional recreational activity, the cost of cleaning up the river would far outweigh the benefits. This attitude is vividly reflected in the pattern of Augusta's historical development.

The general attitude toward the lakes, on the other hand, is very different. The Executive Director anticipates a noticeable improvement in currently polluted lakes once existing waste collection and treatment systems are upgraded and nonpoint source controls are adopted. The State Liaison and citizens also noted optimism about preservation and protection of currently pristine lake waters. One citizen felt that shoreline landholders will be willing to accept inconveniences in the use of their land as long as improvement in water quality of the lakes continues to hold high local priority, and the land owner can clearly see benefits from these controls. His optimism was sparked by preliminary reports which suggest that much of the lakes' problem is caused by agricultural runoff rather than septic tank leachate. Requiring farmers and dairymen to adopt better land management practices would financially affect fewer people than would massive sewering proposals.

B. Plan Approval and Implementation

Although the prognosis for plan approval varied among persons interivewed, most were cautiously optimistic about approval on the local level. Two local officials explained their optimism in terms of the level of water quality awareness prevalent among local communities. They felt this awareness will render decision-makers more receptive to suggestions for improved water quality management. Two of the three citizens interviewed shared this optimism. Both felt that the public involvement program was especially helpful in providing timely information, thereby "selling the program" to the decision-makers. A third citizen was far more skeptical on the basis of possible costs of management and the burden placed by these costs on local governments. In her opinion, most local communities will promptly reject any plan which requires locals to raise more revenue.

The Executive Director was somewhat hesitant to speculate on the likelihood of plan approval. He felt that, although the area is currently receptive to regionalizing wastewater collection and treatment systems, towns may react negatively to individual elements of the plan, therefore, making it difficult to secure overall plan approval. For example, many landowners are opposed to increased land use controls and most local elected officials feel that storm water management is too costly to consider at this time. The Executive

Director feels that local officials consider plan approval a commitment to plan implementation. Thus, if they disagree with some elements of the plan, they may reject the whole.

When pressed for an overall assessment, the Executive Director finally speculated on the possibility of a 60 percent chance of securing local communities' approval of the WQM plan. Unlike the local elected officials and citizens interviewed, he felt that local decision-makers have not been sufficiently involved in WQM planning to date. He hoped to improve this situation, however, during the second year of planning.

All persons interviewed were more confident about State than about local approval ot the plan. As noted earlier, Maine has actively supported the water quality management cause in recent years throughout the State and has been closely involved with the Augusta-Cobbossee WQM project since its inception. No conflicts have surfaced to date between the State and the designated agency, and none are anticipated by the State Liaison or the SKVRPC staff.

All persons interviewed were asked to comment upon the likelihood of plan implementation. Most found it difficult to respond since the plan had not materialized and since political attitudes varied considerably among towns. Most finally gave the plan a 50 percent chance of being implemented across the region. Among the constraints they felt might hinder implementation were the following:

- Two citizens, a local elected official, a State Legislator, and the Executive Director felt that local funding requirements might present a major problem from small communities whose budgets are already strained by existing municipal services.

- One citizen felt that if the plan called for a regional solution, local officials might wrangle over selection of a local agency, thereby destroying any spirit of cooperation currently existing among towns.

- Several people felt that traditionally hostile attitudes toward land use control, regionalism and Federal intervention might be too deeply rooted to be overcome, especially given the short time frame for the study.

The Executive Director felt that, where it occurs, implementation will take place slowly, over a period of 10 to 20 years. Many of the recommendations to be made in the final plan have long-term horizons and will not be fully realized in the first few years after plan approval. The continuation of interest in water quality concerns, the reaction to initial land use controls and the cost of management will greatly determine how many towns implement the plan and to what degree. Expectations for typical management agencies of the future focused on a strong preference for maintaining local control rather

than establishing new regional agencies. Most communities in the designated area already belong to sanitary districts which are empowered to undertake facilities programs. The WQM Executive Director, local elected officials and the appointed official interviewed envision an improvement in point source control through greater coordination among these separate authorities. The interviewees were confident that arguments for the economic efficiency of cooperative action will convince local communities to work together. In the area of nonpoint source pollution control, most persons interviewed looked to the enhancement of local zoning and subdivision controls. The WQM staff engineer also suggested that better land management practices fostered by the RPC on local farms and dairylands would help overcome some of the area's most severe nonpoint source problems.

None of the persons interviewed felt that the approval or implementation would be hindered by legal constraints. All indicated that there are sufficient State laws and local ordinances to implement the plan, at least during the first year or two after approval. The Executive Director noted that State laws in the areas of stormwater management, residual waste management, agriculture, silviculture and soil conservation may be needed in the future, as the continuing planning process and the WQM management agency pursue further WQM issues and needs. More enabling legislation for regulatory authority in particular may be needed as the program evolves.

C. Continuing Planning Process

All persons interviewed hoped that WQM planning would continue beyond its scheduled two-year lifetime, but a few citizens and local elected officials in particular felt that continuation will depend on the availability of Federal funds. Since Maine's economy has been depressed in recent years, locals do not feel that the towns or State alone can support a continued program at any kind of meaningful level.

In the opinion of the Executive Director, continued planning should concern itself with refining the framework for comprehensively analyzing water quality problems and their causes. It should also involve improving existing WQM techniques and institutions in the areas of both structural and nonstructural controls. One citizen felt that continued planning should focus on experimental programs to test less expensive ways of dealing with water quality problems. Most interviewees felt that the continuing planning agency should act in a general technical advisory capacity to the management agencies.

With the exception of two citizens, the majority of interviewees felt that the RPC would be responsible for continued planning. They considered it the most logical choice because of its experience in regional and water quality planning and because it is generally accepted as a local spokesman by communities in the area. Two citizens indicated that the State might assume the planning function in the future, especially if the RPC failed in any way during the course of the two-year WQM planning effort. However, other respondents,

including the State Liaison, Executive Director and a local elected official dismissed this possibility on the basis of current local support of the WQM program, local hostility toward "outside interference" and the inability of the State budget to accomodate such responsibility.

The need for continued Federal support of the program was voiced as a matter of course by all interviewees. The Executive Director was quite hopeful of continued Federal financing but also realized that the local communities would have to bear part of the cost, probably on a 75/25, Federal to local ratio. He felt confident that local communities would contribute to continued planning once they witnessed the benefits of the WQM approach. He has not yet considered ways to raise the money, however, nor has he approached local officials with the issue. He appears to be awaiting guidance or a funding commitment from EPA before taking any action. Presently, he estimates that the first year of continued planning will cost 50 percent of the current budget. Thereafter, the figure will drop to about 30 to 35 percent of original funding levels.

D. Relation to Other Water Quality Programs

The State Water Quality Liaison sees a cooperative working arrangement developing between the RPC and the State on 201-related issues. In his opinion, the State will come to rely more and more heavily on the WQM agency's advice since the latter will have developed a greater expertise in local natural conditions, political scenarios and facilities needs. The Executive Director felt that the WQM program will primarily affect management issues since he feels confident in the State's well-defined set of needs. Currently, the WQM staff engineer is providing technical assistance on matters relating to both the existing facilities and the proposed expansion of collector systems. The Executive Director foresees a continuation of this advisory role. He also hopes to put a cap on future facilities needs by promoting appropriate nonstructural solutions such as land use controls, sub-division regulations and improved septic system codes. One citizen felt that the WQM program's role in determining where and what kinds of facilities should be built will be so pivotal that continued WQM planning will be partially financed through 201 funds.

As to the NPDES program, the Executive Director hoped that the WQM program will help build the RPC's technical capacity to comment on permit discussions made by the State. This issue was of particular concern to an industrial representative who feels that a forum is needed for discussing industrial needs with environmentalists and regulators. Since the WQM program is sensitive to local needs, he feels it should be the prime mover in making NPDES standards which represent a compromise between economic and environmental concerns, and constitute a major advance over current practices.

E. Local Definition of Success

Most interviewees ranked water quality concerns among their foremost community goals and defined WQM "success" in terms of how it would help towns meet their general goals.

Among the ways interviewees hoped to benefit from the WQM program are the following:

- Several people indicated that they felt the need to control growth to preserve the town's quality of life and protect its water resources. These people hoped that the WQM study would give them grounds to establish zoning and land use controls to offset threats to their drinking water supply and to preserve the quality of life.

- Another town hoped the WQM study would produce the evidence they needed to protect a rare bank of sand formed over centuries of natural water movement.

- One local elected official identified historic preservation as the only way to keeping his city viable. He felt that implementation of the WQM plan would mean a cleaner river and therefore increased desireability of downtown property. Increased land values, in his thinking, would encourage revitalization.

- An industrial spokesman summed up the region's goal as one of striking a balance between envirinmental and economic concerns. The WQM program is tailor-made to this need.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

As noted earlier, Augusta's small WQM staff consisted of only the RPC Executive Director, an Engineer, a Regional Planner and a Cartographer. The Executive Director views his role as one of facilitating cooperative action among towns and ensuring timely flow of information, both in-house and to the public and other decision-makers. He was attempting to co-opt local officials into participating in the program and deciding in favor of the final plan.

The Project Engineer was formerly with the Maine DEP and had assisted in securing areawide designations early in the history of the WQM program. He was very familiar with the intent of the national program and sensitive to the State's perspective. He viewed his role as one of providing and interpreting technical information to substantiate reasonable arguments for a regional approach to wastewater collection and treatment. The Regional Planner was involved with the social and economic impacts of various planning alternatives.

The staff was very excited about its work and was optimistic about the likelihood of plan approval and implementation. Their optimism was based on the compact size of the designated area which makes the study manageable and allows most people to feel a personal stake in the decisions at hand. The WQM staff has established a good working relationship with the local sewage authority and with local communities which have sought the RPC's advice on local planning decisions. Although the Executive Director feels that not all local elected officials are sufficiently involved in the WQM process, he has personally established contact with most of the key officials and hopes to arouse further support as the plan nears its final review.

B. Citizens

Three citizens were interviewed in the Augusta area. One is a realtor and member of a local planning board. Another is an officer of a lake association. The third is the official representative of Augusta's major manufacturing firm. All three are members of the WQM Goals and Objectives Committee which is responsible for striking a balance between local economic and environmental concerns.

Each person felt that he had a personal stake in the WQM program outcome. Two were particularly interested in preserving the "quality of life," recreational amenities and property values in their lakeshore communities. The industrial representative was concerned about keeping expectations about upgrading the Kennebec River within a range which will allow continued operation of the plant.

The interviewees felt that their input into the WQM planning process had been meaningful to date. They were not particularly concerned that the general public is not more actively involved in the process. Rather, they shared the Executive Director's opinion on public involvement, i.e., that the most effective way to reach the public is through public interest groups and local elected officials. They were optimistic about the likelihood of plan approval and implementation despite local Communities' traditional stand against land use controls, regionalism and any program associated with a Federal label.

C. Local Elected Officials

Two local elected officials were interviewed. One is the Chairman of a Town Council, the other is a Town Selectman. Both are members of the SKVRPC Sewer and Water Subcommittee.

The first local elected official was primarily concerned with preservation of the lakes as they relate to his community's water supply. He viewed the WQM program as a framework for discussion and a means of identfying the most efficient and effective approaches to local water pollution. He voiced no criticism of the program and envisioned it continuing in an advisory capacity.

The second official has been an advocate of cooperative community action long before the WQM program came into existence. Although he recognized the advantages of working together as "a community of communities," he feared that some Councilmen are still unaware of the WQM program. He was particularly concerned about those towns which will not receive immediate, visible benefits from the plan and therefore will find it difficult to transcend their parochial outlook. Despite this concern, the Selectman was generally satisfied with the way the WQM program was operating and blamed any failure to involve local officials on the apathy of non-participating local officials.

D. Appointed Official

The appointed official interviewed was Superintendent of a local sanitary district. The Superintendent was a member of the Technical Advisory Committee and also served on the Management Subcommittee. In addition to attending formal meetings, he was in frequent contact with the WQM staff engineer with whom he exchanged technical data and advice. The Superintendent was not only pleased with the day-to-day advice he received from the WQM but also with the changes in management which it proposed. He was confident that the local communities would approve the final plan because he anticipated that it would suggest extended services which he felt communities wanted.

E. State Legislators

Two State Legislators were interviewed. One also served as a mayor of a local community. The State Senator was not active in the WQM program and

was quite unaware of its developments to date. He felt, however, that the existence of the legislative committee structure eliminated a personal obligation to get involved in the program. His area of concern was education. He concentrates his efforts and attention in this area and relies on the Natural Resources Committee to advise him on environmental issues.

Unlike the State Senator, the Mayor/Assemblyman was attuned to Augusta's WQM program and its potential effects on his community. His direct line to the WQM program is through his town's representative on the RPC Sewer and Water Subcommittee. He also relied on the Natural Resources Committee for a State perspective on water issues. The Mayor/Assemblyman felt that the Committee is probably aware of Section 208 but was not sure how closely they followed it on the regional level. He indicated that the Legislature was currently receptive to providing money for environmental causes, but that any action on their part would have to overcome the Governor's general reluctance toward increased State spending.

F. State Water Quality Personnel

The official State liaison duties were delegated by the Governor to the Department of Environmental Protection. The DEP was very active in encouraging RPCs to seek areawide designation when Federal money was first made available in 1974. After designations were made, the DEP assigned a liaison to each of the areawide WQM agencies. These liaisons were charged with the responsibility of offering technical assistance where requested, reviewing project outputs, circulating reports among related State departments and ensuring consistency between areawide programs and State policies.

Augusta's Liaison found no problems in his relationship with the WQM agency. Coordination with Augusta has been particularly facilitated by the presence of a former State Liaison on the areawide WQM staff. The former Liaison is, of course, very familiar with the State's perspective.

According to the State spokesman, the DEP plans to incorporate the Augusta and other designated area WQM plans directly into the statewide plan. He could not identify any areas where, with the benefit of hindsight, he would suggest changes in Augusta's program. His one complaint was on the short time span for planning. Given more time, he felt that the WQM agency could assemble a more complete data base to design and support their management suggestions. He was generally optimistic, however, about the likelihood of plan approval and implementation.

IV. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

It appears quite certain that the Augusta-Cobbossee WQM plan will be completed within the study's two year time-frame. With about nine months of planning remaining at the time of the interviews, the staff had completed most of its technical studies and was organizing an outline for final plan preparation.

There appear to be several reasons why the WQM agency is on schedule. Among these are:

- Reasonable expectations about what can be accomplished in two years;
- Utilizing experts familiar with the area, i.e., local Lakes Associations and engineering firms currently engaged in local 201 planning, to conduct most of the technical studies;
- Experiencing few delays in data collection;
- Receiving good cooperation and active support from the State DEP;
- Knowing the public and the most efficient ways to reach them, and;
- Using the existing Sewer and Water Subcommittee of the SKVRPC in the advisory committee structure.

Much of the WQM agency's good sense alluded to in the above list is attributed to the Executive Director. His experience with the SKVRPC and his sensitivity to the area's political climate have played a large part in shaping the program. The schedule he has set should provided ample time for refining plan alternatives, involving the public in review of alternatives and communicating the plan to local elected officials.

The probability of plan approval is very difficult to assess, given the strong independence and unique character of each individual community involved. One hopeful sign is that none of the towns have voiced opposition to the study, nor have any dissenting interest groups arisen. By now, the study is sufficiently visible to have elicited overt displays of opposition if such sentiments did indeed exist. Most local officials appear very concerned about the area's water quality and at least the few interviewed were optimistic about the potential success of the WQM program. Also, in the compact study area, almost every individual involved in the WQM program has a personal stake in water quality management decisions.

Part of the optimism about approval stems from the political acumen of the WQM study management. Keeping the program at a low profile and working within the framework of existing management systems has presented an unthreatening image to the towns. The WQM program has attempted to involve all groups which promote or hinder plan approval so as to "co-opt" them into supporting the outcome. Offering technical assistance to individual towns and sanitary districts has also helped gain visibility and credibility for the study which should prove helpful at the time of final plan review. The political climate itself should also contribute to the likelihood of approval. For at least half the towns, the following are strong incentives for supporting a WQM which addresses both point and nonpoint problems and stresses cost effective non-structural solutions wherever possible:

- Recent precedents of State Water Studies;
- Growing public awareness of pollution problems;
- Increasing local desire to coordinate 201 activities; and
- Depressed economy.

Once the hurdle of plan approval is passed, implementation should follow almost automatically (though not necessarily immediately), unless extensive amounts of local funding are required. For most towns, plan approval appears to be a sign of commitment to action. In fact, the reason why some towns may not approve the plan may be that they cannot abide by selected portions of it, and, therefore, refuse the whole. The WQM staff will have to conduct a good selling job to assuage the towns' fears of regionalism and Federal intervention. The key items to watch are:

- Whether the program can effectively reach LEO's;
- Whether any opposition groups develop, or alternatives are refined; and
- Whether any of the later stages of analysis will result in changes in and/or support of staff recommendations.

B. Public Involvement

The public involvement effort is geared almost exclusively toward Lakes Associations, industries and local elected officials rather than toward the general public. Some public education work is taking place through the general mailings and speaking engagements at Community or interest group gatherings. But past experience has shown that efforts to reach the general public in the Augusta area are not only costly, but are not all that meaningful. The first meaningful public involvement has occurred recently through the Goals and Objectives Committee. Unlike many other WQM agencies which get

public interest groups, industries, etc., involved early in the process and then lose their interest by the time meaningful input can be made, the Augusta study waited until they had concrete issues to which the public could react. As a result, members of the Committee feel that they have an important and influential role to play in plan development. Their enthusiasm should carry through to the end of the planning phase.

The key people to actual plan approval and implementation are Town Selectmen, local Sanitary District Commissioners and Lakes Associations which will probably be the most vocal supporters of the plan. With the exception of several Sewer and Water Subcommittee members who have been actively involved in the review of planning outputs, few local elected officials actually have been involved in the WQM process. The Executive Director has tried to keep the latter groups aware of the program by maintaining phone and mail contact with them. This has been sufficient during the first year of planning when the program was concentrating on technical studies, but now that alternatives are being developed and refined, local elected officials' involvement is crucial and should be stepped up. Again, with about nine months remaining, there should be sufficient time to make a meaningful impact if their involvement can be facilitated.

C. Current Planning Process

The WQM plan will address some site-specific facilities problems but, in general, seems geared toward comprehensive, areawide coverage of water pollution issues. In taking a comprehensive approach, the Executive Director appears to be responding to what he perceives as EPA's directive to address the full range of possible water quality issues. The broad scope of study has precluded in-depth analysis of all problems. But even identification of existing and potential problems and their most probable causes should be useful in future management planning. For example, determining that natural and rural runoff contributes more to lake eutrophication than does septic leachate will redirect control efforts away from massive, sewering programs and toward more effective land use and land management practices.

The Executive Director has been able to avoid becoming overwhelmed by concentrating on developing a process for management decision-making rather than trying to find all the technical answers within two years. He has stressed the development of forums for discussion among industrialists, lake associations, sanitary districts and local officials while still producing some products (land use, lake sampling, etc.) necessary to formulate recommendations and gain credibility for the SKVRPC. This approach is probably most reasonable for the area, given the existence of undermanaged water and sanitary districts and the currently high visibility of lake problems. The value of this approach is largely contingent, however, upon the continuation of planning beyond the initial two year period. Whether or not the full benefits can be reaped depends on whether or not the WQM agency can convince the local communities to continue the efforts and implement the planning.

At no point in the process has the agency invoked the threat of Federal sanctions as an incentive to plan or implement recommendations. Such action would only alienate local communities which already fear Federal intervention. Instead, the agency needs to plod along gently as it has been doing, constantly demonstrating the need for action and the value of the plans the agency recommends.

D. Continuing Planning Process

Despite the fact that all interviewees expressed a desire to see WQM planning continue beyond two years, the prospect of continuation appears to hinge on local decision-makers' reaction to the final plan and the availability of Federal funds. Presently, most towns in the area are hesitant if not opposed to the concept of regionalism. Whether or not the WQM process can change this opinion remains to be seen. A good indicator will be the degree of plan approval and implementation. As to funding, neither the towns nor the State have the resources to support anything but the most minimal of planning efforts unless they are supported by Federal funds. It appears unlikely that Maine's financial problems will change significantly in the next few years, so the Federal response will be quite crucial.

If planning does continue, it will probably involve some added data gathering efforts and technical analysis, especially on the lakes. The SKVRPC's role will be to provide technical advice and management assistance to the individual towns, sanitary districts and/or other regional management agencies to be created in the future. The RPC is beginning to cultivate the trust of local communities. If it can continue to do so, it probably will be quite influential in future WQM decisions.

G. Significance of Local Elected Officials' Involvement

As noted earlier, local elected officials have not participated actively in the WQM process to date. However, Sewer and Water Sub-Committee members have played an important role in review of interim outputs throughout the process. The WQM staff has relied on them to act as spokesmen for sanitary districts and local communities. Without becoming subservient to the Sub-Committee's reviews, the staff has incorporated their comments and concerns into plan development. The Sub-Committee members, in turn, seem pleased with the responsiveness of the staff and may be helpful allies at the time of final plan approval.

AGENCY: SOUTHWEST FLORIDA REGIONAL PLANNING COUNCIL (SFRPC)

REGION: IV - (Atlanta)

GRANT RECEIPT: June 1975

GRANT AMOUNT: $949,000

STARTING DATE: July 1976

STATUS AT TIME OF INTERVIEWS: Are awaiting approval of revised work plan for State and EPA. Committees have been organized since September 1975.

REASON FOR INCLUSION IN SAMPLE: This is a coastal area.

I. BACKGROUND[1]

A. Area Description

The Southwest Florida designated area consists of 6021 square miles of relatively flat land located on the coast of the Gulf of Mexico between Tampa and the Everglades. Much of the developed portions are located along a north-south interstate highway. Tourism construction and agriculture (sugar cane, cattle and citrus) are the main employers, as there is little industry.

The designated area consists of the six counties -- Sarasota, Charlotte, Lee, Collier, Hendry and Glades -- which make up the Florida State Planning District #9. Within this area there are seventeen local governments, nine of which are located in the two SMSA's of Sarasota and Ft. Meyers. This area is considered one of the fastest growing in the country. In 1970 there were 306,756 inhabitants. By 1975, the University of Florida estimated population at 436,000 and by 1995, population is expected to be 700,000.

There are other related projects underway which will be coordinated with the WQM Study. One of these is the Coastal Zone Management program. Both projects, for example, try to avoid duplication in data collection. This area was also designated a Flood Control District by H.U.D.

This area experienced a tremendous amount of residential growth over the last two decades. There are large numbers of condominium developments and trailer parks throughout, often catering to retired persons. For many large sections, the land has been platted, streets built, and lots sold (often to persons out of state), but no one has yet built any homes. This presents a curious sight, and a potential headache.

There is no overall set of community objectives in this area within which the WQM can function. In general, there is a realization that "biggest is not best", growing out of a negative reaction to the rapid and uncontrolled growth of the past.

The counties and cities are all at different stages of being able to cope with the growth. One county was zoned and platted for one million people, although they now have only 45,000. They are searching for methods to make sure that the growth, when it occurs, is slow and orderly. The county adjacent to it has no land use plan and no idea of what they want. Individual communities are adopting their own land use plans, including one

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[1] Information in this Chapter was taken from the SPRPC work plan; and from interviews.

which has set a population limit. Zoning, where it occurs, serves mainly to keep out heavy industry.

B. Water Quality Problem

Within this area there are four watersheds, two major river basins, thirty minor rivers and creeks, 220 miles of coast, more than seventeen estuarine bodies, and numerous canals (many of them man-made). In addition, the area covers one-third of Lake Okeechobee, a water supply source, and Charlotte Harbor, a popular recreational fishing area. All waters in the area are classified WQL by the State, pending reclassification.

The first step in program design was an inventory of all water quality data available, including NPDES permit information and STORET file data. From this, all waters and their problems were evaluated, and the most critical were prioritized. Severity rankings were matched with importance of the water body as a natural resource and suspected cause of the problem. All of this information was then given to the 208 Advisory Committee to come up with a final list of highest priority segments, which were used to develop the five critical areas for study.

Water quality problems are associated with a number of sources. In many cases they are from point sources, in other areas it is due to urban runoff, septic tank leakages, and livestock and agricultural runoff. Another major problem is that most of the area is a drained wetland with man-made canals which intercept the natural flow of waters subsequently, and, the ecosystem.

C. Designated Agency

The designated agency is a regional planning council. It was established in 1973 and staffed in 1975. Although WQM is the first major effort for the agency, it has complementary responsibility for coastal zone management program and for the State Development of Regional Impact (DRI) Process. The agency also does DOT, HUD 701 and LEAA planning.

The State of Florida recently has enacted a lot of legislation related to the environmental, land use and planning issues. One law, for example, requires land use plans by 1978. Another, the Environmental and Land Management Act (ELMS) established a state EIS process known as DRI. This process establishes and provides funding for regional planning commissions to make fiscal, economic and environmental impact assessment of major private development projects and all government facilities. It also establishes a State purchasing program for areas of "critical State concern". The designated agency recently has completed a major DRI on a proposed estuary development scheme.

Although the RPC has no land use sowers, it has considerable influence over the urban infrastructure. Through DRI, they impact transmission lines, and with

WQM, they hope to expand their sphere of influence to include sewer systems.

Full time staff working on the WQM study include the Project Manager, one person responsible for monitoring technical contracts, and one person responsible for the contracts on facilities planning. Two-thirds of the grant will be used to hire consultants for certain work elements. Initially, a consultant was hired to write the work plan, but it was considered unsatisfactory and rewritten. The same consultant was hired to do engineering, management and public participation, but has since had the management and public participation sections taken away. Another engineering consultant was hired to do problem identification and probably will be used for making impact assessment also. Most of the sampling, monitoring and analysis will be done by this consultant.

In addition to the private consultants, the WQM agency has entered contractural arrangements with some public agencies. Lee County is doing the water quality analysis for the Caloosa Latehie River. New College is conducting the septic tank analysis of Lemon Bay, and the University of Florida Law School will examine the legal basis for controlling runoff.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The overall objective of the WQM project is the achievement or maintenance of water quality standards "suitable for the protection and propagation of fish, shellfish, and wildlife and recreation". Because the grant was not sufficiently large to complete studies in all parts of the designated area, the work program was designed to accomplish two things:

- Identify, prioritize and schedule public wastewater treatment facilities eligible for 201 funding. To encourage and assist those agencies which will be responsible for construction and operation of treatment facilities;

- Analysis and alternative solution selection for priority problems in each of five critical areas. These problems include a mix of point and nonpoint source concerns.

B. Technical Component

Technical portions of the plan are divided among the five critical areas selected by the Advisory Committee. Predominantly, work will involve monitoring to determine where problems lie and development of regulatory controls, where indicated.

The first critical area covers Phillippi Creek, Roberts and South Sarasota Bays, and Little Sarasota Bay. There are at least six point dischargers into these water bodies, but the primary focus will be upon nonpoint sources. In the eastern portion of the area, problems come from crop and livestock production; problems in the western portion come from urbanized land uses. The study will begin with a survey of existing land use, topography and hydrology. A sampling program will be designed, specifically to measure urban runoff from particular uses and to find their impact on receiving waters. This study also will involve a hydrodynamic sampling program tracking tracers. Data from the hydrodynamic study and pollutant loadings will be used together to determine allowable waste load levels for attaining standards. Outputs from this critical area study will include: sub-plans for urban runoff and for agricultural runoff; and a program of treatment facility construction; and regulatory actions to control pollution of the area.

The second critical area is Lemon Bay, the non-urban coastal basin near the barrier islands, and an area popular for shellfishing. The focus of this study is on whether septic tanks are causing coliform and nutrient pollution of the Bay. The study consists primarily of a sampling program and a tracer study. If septic tanks are found to be a problem, a regulatory program

will be designed.

The third critical area is Charlotte Harbor, one of the largest estuaries in the State and an important natural resource. The objective of the study is to determine the spatial and temporal distribution of contanimants coming into the estuary as well as an assessment of total pollutant loadings. Again, the study will rely heavily upon a sampling program. Specific sites for monitoring will be selected following a review of land use data. Specifically, urban (commercial and residential), pasture, open spaces and canals (hydrographic modifications) will be studied. The final outputs will be a series of alternate controls for both point and nonpoint source pollution.

The fourth critical area is two segments of the Caloosahatchee River. In one, there are problems from agriculture and livestock operations; in the other a drinking water supply source (Lake Okeechobee) must be preserved. Again, a sampling program will be used to provide baseline water quality data as well as quantification of loadings from livestock and cropland runoff and from urban runoff. Storm sampling, baseline and flow data will be used to relate pollutant loadings to water quality. Projections of future loadings will be made and control techniques will be developed.

The fifth critical area is the Big Cypress Basin, another extremely complicated estuarine complex that consists of a series of coastal streams, bays, marshes, islands and hammocks. The primary objective of this study is to conduct sufficient sampling to recommend a water quality monitoring program to the local government.

C. Management Planning

Management planning will consist primarily of the institutional analysis and the analysis of implementation mechanisms found in the third and fourth task elements. Management planning will be completed by one of the staff members with the Project Manager. It is scheduled to start in September 1977. One of the first priorities for management planning is to change the existing structure as little as possible. Beyond that, management studies will examine the political base, financial support and legal power of potential management agencies.

D. Public Involvement Program

The public involvement program was designed around two principles. First, it seeks to involve primarily the representatives of local government who will be responsible for making recommendations. Accordingly, each local government was asked to submit the names of a planner, an engineer, and a leader of environmental interest groups as delegates to the WQM committees.

The second principle followed in designing the public involvement program was that committees should be divided according to major drainage basin. In this

way, committee members would have a common interest and frame of reference. Consequently, four advisory committees were created, one for each basin.

Advisory committees have been involved in the study design since its inception. During the data assessment stage, for example, they reviewed consultant reports and made priority recommendations. They were also given briefing sessions by USGS and SCS representatives to increase their technical knowledge of the areas. All four advisory committees are expected to continue having input into management, regulatory and impact stages of the study plans.

The work program indicates that most of the resources for public participation will be used after alternatives have been developed and impacts determined. If necessary, a full-time staff member will be assigned to coordinate efforts which will include presentations, information depositories, public service broadcasts, and newspaper supplements. The final plan will go through formal public hearings.

Advisory committees have been meeting since September 1975. At the first series of meetings, an orientation handbook was presented, and at the second series, guest speakers outlined local problems. In the third series of meetings, preliminary goals and objectives of the study were set. Committees did not meet from mid-October until March, the time during which consultants were being selected and contracts arranged. During March and April the advisory committees met with the staff and consultants to discuss work program priorities. In the future, it is intended that committees will meet in order to hear progress reports.

E. State and Federal Involvement

The Project Manager described his relationship with the Regional Office as "very good". He feels he has been given a lot of guidance and was particularly grateful for their guidance in how to let contracts. The Project Manager has found that the guidance from EPA Headquarters is difficult to understand and often waffles. He is particularly bothered by the guidance on WQM/201 coordination and the guidance that outlines State involvement.

The Project Manager feels they have a "neutral" relationship with the State Department of Environmental Regulation, although, up to this point, it has been "hostile". He believes that their comments on the work plan were not helpful, and has so far, has refused to pay the State the money they want for their review services. The State, in turn, has refused to approve the work plan except with a series of conditions, including a requirement to pay the $29,580.[1] Other than to review the work plan, the State has not been particularly involved thus far.

[1] The Department of Environmental Regulation is also having trouble getting the money from the other twelve Florida designated areas.

F. Scheduled Outputs

The first work task deals with identification, prioritization and scheduling construction of treatment facilities for a 20 year period. There are currently nine 201 designated areas. Five of them (four counties and one city) have received Step I grants. Activities under this task include:

- A 201 workshop to disseminate information about facility planning;
- Concentrated efforts working with the inactive areas to encourage their participation in 201;
- For those areas that will receive construction grants→ select service areas, estimate flows, cost estimates of alternative treatment systems;
- Analyze the requirements necessary to control urban stormwater runoff in Phillippi Creek, Charlotte Harbor and the Caloosahatchee River;
- Review of Step I plans for conformance with EPA guideline AM-II;
- Prioritize needed facilities for five years based on severity of pollution, population affected, need to preserve high quality waters and national priorities;
- Scheduling of facility construction for 20 years.

The second work task involves establishment of regulatory programs in the five critical areas, and one task which is a generalized regulatory program for control of pollution in the "non-critical" areas. The task was divided in this way because lack of funding did not permit examination of all problems. It is believed that the major source of pollution in these areas is domestic waste, which can be handled through creation of areawide waste treatment systems. Programs for the five critical areas are described in Section IIB. They consist predominantly of sampling programs designed to yield sufficient information to develop a regulatory control program.

The third task in the work plan involves an institutional analysis of agencies which will be responsible for construction and operation of treatment facilities and analysis of agencies which can implement the regulatory programs called for in each of the five critical areas. Finally, agencies will be identified whose responsibility will be to oversee overall implementation and to perform continuing planning analysis. This task will include legal authorities, administrative capabilities and financial support. Institutional

alternatives will be presented to advisory committees and to Southwest Florida Regional Planning Council for approval.

The fourth task of the program involves four sub-tasks. These are:

- Identification of measures needed by the management agencies for implementation;
- Establishment of an appropriate timeframe for implementation;
- Determination of cost of implementation;
- Assessment of environmental, economic and social impacts.

Monitoring in the five critical areas, which is a large part of the work program, will take place for one year from July 1976 to July 1977. The analysis of regional programs (land use, etc.) will be done between January and July 1977; so will the 201 work leading up to a prioritization of needed facilities. Management planning, including identification of management agencies, necessary authorities, and impact assessment will be done between July and October 1977.

G. Achievements to Date

It took several months for this agency's project to get underway. Because it was the agency's first major program, an Accounting Procurement System had to be established. The EPA Regional Office helped with this and with a consultant selection procedure, which the Executive Director feels is a "model".[1]

Phase I of the project has been completed for some time. Basically, this involved a compilation of all existing water data in order to define, prioritize and select those problems to be treated in the initial workplan. Consultants were selected in early Spring for the technical water quality portions of the plan. In the meantime, the WQM is concentrating on following the 201 planning presently underway. In the fall they will hold a 201 workshop to try to get other eligible communities interested in pursuing a grant. Committees organized along river basin lines have been established. They do not, however, meet regularly. Rather, they meet when the WQM agency feels

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[1] Basically, consultants were invited to submit a statement of qualifications. The agency then did a written analysis of each consultant according to their own guidelines. Three consultants for each contract to be let were then asked to submit a proposal. The Agency Council made the final decision within each set of three.

there is something to be reported or, when an approval is needed. Between meetings, members receive a newsletter which reports happenings and activities.

The Project Director described three changes in the area that he felt were WQM project accomplishments. For the first time in the history of southwest Florida, governments are working together on a regionwide basis to try and solve their water quality problems. The second achievement is that WQM has shown several local area governments, especially counties, where they can get money for facilities projects. The third accomplishment cited was a belief that WQM agencies helped bring about a restructuring of the State bureaucracy responsible for coordinating WQM plans. The Project Manager was hopeful that the new structure would be more responsive to the needs of the designated areas.

III. EXPECTATIONS

A. Water Quality

There were a variety of opinions about whether the area would meet the 1983 goals of fishable, swimmable waters, and how, if at all, the WQM plan would help achieve improved water quality. The Executive Director of the RPC said it was a question of funds; adding that if they continued to receive 201 monies, if a solid waste program could be started, and if the work of the WQM continued that yes, water quality would improve.

Most interviewees discussed meeting the goals vis-a-vis point source problems. The appointed official said he was optimistic that point source problems could be solved by 1983. One citizen felt the area barely met the standards now. He was outraged as to EPA effluent limitations, calling them "secret", "outrageous", and "counterproductive to meeting the goals". The Project Director said that the area's major point source problem is sewage which should be improved by the WQM study. He said the area, for the most part, meets the goals except in worst case conditions.

B. Plan Approval and Implementation

Almost everyone interviewed gave high marks (9 or 10 of 10) to the likelihood of plan approval and plan implementation. The WQM Project Director explained that this is because they designed the work plan by working backwards from the goals they considered attainable. Some of the other comments given were:

- State Liaison said it is his job to make sure that the plan is approvable;
- One city engineer gave a "9 or 1" for implementation depending on whether money is available. He added that in Lee County, one Commissioner is against all Federally-funded projects;
- The Ft. Meyers Director of Community Development said the city surely would approve and implement the plan so long as they don't have to give up control of their treatment facilities;
- One citizen said the plan had zero change of either approval or implementation. He thought beginning 201 type work was a mistake;
- One local elected official said he gave high ratings (9.5 on both) because he believes this area is very planning-minded. The other local official agreed, but added that implementation would depend on funding;

- The RPC Executive Director was less sure about implementation (he said 7) because he is unsure what the agency's future personnel picture will be and, therefore, is unsure about their ability to oversee implementation.

No one seemed to know what the cost of implementation would be, or where the funds would come from. The Project Director explained that determining cost of implementation was one of the sub-tasks at the end of planning. He believed that quality of the product is the key to getting money for implementation -- "if people like it, we'll get money." Most everyone agreed that there were no local funds for implementation. Only the City Director of Community Development was not considering asking for more Federal money. He commented, "There's still plenty we can do at the county and city level even if there is no Federal money."

The county official responsible for 201 planning sees the area working toward a regional management system. This is somewhat contrary to the opinions of some city officials who feel the city will never give up control of its facilities. One County Commissioner concurred with the city view. His view was that the best management level is the county. He thought that the RPC thinks in terms of regions, but that, "It would be foolish to recommend anything that can't be implemented", which is what regional management would be.

One of the County Commissioners commented on the climate for making changes. He felt that Florida is moving away from their former position of a restrictive planning philosophy to one that allows laws to take effect before passing more. "After all," he continued, "the environmental appetite is insatiable." The second County Commissioner felt that the Florida Water Management Districts[1] were the most logical implementation authorities. They already have both enforcement powers and taxing authority.

C. Continuing Planning Process

There were very few specific comments made about continuing planning. The RPC Executive Director called WQM "planning in action". He forsees an overall program to control wastes with WQM policing 208 and 201, and expects it probably will be funded through Federal grants. One of the County Commissioners said he, "hopes the plan is valid for a number of years", and that all they will need to do is continue testing. The other County Commissioner felt that planning will continue, although some people always think planning is a waste. One citizen and the State Liaison both said that continuing planning should be used to update the plan, and that this definitely should be done at the local

[1] Some people thought the Water Management Districts were the most appropriate agency to perform WQM planning. They are governed, however, by an appointed board and, therefore, are ineligible by EPA's designation criteria.

level. Finally, the Project Director sees continued planning as a monitoring process. He says there is no local source for this money and believes that, "the Feds will be sued," if they don't provide additional planning money.

D. Relation to Other Water Quality Programs

One of the most important objectives of this WQM project is to try and get as many eligible governments as possible into the 201 program. In speaking with counties and cities, the WQM agency found that these areas do not understand the 201 program, particularly the requirements for a user charge and an industrial cost recovery program, and, therefore, there have been difficulties getting projects adopted locally. The agency intends to hold a seminar in the fall to explain the requirements of the 201 grant program. The agency also has offered to do Step 1 planning for three of the areas.

Besides trying to get communities involved in 201, the agency intends to play a large role in the facilities program. For example, they will prioritize facilities needed in the area and pass these recommendations on to the State. The agency also will review 201 plans (although not the technical parts).

The appointed official interviewed expects WQM will be involved in future changes. One citizen was pessimistic about the future facilities picture. He felt the 201's underway were probably a waste because construction money would not be available. He thought priorities were, "determined by the local newspaper, and they're anti-regional."

The Project Director thought that the greatest WQM impact on the permit program would come from the five critical area studies. Because they will be calculating wasteloads, the WQM will be in a position to recommend changes in allocations which would change permits. For this State, EPA controls the permit process. One of the citizens was outraged because EPA had recently published effluent limitations that were less strict than those already in effect. He added, "WQM can't save that."

E. Local Definition of Success

Interviewees produced a series of definitions for success, mostly centered around a better understanding of what the problems are and possibilities for solving these problems. Specific answers included:

- Clean up the nonpoint source problems that are practical (e.g. agriculture) (citizen);
- Achieving the water quality goals of PL 92.500 (citizen);

- A comprehensive evaluation of potential problems so that preventive, not corrective, actions may be taken (County Commissioner);

- A political process for solving water quality problems (State Liaison);

- Answer questions about the river condition (Appointed Official);

- Maintain some waters and improve others. Set up an institutional process to keep good water quality (WQM Project Director);

- A reasonably approved waste disposal plan that is implemented and eventual solution to existing point source problems (RPC Executive Director).

Responses to a question about expected benefits from WQM planning were very similar to these difinitions of success: "developing baseline data"; "knowing if there is a septic tank problem"; "for once we'll be able to comprehend our problems"; "we'll have an awareness of where the problems lie and what controls might be available"; "basic research for future years." Since these answers were repeated twice at different points in the interview, and in response to slightly different questions, two things might be inferred: either people in this area define success in terms of what they expect will happen; or, people are expecting to know more about their water quality problems as a result of WQM planning, and this is what they feel is a success.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

The WQM staff is well-integrated into the full RPC. For example, several of the WQM staff did work on a recent "DRI" and DRI staff works on parts of the WQM study. In this way, WQM becomes part of a larger framework of analyzing regional impacts of proposed development projects. This ability to be flexible with staff is seen as a strength for the WQM project.

The DRI and WQM programs together are building the reputation of this new agency. So far, everyone seemed to agree that they are establishing a positive impression about what can be accomplished through the RPC. The assessments of the WQM staff by citizens, appointed officials and local elected officials were consistently favorable.

The RPC Executive Director and WQM staff alike are enthusiastic about the future role for the WQM project. They have purposely selected a strategy that they believe will gain them the support of local officials (by bringing in money for 201 projects) and that will be implementable (by selecting only those water quality problems that they know in advance will be implementable). The desire is to create a waste management control system, and they are already planning to expand WQM into solid waste management planning. Any expansion of the program will come because Federal funds are available. There are no plans to seek local sources of funds.

B. Citizens

Only one citizen was interviewed.[1] This citizen is retired and spends much of his time studying water issues and serving on committees. He is on his Neighborhood Association, a 201 Citizen Advisory Committee and one of the WQM advisory committees. He had hoped WQM would be more of an action program and wrote to the Commissioners recommending a ground water study. He was not successful.

This citizen feels WQM is following the act, but feels it won't make much difference. First, because the 201 program will have many problems. He did not think that any one of the 201s in this area were regional in concept, so he doubts that they will ever be funded. Second, he feels that EPA effluent limitations relax the previous standards, particularly for the phosphate industry. In effect, the area (in his opinion) has failed in the two areas where they could have exercised the most control; namely municipal and industrial point sources.

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[1] The agency scheduled interviews with three advisory committee members. Two, however, were public employees and, therefore, are discussed under Section IVD, Appointed Officials.

C. Local Elected Officials

Both local elected officials interviewed are County Commissioners (different counties) and members of the RPC Board (one is Chairman). In general, they were much more knowledgeable about and interested in their respective 201 studies.

The first Commissioner feels water quality has a high ranking among community goals, and that water supply is a major determinant of growth. He had hoped the WQM study would consider the effect of phosphate on the area's water quality, but it will not.[1] Other than that, he feels his input has been well received. The Commissioner felt strongly that all data gathered by the WQM study should be widely disseminated and he would like to see more frequent and timely reports from the WQM study about their progress. The Commissioner favors having the existing Water Management Districts becoming the implementing agencies. He believes funding should come from Federal grants programs.

The second County Commissioner said his biggest goal is to "keep Charlotte Harbor clean", and he would like to see 22,000 acres of the mangrove area put into a State Wildlife Preserve. Although his county has fairly high water quality, recent tests show they are on the verge of problems. He hoped the WQM will result in a comprehensive evaluation of those potential problems so that preventive actions can be taken.

The Commissioner felt it was too early to predict how the planning process would fare in the political setting, but added that he thought they had a good project and a good staff. Although the Commissioner understood that WQM is a regional concept, in reality he felt that they have separate studies and that the best strategy is to recommend the County for management purposes. He added that if the existing institutional structure is maintained, implementation would not be difficult.

D. Appointed Officials

Three appointed officials were interviewed: the Director of Community Planning for the City of Ft. Meyers, the Engineer for the City of Sanibel, and the Director of Environmental Protection for Lee County. The WQM agency has chosen to concentrate its efforts on "agency-type" people in the belief that they will be responsible for actual implementation of the eventual plan. Each of these persons, therefore, was familiar with the project through their committee membership.

The City Director of Community Development felt that the WQM study is important because they will, for the first time, be looking at their water problems, particularly those caused by nonpoint source problems such as agriculture and

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[1] This was decided against because CEQ has funded a major study on phosphate in this area.

dredging operations. The Director believed that local officials do not understand WQM and are particularly unaware of the cost. He thought some local officials were afraid that WQM will take away their authority. In this political context, he thought it was possible that the WQM study would be "just a plan". In particular, he felt there was a lot of concern that regional government is "unrepresentative", an image the RPC would have to fight if it is to succeed. At the time of the interview, the Director reported the committee he served on was "in limbo".

The City Engineer (another city) also found interest dragging in the committee. He thought some members see the committee as just, "one big rubber stamp". Because the members are all very busy, and they see no immediate benefit from the WQM project, attendance has been declining.

The Engineer does not find WQM particularly useful for his area. First, his city is not in one of the critical areas. Second, their 201 work was fairly well progressed, which has a goal of eliminating all septic tanks. The Engineer felt his city's citizens and local officials are environmentally attuned and would be supportive of the WQM plan.

The third appointed official interviewed is Director of Environmental Protection for Lee County. They had recently completed a Step I study and had completed two Step II applications. The Department is particularly interested in the Caloosahatchee study because the County is dependent on the river for its water supply. The Director finds the County Commissioners are supportive of the water programs, although at times they can be unpredictable. He thought they understand 201 is domestic waste, and WQM is "everything else".

E. State Legislators

No State legislators were interviewed.

F. State Water Quality Personnel

The Chief of the Bureau of Water Quality Management for the Florida Department of Environmental Regulation, and the WQM Agency Coordinator (hereinafter, State Liaison) were both interviewed. The Bureau Chief's comments related mostly to the State program and to their relation with EPA. The Liaison's comments were specifically directed at the work program.

The Bureau Chief was critical of the WQM program because it meant EPA was "circumventing" the State authority. At the same time, the State was being asked to review WQM projects and was not given any money for the necessary staffing. He did not feel the EPA Headquarters was supportive of the State's position. The Bureau Chief explained that, because of its regulation responsibilities, the State has the prime responsibility for making projections,

allocations, classifications, etc., although he said the WQM agencies will be asked to comment on all of these.

According to the State Liaison, the Department has a "strong" attitude about WQM -- they want input and control to make sure plans can be implemented. It was known in advance that there was not enough money to complete outputs in all 16 recommended areas, so the designated agencies were allowed to set their own priorities. The State of Florida finds that this increases the difficulty in controlling the projects.[1] The Liaison added that some of the difficulty comes directly from EPA -- Is WQM to be nonpoint or point source management? He feels that sometimes they emphasize drinking water, sometimes phosphate pollution, now residuals. What, he wondered, will be next?

The State Liaison had a number of concerns about the Southwest Florida revised work plan. Specifically, he felt there should be better documentation of what they intend to do. He felt they may be trying to do too much and wanted to make sure there was no duplication between this and other State programs. The Liaison felt that the biggest problem in all the designated areas is a lack of water quality experience. He felt that EPA used its money to train managers, and it was necessary for the State to do much of this training.

The State Liaison expected to see the Water Districts as major management authorities, possibly by giving them permit authority for nonpoint sources. He felt the State will probably oversee the management agencies. The Liaison also expected to see the State pass new laws and develop best management practices as a last resort if they were not done at the local level.

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[1] There are 12 designated areas in Florida.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

There are two parts to this project. The first is work-related to 201 projects in the area. The second is the detailed studies of the five critical areas. There is little reason to doubt that the 201 related work will be completed well before the two year period has ended. Facilities will be prioritized and recommendations sent to the State. "Implementation" will depend on whether funds are available and whether EPA funding criteria are met. Assisting the cities and counties with their facilities work will remain an on-going function.

Technical work (i.e. monitoring) in the five critical areas will most likely be completed on schedule. It is less certain whether regulatory controls will be developed. The work plan is not very specific as to what "regulatory controls" will include, and work is not scheduled to begin until September 1977. This schedule may leave too little time to realistically obtain financial support and legal powers or to solve institutional disagreements which are sure to arise.

There seemed to be conflicting views about regionalism. At least one county official and the Project Manager said they are working towards a regional management system. At least one other county official and a city official said regionalism was foolish. Previous efforts to pass annexation laws in order to achieve metropolitan government have not been successful.

There had been little thought about how implementation would be financed, beyond a determination that it would not be local. This raises obvious doubts about the sincerity to implement. There is even some doubt whether the RPC, on its own, could support a staff to oversee implementation of the plan. With this unclear funding picture, it is possible that implementation could be taken over by either the Florida Department of Environmental Control or by the Water Management Districts, each of which have both enforcement powers and funding sources.

B. Public Involvement

The public participation program has two positive features. First, it organizes committees according to river basin. Theoretically, everyone on a committee is interested in the same issues. Furthermore, none of the committee members have to travel very far in order to attend a meeting. The second positive feature of the program is that each county selects three members, a planner, an engineer and an environmentalist. Thus, the people who eventually will be responsible for implementation on a day-to-day basis are involved from the outset.

Committees have been in existence since September 1975. They do not, however, meet on a regular basis, but it is their responsibility to stay informed of the issues rather than to direct the project. Meetings are called only when the staff feels they have something to report. Thus, the first round of meetings was held in the fall to inform people about the project. The next set of meetings was held around March to select work programs and consultants. No meetings have been held in the meantime, although members are kept informed through newsletters. Unfortunately, many of the members are losing interest, believing they only serve as a rubber stamp.

Another unfortunate aspect is that the general citizens are never reached. There is no attempt at getting citizens on committees, distributing the newsletter, or even writing newspaper articles. The Project Director does not intend to do any of this, although he has reserved money in the budget for a full-time Public Participation Coordinator "in case things get hot in the last six months" of the project. County Commissioners are contacted because they are on the Regional Planning Council and because their staffs are on the committees, but other local elected officials are only contacted if they are involved in the 201 portion of the project.

C. Current Planning Process

The work program is more a consortium of water projects than a comprehensive areawide study. The five critical areas portion of the study, in particular, encourages committee members and staff to look at their problems by river basin, and not for the area as a whole. Although this strategy provided a certain kind of geographic coverage and permitted a reasonable formula for distributing the funds when it was known that there were not enough funds to examine all the area's water quality problems, the strategy also may make it difficult for participants to take an areawide approach in their management studies and when developing regulatory controls.

The first phase of planning was "problem selection". This process got a number of agencies and individuals involved in the project, and it helped narrow the field of study. However, there was a heavy weighting towards selecting problems whose solutions were expected to be "implementable". Again, this may assist the agency in gaining some legitimacy, but the more difficult problems will still have to be faced at some later date, and there is no strategy for that.

At the time of the interview, the five critical areas studied were in the early stages of water quality sampling. The sampling is being done to decide whether or not there is a water quality problem. Management planning will not begin until this determination is made. As stated earlier, this probably leaves too little time to adequately analyze legal, financial and political strategies for regulatory controls. The agency might do well to consider overlapping the two tasks, once preliminary data begins to indicate problem sources.

Finally, the 201 strategy attempts to get as many counties and cities as possible involved in the program and in receiving grant money. The incentive is the availability of large amounts of Federal funds, and the agency hopes to get the areas involved in the rest of the project as a corollary. There exists the possibility, however, that this strategy could backfire.

Both the State and EPA are involved in funding decisions. Many of the local agencies do not understand funding processes (which is why they have not been involved in the past), and they stand to be further alienated if their expectations are raised and then not realized.

D. Continuing Planning Process

There has not been much thought about the continuing planning process. As one citizen said, "The plan will need constant modification, but the committee is not talking about what to do next." Interviewees had vague notions that something would continue, but they did not know what continuing planning would cover, or how it would be financed. In fact, the RPC Executive Director commented at one point that the future personnel picture was very unclear.

Realistically, continuing planning is a very relevant topic. First, it is highly unlikely that funding commitments for 201 grants will all be made in the next year. (The question is, who will continue to guide local agencies through the process after the initial planning period is over?) Second, there needs to be a strategy to determine whether problems (and controls) examined in the five critical areas studied have relevancy to other parts of the area, and if so, how can they be transferred? Third, even within the critical areas, comprehensive studies are not being made. Some thought must be given to how other problems will be studied and eventually treated.

E. Significance of Local Elected Officials' Involvement

Local officials have not been particularly involved so far. County Commissioners are members of the Regional Planning Council. City and town elected officials are not involved except through their technical staff members who may sit on committees.

Local officials appear much more interested in their 201 projects than in the WQM study. The implication is that they see domestic waste, point sources as the major water quality problem. Further, local officials do not appear to favor regional management systems, either for point or nonpoint source problems. So far, they do not expect any change in the institutional structures or change in the status quo for regulatory powers.

AGENCY: SUSSEX COUNTY COUNCIL (SCC)

REGION: III - (Philadelphia)

GRANT AMOUNT: $633,089

GRANT RECEIPT: June 1975

STARTING DATE: February 1, 1976

STATUS AT TIME OF INTERVIEWS: Approved workplan. Two to four months behind on most tasks. Basically are at data gathering stage.

REASON FOR INCLUSION IN SAMPLE: This is a coastal area. Also designation was made to the County Council, which is a non-COG Agency.

I. BACKGROUND[1]

A. Area Description

The designated area is located in southeastern Delaware and includes the drainage basins of the Broadkill River, the Indian River, Rehobeth Bay and Little Assawoman Bay. This is a low-lying coastal area consisting of 120 miles along the Atlantic Ocean. The chief water quality problems are associated primarily with coastal development but are also attributable to agriculture, canning and poultry processing.

Major jurisdictions include Rehobeth Beach and Bethany Beach, Georgetown, and about seven smaller municipalities.

Permanent resident population of the entire area is under 40,000. The area in general is economically depressed and there is a large number of migrant farm workers.

During the summer, the population rises to 70,000 and climbs even higher when day-users are counted, and on weekends when the area is inundated with Washingtonians escaping the city. The Coastal areas are popular for their good fishing and shellfishing. The bays have sandy beaches for excellent swimming, pleasure boating, and water skiing.

The coastal area and inland bays have experienced heavy development demands for mobile home parks built on artificial lagoons, high-rise condominiums and vacation homes. This pressure appears to be increasing and threatens to destroy those amenities that attract both tourist and resident. The area's most serious problem seems to be an inadequate method for dealing with the projected population increases.

B. Water Quality Problem

There have not been a lot of studies on water quality in this area, but coastal development and agriculture are believed to be the sources of existing surface and groundwater pollution. Segments with problems include the Broadkill Creek whose problems come from point sources (food processing and a municipal sewage treatment plant which needs upgrading); the Indian River which has high coliform counts from point sources and high phosphorous and nitrate concentrations; and the Buntings and Cypress Branches which also have high coliform counts. Supporting data for these problems have been collected and analyzed allowing development of a comprehensive program to adequately deal with projected future problems. The area is dependent on groundwater for water supply and most of the area is dependent on on-site sewage disposal which increases the urgency for developing a water quality management plan as soon as possible.

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[1] Information for this Chapter was taken from the SCC Designation Package, 1975; SCC Work Plan, 1975; and interviews.

The area contains five storm and sanitary sewer collection systems and treatment plants (Milton, Georgetown, Millsboro, Selbyville, and Rehobeth Beach). All except Milton are at secondary treatment or are presently being upgraded. A sixth, in Lewes, consists of a combined sewer system and a primary treatment plant. The South Coastal Regional Tertiary Treatment Plant is completed, but not yet open due to a controversy over where effluent should go. Three other plants for the area are in design stages.

In the past 35 years, dramatic man-made changes have been made to the bay areas. Miles of lagoons have been dredged and hundreds of acres of marsh have been filled. Wooded areas have been denuded for mobile home parks and marsh bottoms dredged for marinas. The resulting effects on bottom mud and sands have altered estuary ecology and the population of finfish and shellfish. On the sandy areas of the coast, barrier beaches and dunes have been damaged and sometimes destroyed by cottages, marinas, campgrounds and park uses. As a result, storm tides continually wash across and erode the land, further aggrevating problems.

Known nonpoint sources include septic tank seepage, landfill leachate, construction and agriculture sedimentation, and some saltwater intrusion of coastal aquifers, although little is known about the extent of these causes. Natural background levels of pollution from wildlife are considered high in several parts of the area. A 303(e) plan has been developed by the State Department of Natural Resources and Environmental Control.

The Project Director listed the area's problems in the following order of priority:

- Rehobeth Bay is polluted by Lewes and Rehobeth municipal sewage plants, by a man-made canal, by mobile home parks built on creeks, and by the fact that it is a trapped lagoon with very little flushing action;
- Little Assawoman Bay is polluted by mobile home development;
- Indian River has infiltration from septic tanks; and
- Broadkill River has pollution from cattle runoff.

Others interviewed did not have a clear view of areawide water quality problems and generally described isolated problems near their home.

C. Designated Agency

The Sussex County Council was formed in 1970 by the General Assembly of Delaware. It was given far-reaching powers including all powers not specifically

denied to it by State statutes. In addition, the county was specifically granted authority for sewer and water system construction and operation, comprehensive planning and zoning, and solid waste disposal planning and management. The County Council consists of five elected offiicals, and its day to day operations are seen by a County Administrator.

The WQM grant award was made through the County Engineer's Office. This office has performed extensive WQM facility planning in the past. After receipt of the grant, a WQM Program Director and staff were hired who are responsible to the County Adminstrator and the County Council. Staff consists of a Director who is a professional engineer, and Environmental Planner, a Public Participation Coordinator who is a former Mayor, and a Graphic Technician. They are about to hire a fifth professional. This additional person, who will be paid by shifting some consultant time, will be used in an assistance manner to free up time so that the Environmental Planner can spend more time on an impact assessment of offshore oil development.

Consultants are conducting nearly half the work program. The University of Delaware, College of Marine Studies, is doing modeling and waste loadings of nonpoint sources. The University of Delaware, Department of Urban Affairs is doing population, economic, employment and land use projections. An engineering consultant has been hired to do a study of industrial problems, and another consultant has been hired to conduct a survey of alternatives to effluent disposal. An RFP for a consultant to do management planning was about to be published.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

This area does not have a working set of regional goals. A county comprehensive plan was written by the State and a South Coastal Zone Land Use Plan was recently approved by the County Council, but these are considered limited tools. When asked, none of those interviewed (including the two elected officials) could cite any regional or community goals. Goals described seem to be those of particular individuals, and very often this meant development. A previous moratorium on high rise apartments, for example, was recently lifted. One citizen feared that WQM would be used destructively as a tool to stop growth. The growth has brought some conflict between goals of newcomers and those of the old time residents. In general, the coastal area is recreation oriented, and there is a mix of views over whether single family homes, high rise dwellings or parks are preferred land uses. Inland, concerns shift from recreation to industry but, in both coastal and inland areas, environmental quality is a much lower priority goal than economics.[1]

The Project Director noted that helping existing industry and stimulating new industry are primary local goals. Because the WQM project wishes to mesh its program with local objectives, focus is being placed on identifying (and correcting) problems industries are having in meeting water quality standards and developing "affordable alternatives for industrial pollution."

The work plan describes local goals as efficiency, cost-effectiveness, equity, local determination of priorities, and compatability with other programs. With the exception of local determination of priorities, however, few of these goals were explicitly or implicitly discussed by any of the interviewers. Efficiency was designed into the program in the form of program coordination to avoid duplication of efforts. The WQM is coordinating with the Sussex County Planning and Zoning Office on land use planning, and with the State CZM program in developing population projections (through a joint contract with the University of Delaware). One elected official felt that WQM (which he did not distinguish from PL 92-500 or from EPA) was extremely inequitable in its requirements for secondary treatment which his community could not afford. He implied that WQM objectives were not consistent with his own. The Project Manager tells one of his major obligations was to raise alternative nonstructural solutions ("cost-effectiveness") and has focused on encouraging discussions over alternatives to an ocean outlet and also on promoting consideration as land application.

First priority goals for the WQM program, as identified in the work plan, include 20-year municipal facility planning; permitting planning; assessment and control of nonpoint pollution including recreation and tourism, agriculture, septic tanks; and development of a management program. It should be noted that detailed identification of WQM program goals is Task 2311 of the

[1] The Delaware State Planning Office is currently developing a plan under the Coastal Zone Management Program (CZM).

workplan and identification of regional and local goals is Task 2312. These are scheduled for completion in Month 2.

B. Technical Component

Task 2.0 of the Work Plan describes all technical water quality planning and it is dependent, in part, on results of preliminary studies of what are the major problems. Task 2.0 is divided into "series" and includes three major sub-plans as final outputs: a point source plan; a nonpoint source plan; and a residual management plan.

The first series outputs of this task involve program sketch plans; reports of local and regional goals; reports of existing resource management programs; and coordinating mechanisms with local planning agencies, State agencies, the river basin plan, NPDES Permit system, and 201 planning. This work is considered preliminary and introductory for the staff.

The second series outputs are baseline inventories relating water resources and human activity. This work will be conducted by the county and individual cities. Areas of data collection include: cultural environment, natural environment, water uses, land use, and groundwater quality.

The third series involves water quality data collection. Outputs include a hydrodynamic model (of Indian River and Rehoboth Bay), water quality monitoring data (both point and nonpoint source), and industrial facilities report, a municipal waste water collection systems report, a private waste treatment systems report, and a residuals disposal report.

A fourth series outputs include estimations of nonpoint source waste loadings detailed by background level and loadings by land use categories, a report of point source waste loadings, identification of existing service areas, a report on land use/water quality relationships, delineation of future service areas, a residuals disposal alternatives report, a future residual production report and a segment analysis report.

The fifth series formulates alternative subplans for point, nonpoint residuals, and management elements. This series also involves an environmental assessment.

C. Management Planning

Task 3.0 of the work plan provides for establishment of a management program including facilities planning, regulatory programs, financial management and institutional arrangements conducted concurrently with Task 2 0 (the Water Quality Program). Outputs will include a management program goals and components report; existing management and local programs inventory; a report on management system deficiencies and necessary changes; and a set of management alternatives.

Management planning has not yet begun, but it will principally involve the Project Director, Environmental Planner and a consultant (yet unhired). It is expected that the consultant will be hired in August. The Project Director listed a series of areas where management plans are needed. These include: nonpoint source, new sewer districts, sewer collection and regional plants, industry, land disposal (probably irrigation), dune irrigation, and underground water table. The staff has identified three possible management agencies. Subject to future investigation, these are: as a wing of the engineer's office, as part of the planning and zoning office, or as a separate agency.

D. Public Involvement Program

The work plan calls for a public participation program that includes a committee structure, public awareness campaign, omsbudsman, public workshops and public hearings. So far, very little of this has been accomplished and getting people involved is considered by everyone as one of the program's biggest problems. Most people have not heard of WQM and those who have do not understand what it is. There is very little experience in this area with public participation in other programs and people do not like to go to meetings. The elected officials, who are usually unpaid, also do not understand WQM or why they have been asked to a meeting? There are very few organized interest groups in the area and none are involved in WQM.

The first committee formed was the Policy Advisory Board. It is made up of 18 elected officials but has suffered from poor attendance. The official number for a quorum had to be dropped in order to conduct business. Many of the officials send alternates. Some of the jurisdictions never attend. The most active have been the representatives from Lewes and from Bethany Beach. To further complicate problems, several elected officials were changed in the spring, making it necessary to educate the new members.

A staff member has been hired to spend his full time on public participation. He has made approximately eight presentations about the program to local groups. He is also starting a slide library for public presentations. There has been some interest on the part of the local newspapers, but the majority of the effort is on informal contacts.

Much advice has been offered to the Public Participation Coordinator, but none of it was considered helpful. He initially spoke to the staff at New Castle County WQM but did not find their methods transferrable. He attended the Synergy meeting, but found it too urban oriented. He felt neither the State nor EPA has been of much assistance.

E. State and Federal Involvement

EPA has a very bad name in this area. The agency is seen as arbitrary, ig-

norant of local conditions and insensitive to local financial problems. The WQM agency is trying to overcome some of this feeling by proving that they can help everyone, starting with industry. By developing a complete data base on water quality problems, the WQM agency hopes to be able to prove what should be done and what effect each change will have.

The Project Director feels they are getting low priority from EPA Region III. The Regional Office has attended two TAC meetings and has visited about four other times. The Project Director feels he is considered a nuisance and finds the Regional Office directors unwilling to meet on policy issues. He feels EPA has given the WQM agency a tremendous volume of literature and opportunities to attend the meetings, but he wants more guidance on policy matters. Again, he is speaking particularly of his wish to expand the work program to include a study of land application. Region III, so far, has been unsupportive of this change.

As with EPA Regional Office, the Project Director feels the State policy level has been unsupportive, particularly over the land application issue. In other relations, he has found the assigend coordinator cordial, helpful and active and feels that mechanics and procedures in general have been smooth. The State Coordinator attends most of the TAC and PAB meetings.

F. Scheduled Outputs

The first phase of the program involves data collection and analysis. Much of this is being conducted by consultants. Developing a good data base on existing problems is considered one of the chief outputs. The focus of the rest of the work plan will depend in large measure on what is found in this phase. The staff feels it is essential to get a grasp of the magnitude and gravity of the problems, including background levels.

A detail of sub-task outputs for both technical water quality and management planning is described in Chapters 2B and 2C above. Final outputs will include:

- A point source plan,
- A nonpoint source plan, and
- A residuals management plan to deal with municipal and industrial solid waste and with sludge disposal.

The likely final output will be a series of recommendations for institutional arrangements for nonpoint sources, septic tanks and industrial pollution.

The work schedule officially began on February 1, 1976. According to the work plan, data collection and analysis of growth is scheduled for completion

in month 4 (June). The third series, data collection and analysis of water quality, should be partially completed by month 8 (October) and fully completed by month 14 (April, 1977). The fourth series, growth accommodation planning, should be completed in month 8. The fifth series, water quality considerations, should be completed by month 14. The sixth series, plan formulation, should be completed by month 18 and the seventh series, plan review and approval, is scheduled for months 14-24. The management program is scheduled to begin in month 2 and be completed by month 11.

G. Achievements to Date

WQM's biggest achievement so far is that it has begun to change attitudes about what can be accomplished. The County Administrator, for example, said that originally he was opposed to WQM planning because he saw it as "a two-year job, with lots of consultant work and pretty little reports". The vote to accept the grant passed by only 3-2 because of a feeling that it was a waste of money in an area where sewer lines were already in the ground. Soon after getting started, however, the WQM staff was instrumental in convincing EPA not to go ahead with an unpopular Lecato ocean outfall. The Policy Board was pleased with the way WQM handled the situation and unanimously endorsed the staff to continue. The County Administrator now sees WQM as action-oriented and receiving growing support. He considers it an arm of the County government and has asked them to take on certain other projects. The WQM Project Director agreed that an increased public interest is the greatest achievement so far. He felt this was accomplished in spite of tremendous skepticism about the project and it would help contribute more good will towards EPA in general.

The staff feels they are out of phase by two months because they were bogged down in the letting of contracts. Most of the consulting work is being done in the first phase. Therefore, the population and land use data base and projections (being compiled by the University of Delaware) have not been completed and interim outputs have not be submitted. Also, most of the inventory tasks (cultural environment, natural environment, groundwater, water resources uses) and the water quality tasks (municipal treatment, industrial discharges, land uses, water resources) are behind schedule. This will probably mean less time spent to complete the task or less time on formulation of alternatives. In the area of nonpoint source work, not enough work has been done in order to establish the priority problems, although this is one of the main areas of concern for manangement planning. There is no specific mention of how anti-degradation will be handled.

The Project Director feels that one of the chief purposes of the WQM is to propose alternatives to structural solutions. Early in the project, he was successful in halting a proposed ocean outfall. He is now trying to change the workscope to include a study of land based alternatives. In particular, he would like to examine whether land application is feasible and whether

groundwater can take some of the pollution, lightening the burden on surface waters. This idea has met with considerable opposition, particularly at the state level, in part because the area depends so heavily on groundwater for its water supply.[1] The director is also trying to get approval and additional funding for studying dune irrigation.

A second possible PCP revision would require the addition of a new staff person (paid for by a shift in consultant time). The purpose for this shift is to free up some time to conduct an impact assessment of proposed offshore oil drilling. The state and county have recently changed their position on offshore drilling and have decided to actively court it. Consistent with his views of WQM as an action agency, the County Administrator has asked that they conduct the assessment.

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[1] The Director explained that land application is supposed to be studied under the law, but feels that, because it wasn't in the original workplan, no one wants to talk about it now.

III. EXPECTATIONS

A. Water Quality

Very few of those interviewed had any opinion on whether water quality problems would be solved. The staff felt solutions could be achieved, mostly because a management agency would be established. Most felt that background levels would make improvement imperceptible, and that the complexity of nonpoint source problems further complicated meaningful solution. The County Engineer felt there would be improvement, but that this was due to actions already underway. There was general agreement that water quality planning should be integrated with water supply.

Although waters would be improved, no one felt the area would meet the 1983 fishable, swimmable goal. In the Broadkill River area this is due to high background levels from wildlife. Where the goal will be met, this is considered due to programs previous to WQM, although WQM is considered to enhance those actions. For those areas which would be sewered, they expected to meet the goal, but not necessarily by 1983. The coastal shellfish and swimming problems were expected to be resolved by 1980. One citizen felt that the area may get worse before it gets better. Another hesitated to speculate on results until plans started coming in.

B. Plan Approval and Implementation

Again, most persons interviewed either did not know enough about the program to answer or were hesitant to answer without having seen the plan. Approval by the State was considered very likely (8) and by the local communities, to vary widely (4 or 5). Short sighted local interests, particularly by farmers, were blamed as the reason why plan approval would not be achieved. The Planning Policy Board, made up of affected municipalities and county council members, were considered most essential in achieving approval.

At this point in time, local elected officials do not understand WQM and, therefore, cannot be considered committed to it. Consequently, they are not facing the issue of implementation. It is unlikely that this issue will be faced this year because it is an election year for County offices. It is believed that the area is already implementing much of what is needed for municipal treatment plant control. But the hard issues of nonpoint source controls will not be faced until 1977. The staff is aware of the need for elected official involvment and has contracted with the county and municipalities for some of the data collection work. In general, however, they have not tried to involve elected officials except through the PAC. Implementation is generally seen as an area of local concern subject to the avialability of funds.

Implementation would depend on how well the PAC is sold on the plan and this likelihood was generally rated low (around 4). One local elected official said he would not go along with anything unless he knows the cost. The other said she would go along with anything recommended by the County Engineer. In general, the County Council is believed most essential to implementation. It is beleived that to implement, there must be increased education of industries and agriculture in order to overcome emotionalism.

The Project Director did not know what State laws or County ordinances would be needed to implement the plan. They are considering hiring the consultant who conducted legal work for New Castle County WQM and having him adapt it for Sussex County.

C. Continuing Planning Process

Most of those least involved in the program (citizens, local elected officials) thought that it might not continue after two years, especially if there is no follow-up money. No one expected the state would take it over. One citizen felt it could only be a Federal program because it was so big and because local and State governments are too easily subject to pressure from industry. The two local elected officials seemed to think it should go back to the County Engineer's office. The County Engineer thought the project would be smaller but remain in order to maintain and update the plan. The Project Director saw the agency's role as ensuring implementation of controls for nonpoint sources, septic tanks, industry and other identified problems.

The County Adminstrator saw the possiblity of the WQM staff becoming a County Planning Agency. Although there would be less money, he felt the staff had developed expertise at no cost to the county and he sees the county playing a more dominant planning role in the future. He felt growth and land use planning would be less helter-skelter, but that the area would still be subject to development pressures. He did not estimate what continuing planning would cost.

D. Relation to Other Water Quality Programs

Most people did not know the expected effect WQM would have on 201 and NPDES programs. One industrial engineer expected 1977 permits to be stricter (closer to zero discharge) but did not know what would be WQM's role in this. The Project Director saw the WQM role in 201 planning to be an advocate role for non-structural alternatives. The County Engineer, whose office writes 201 applications, expected WQM to provide population and other data where service areas are being delineated. He also thought it possible that they might review preliminary designs. The County Admin-

istrator identified an existing conflict between WQM and 201 based on personalities, but said it was being resolved.

The County Administrator and the Project Director both saw a role for WQM in the permit program. WQM is expected to provide the data needed to do permit revisions. One of the first efforts of WQM is to help industry resolve its permit problems. Towards this end, a consultant is doing an industry-by-industry contact survey to determine how WQM can help them. This effort will hopefully result in more widespread support for the WQM project.

E. Local Definition of Success

The Project Director said success for the WQM project would be if they can get a grasp on the magnitude and seriousness of their problems, so that when it is necessary to tell someone not to pollute that they can prove that action will actually clean up the waters. Furthermore, he believed success requires a plan for all problems and not a piecemeal approach. This regard for credibility seems necessary since representatives of government, industry and individual citizens all expressed concerns that they were the only ones being regulated and it wasn't making any difference. One local elected official said there could be no success because WQM is a waste of time and money. Success, therefore, might in part include overcoming such attitudes.

The County Engineer said there would be success if WQM provided sufficient data to adequately do 201 planning and if it established a better interagency review process. The County Administrator felt success would be if the county estabilished a planning department that faces all aspects of life and if pollution is controlled so it stays controlled for a number of years. Finally, one of the citizens said there would be a success if they provided a way for people to give their input.

Interviewees listed a number of expected benefits from the WQM program. Cleaner water was considered both a direct benefit and an indirect one. For example, it was expected that shellfish would return to most areas. The project director explained that clean water is essential to the economic health of the county because of its dependence on tourism. Other indirect benefits included better education on water quality, and free planning experience for the staff that could later be used by the County.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

According to the staff, the greatest constraints so far have been in getting consultant contracts approved. This has held up most of the work. They also feel they have had little success coordinating with municipalities on projections. The staff did not specifically feel they had been limited by either EPA or the state, with the exception of the complaint by the Project Director that neither were considering his request to study land application alternatives.

B. Citizens

Since no meetings of the CAC had been held before the citizen interviews, none of the citizens interviewed were particularly familiar with WQM program. They did, however, have varying degrees of knowledge about water quality in the area. Invitees to the first CAC meeting were heavily representative of industry and the question period centered around a concern that all problems would be attacked, that the goals would be set locally, and that they would be sure of not "over-extending". That is, doing things that they later might find were not necessary.

The first citizen interviewed was the plant engineer at Townsend, Incorporated, a poultry processing plant, who is responsible for making sure the plant complies with standards. His plant has two permits, one for temperature and one for waste water. He feels he knows nothing about the WQM so far, but did attend the organizational CAC meeting. He also feels that in addition to making sure industry complies, they should look at pollution coming from mobile home parks, particularly those near streams. He was concerned that small areas such as theirs could not afford the measures being required, and that WQM would only be a benefit if it provided Federal and State money for treatment. For the company, he doubted whether WQM would be of any benefit.

The second citizen interviewed is owner of a water supply company. He has been involved in a number of community efforts such as schools and highways and sees them as all interrelated. He attended the first CAC meeting and is a member of the Policy Advisory Board. He feels the PAB members all come from a "different scope of things" and they attend meetings to find out how WQM will affect them. This man's concern was that the State and EPA are getting outside of their expertise when they come into a local area. He felt it is essential to take a more local viewpoint, and he felt WQM should provide a vehicle for this local input. Alternatives to the ocean outfall were discussed at the last PAB meeting.

The third citizen interviewed became involved through his activity in a mobile home community. He is head of a local committee that took over

a mobile home park which had been abandoned by the developer. Sewer and water facilities had not been maintained, only two of nine aerator tanks worked, and a storage pond was leaking. He is now President of the Community Association. When a County referendum established a sanitary sewer district, he was appointed as a member of the Advisory Committee. He has been attending PAB meetings (ex officio) and feels that his input was received during the formative meetings. He is particularly concerned that people must be educated in ways to prevent pollution, and is concerned with the tremendous growth in the area which simultaneously brings more waste and more demand for water. He feels the WQM project was slow in getting started and the committees were not well instructed in the beginning. He feels they are now moving and are attempting to make up for lost time. Finally, this citizen's greatest concern was for implementation. He believed the local municipalities were too weak and too opposed to anything that will cost money. He feels that strong federal regulations are necessary to attain clean water.

C. Local Elected Officials

The local elected officials interviewed knew very little about WQM. They had attended PAB meetings, but were most concerned about their local interests. They were not at all committed to implementing WQM, particularly if it would cost money which they felt they did not have.

The first official interviewed is a Councilwoman in a small resort town. She has gone to PAB meetings, read the materials, and feels it is a good idea to have the information. She is particularly concerned with how the ocean will be affected. In general, however, she feels WQM is a waste of time and money. She feels that the County Engineer had already developed plans for the area and that "they should just leave it to him". Bringing in a consultant from California was considered a particular waste. She hoped the program would go away in two years and go back to the County Engineer.

The second official interviewed was a Mayor of a small town that had been told it must upgrade its treatment plant to the secondary level. He had the town Treasurer with him, and they both felt that this requirement was totally inequitable - that areas with no plant were not being forced to build one, so in effect, they were being punished for having done something a few years ago. The Mayor has attended the WQM PAB meetings, but seems only concerned with what his town has to do and what it will cost. He does not feel anyone, including the WQM planners, are answering his questions. This official said his town is constantly being told what to do, and then told to pay for it themselves, then told a few years later to do more. His town already has a sewer user charge and a front footage charge. Bonds on the primary system are not due until 1990 - "Where," he asks, "can he get more money?" He needs to know a per person cost for any actions. Furthermore, he does not feel they are polluting the creeks anymore than anybody else. Industry is

constantly dumping in, and some towns are totally unsewered. Farmers and cattle owners are polluting, but he does not see WQM going after them. He also feels that his town is in limbo regarding whether or not they can (or should) hook into one of the treatment plants.

D. Appointed Officials

The official interviewed was the County Engineer. His office directed the initial WQM application and he now attends both TAC and PAC meetings. His office is also responsibile for 201 application writing and operation of sewer treatment plants. The County Engineer feels WQM is important to his work and wishes it had been done several years ago. For example, in planning the Lecato plant, they needed long range growth projections, but the data were not avialable. In the future, he hopes this data will be collected in an on-going way so that it does not have to be done on a project-by-project basis. He sees WQM's problem in getting the attention of local elected officials as due to several things:

- WQM is not a tangible thing that produces something now,
- Local areas are protective of their sovereignty, and
- Water quality is not a high priority in this area.

The County Engineer's office has fairly wide authority and it is likely that they will have some management responsibilities for implementing the plan. He expects WQM to provide 201 planning guidance and to serve as a review agency for preliminary design and that the plan will need constant updates and revisions.

There is currently a difference of opinion between the County Engineer and the Project Director over suitability of land application. The County Engineer feels it is not needed to recharge the groundwater nor, in most years, is it needed for irrigation.

E. State Legislators

No State legislators were avialable for interview at the time of the site-visit.

F. State Water Quality Personnel

No State water quality personnel were available for interview at the time of the site-visit

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

This agency has taken on a very ambitious work program and is fairly dependent on consultants in all tasks. The population and economic data collection tasks were scheduled to be completed in time, but were late in getting started. An August completion date has been predicted for this data. Several other tasks build on this data, which automatically puts them behind also. This time can be made up during alternative formulation, assuming that the tasks fall no farther behind. Management planning, which is not dependent on data collection tasks, is also behind by about two months and the contract is just being let.

The WQM agency is concentrating some of its early efforts in two areas. First, they are conducting a survey of industry permitting problems. If this is completed, and the WQM is able to be of some assistance, they will gain invaluable support for the WQM program. Because the inland area is particularly concerned about its economy, and EPA regulations are seen as an irrational threat to industry with very little clean-up value, it is necessary that WQM serve a difficult balancing function. The second early effort has been to argue for non-structural effluent disposal alternatives. This problem is of particular concern to the coastal areas, heavily dependent on recreation and tourism, where a proposed ocean outfall was to be located. Again, this approach has won respect and support for the WQM by local governments. The land application alternative, however, has some powerful opponents including the EPA Regional office, the State and the County Engineer. WQM must be careful not to be too closely identified with any one alternative, or they risk losing much of their support.

Despite the growing support for the program, very few citizens and local elected officials have ever heard of WQM. Of those who have, it is generally not understood or thought of as a sewer program. This will be an obstacle to plan approval and implementation, particularly if implementation is to take place at the local level. The County seems to be the most involved level of government. The County Administrator is supportive of WQM and sees it possibly turning into a County Planning Agency. The County Engineer has been fully involved in WQM since its inception. This closeness of the WQM to an operational level is a hopeful sign for implementation at the County level. A considerable amount of person-to-person contact and involvement would be necessary to achieve any implementation at the local level.

B. Public Involvement

The public participation program should be stepped up and broadened. This is very difficult because public participation is new to this area, and

there are no identified citizen leaders on which to build. In general, citizens do not understand WQM, water quality issues, planning or their role in decision-making.

It is clear that WQM is either not known or not understood at all levels. At the general public level, leaflets or brochures describing the WQM project should be distributed and more public presentations should be made. Also, the staff might spend some time with local newspapers making sure that reporters understand the meaning and usefulness of the program.

The first meeting of the CAC was held during the period of the interviews. Of nearly twenty people invited, only five or six attended the meeting. The program was explained and a Chairman was elected. The tone of questioning was skeptical and most people seemed to be attending to find out if WQM would be worthwhile. It will be necessary to hold additional meetings soon and to make sure there is a meaningful role for the committee or else the marginal attention they have now will be lost. The same may hold true to a lesser extent in the PAB. In order to increase involvement, it probably will be necessary to seek out key individuals more aggressively, to individually brief them on the program, and to personally solicit their participation. It probably will be necessary for the entire staff to do this kind of one-on-one contact.

At the interest group level, the staff has done a good job of identifying the affected industries. The staff should also identify other groups (such as conservation and farmers), and invite them to select representatives to serve on committees. In addition, the WQM Agency must decide if it wants committees to serve any function besides review. So far, the PAB has suffered from poor attendance. This might be because they either do not understand their role or because there is no meaningful role for them. Committee members should be notified by telephone and mail to explain agendas prior to the meetings.

C. Current Planning Process

The agency is at the data gathering stage in the planning process. Except for having written a workplan (which was done by a consultant), the agency has not developed a set of goals and objectives.

In one area of study, they are at the point of alternative formulation. This is about the alternatives to the Lecato ocean outfall. The alternatives, which were developed by a firm from California, were presented at the last PAB meeting. There has been considerable reaction to these alternatives, ranging from total opposition because they were done by an outside firm who "couldn't possibly understand conditions in Delaware", to advocacy support for particular alternatives. All other areas of study are at the stage of

data gathering and should be into problem analysis by the end of August.

D. Continuing Planning Process

If WQM Planning continues it probably will be because the county has created a planning agency. This is possible if, when WQM is completed, it is considered comprehensive, accurate, equitable and not very costly. Local governments are so overburdened, unconvinced that WQM is needed or workable, and unconcerned about their water quality that there is practically no chance of their agreeing to pay for continued planning. A tremendous public relations promotion will be needed to keep WQM.

E. Significance of Local Elected Officials' Involvement

Local elected officials interviewed did not understand WQM's function, or why it was needed. The County Council members know little more than its expense, and that it involves consultants. There is little or no commitment to either implementation or continuing planning.

In order to make any change in this condition, the efforts of all members of the staff will be needed. So far, efforts to get involvement have suffered because of turnover in officials. Whereas this is unavoidable, the staff still must carefully guide the elected officials toward understanding their role in implementation. It will also be necessary to elicit the support of people such as the County Engineer and the County Administrator.

AGENCY: TETON COUNTY 208 PLANNING AGENCY (TCPA)

REGION: VIII - (Denver)

GRANT AMOUNT: $370,000

GRANT RECEIPT: July 1, 1975

STARTING DATE: July 1, 1975

STATUS AT TIME OF INTERVIEWS: Work plan is approved. Water quality inventories and constraints analysis are complete. Water quality monitoring will continue throughout the study period.

REASON FOR INCLUSION IN SAMPLE: This is a new agency, specially created to conduct WQM planning. The agency is in an area with presently high water quality conditions, but is subject to substantial tourism-related development presure. Finally, over 75% of the area is under Federal management.

I. BACKGROUND[1]

A. Area Description

Teton County, Wyoming is located in the heart of an area of senic grandeur and high environmental value. Most of the County is located in the Grand Teton National Park, a mountain range known world-wide for its dramatic beauty. Two National Forests (Bridger-Teton and Targhee), the National Fish Hatchery and the National Elk Refuge are located in the area. Yellowstone National Park is located directly north of the area.

Most of the land in Teton County is publicly owned. Only 75,000 acres, or 3 percent is privately owned. Eighty-six percent of the private land is held by 139 large land owners having 100 acres or more. Of the publicly owned lands, 77 percent is U.S. Forest Service land, 16.5 percent is controlled by the National Park Service, and the remainder comes under the jurisdiction of the Bureau of Land Management, the Bureau of Reclamation, the Fish and Wildlife Service and the State of Wyoming.

Grand Teton National Park and the National Forests receive nearly 4 million visitors each year. In the winter, visitors are attracted to the three ski areas of Teton Village, Grand Targhee and Snow King Mountain. Much of the area's problems, both water-related and other, are derived from this tremendous volume of visitors to the area.

The National Park Service recently has prepared a Master Plan for Grand Teton which would limit the number of public concessionaires and camping units, which would probably increase the demand on privately owned facilities. The Park Service also is considering expansion of the park through purchases of additional lands and possible acquisition of "scenic casements" and "development rights."

The 1975 population of the area was 7,300. Approximately sixty percent of the area residents live in the town of Jackson, which is the only incorporated municipality in Teton County. Growth (basically in Jackson County) has occurred at an annual rate of 4.7 percent. By 1990, the County is expected to grow to approximately 12,900 full time residents.

Currently, over half of the county's 4,300 jobs are tourism-related and many are seasonal in nature. Most of the remaining employment relates

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1 Information in this section comes from the TCPA grant application; memos in WQM files; Teton County Growth and Development Alternatives and Summary Citizen Report and Questionnaires, 1976; and from interviews.

to farming and/or cattle ranching. It would be difficult to alter the area's economy significantly by introducing new industries (for example, lumber, livestock processing, or oil and gas production), without causing severe conflicts such as air and water pollution that would affect the tourism-related economy adversely.

In relation to the WQM study and a related Comprehensive Plan effort, the County conducted a survey on attitudes toward growth and development. Results of the survey indicate an overwhelming sentiment in favor of limiting development of private lands when there are natural hazards; when the land is unsuitable for septic tanks; or when the terrain or scenic values are being protected. Large land owners (100 acres or more) who might be expected to have the greatest influence on County development agreed with these sentiments to a lesser degree. Long-term residents of the area generally followed the majority views but residents of one unincorporated area, Wilson, strongly favored limitations on development. In response to water quality-related problems, 24 percent were not aware of any problems. Others were evently divided as to their awareness of particular problems. Eighty-one percent of the respondents said they would "support enactment and enforcement of water quality regulations even if they affected their business, ranching operation, or their life style"; only 7 percent said they would not support such regulation.

Public involvement

B. Water Quality Problem

The main thrust of this WQM planning effort is toward anti-degradation and identification of potential problems. The County includes nearly 70 square miles of surface water, all of which have been given the highest quality classification.

The major water body is the Snake River and its tributaries; Pacific Creek, Buffalo Fork and Cache Creek. The USGS operates seven major guaging stations and 90 stream monitoring stations. In addition, the U.S. Forest Service, State Game and Fish Department and State Department of Environmental Quality operate 17 others.

? lack of data

There are three known present or potential water quality problems in the area. The first relates to the unregulated diversion of Gros Ventre River for irrigation which has caused some downstream segments to go completely dry. Late summer water releases from Jackson Lake diminish the scenic and recreational value of the lake and affect important trout spawning areas. The second water quality problem is caused by effluent discharge from the Jackson sewage treatment plant which has resulted in high TDS, BOD, fecal coliform, phosphate and nitrate levels in Flat Creek. The source of the problem is due probably to extensive infiltration. Teton Village and Aspen treatment systems have periodic malfunctions due to abrupt changes in waste loads. The third water quality problem is well pollution. Although only a few cases are known, they are important because of the area's reliance on wells for its water supply.

don't Know

In addition, there are potential problems from increased urbanization, road runoff and road construction, as well as from larger amounts of effluent discharges. Further, there has been some concern about possible run-off from the Elk Refuge. (This is being studied by the WQM agency, but so far it does not appear to be a problem).

C. Designated Agency

The TCPA was created specifically to conduct the WQM study. Although the County has given the WQM agency office space and equipment, the WQM agency is not a part of the County government. The agency was created in 1974 when a University of Wyoming survey of community attitudes toward land use, planning, and regulation showed that people felt such a plan was needed. At about the same time, the State passed its Land Use Planning law which required a comprehensive plan in each county. A California consultant subsequently met with representatives of the County Forest Service, National Park Service and U.S. Fish and Wildlife Service, and prepared an application for designation. At the same time, the consultant began work on the County Comprehensive Plan and Implementation project.

The Comprehensive Plan project started in spring 1975, and is being continued at a cost of $262,500; of this, $60,000 comes from a grant from the Nature Conservancy and $99,500 from EPA WQM funds. The first phase of work, which included compiling environmental studies, was completed in December, 1975. The second phase, completed in May, 1976, included a summary and a full technical report on growth and Development alternatives. In conjunction with this phase, a survey was made of all County households and non-resident property owners. The questionnaire was accompanied by a lengthy and detailed analysis but, due to the complexity of the issues and the confusing format of the questionnaire, a less than desirable response rate was achieved. A second survey will be conducted covering the Comprehensive Plan and alternative means of implementation.

The County has enacted Interim Development Regulations which require permits for all new development during the period that the Comprehensive Plan is being prepared. These regulations mandate positive findings on 25 factors such as environmental and visual impacts, water supply, and waste disposal. The County and Town of Jackson recently hired an Administrator of Planning Services who will prepare reports of his findings.

There are several other relevant planning studies going on in this area. These include: a scenic rivers study; and airport study; a transportation study; a HUD floodplain mapping study; and an EIS for a sewage treatment plant. Although these are being conducted by a range of Federal, State and county agencies, they demonstrate the depth of development pressures the area is currently experiencing and which will continue to dominate the County's future.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The objectives stated in the original applications were written by the consultants and representatives of the Forest Service and the National Park Service. Objectives included:

- Preservation of existing water quality and protection from possible degradation;
- Provision of land and water resources for area residents and tourists;
- Preservation of the County wildlife resources;
- Provisions for orderly economic growth and development of the County;
- Providing a means for achieving the Federal 1983 goals;
- Establishment of priorities for the solution of point and nonpoint pollution problems, with particular emphasis on non-structural measures; and
- Cooperation with the State in setting waste load allocations for the Snake River Basin.

B. Technical Component

Lacked data

Several special water quality monitoring programs have been initiated to improve the available data on nonpoint sources:

- Montana State University has agreed to monitor the effects of elk and cattle on the quality of Flat Creek. Sampling and tests will be conducted for a year, concentrating on the Spring runoff period.
- USGS will be studying the effects of recreation and concessionnaire activity in Grand Teton National Park on the Snake River.
- The Forest Service will test water over a two year period for lumbering sites, recreational areas, a dredge operation on Cottonwood Creek, some controlled burning areas, and a herbicide spray area.

- The Town Engineer and County Sanitarian will conduct an urban runoff study of Flat Creek near the downtown area.

- The WQM agency staff is monitoring water in areas closest to population concentrations.

C. Management Planning

Substantial management planning has not been previously conducted in the TCPA area due to a lack of preliminary technical planning. Technical plans were necessary in order to define work tasks and increase general public awareness. When the results of the second survey and corresponding public meetings are gathered, (sometime in September or October, 1976) TCPA will begin to formulate alternatives.

Recently, a joint county/town planning office was formed and it is possible that this office could serve to oversee implementation of the plan. Other possibilities are to increase the responsibilities of the County Engineer or alternatively/additionally, to maintain a technical person on the County payroll to specialize in managing water quality.

D. Public Involvement Program

Twelve organizations such as civic groups, professional clubs, the League of Women Voters, environmentalists and cattle and horse associations were asked to select a representative for the Citizen Advisory Committee. The Project Director sends written notices followed by phone calls to these representatives and invites them to attend the monthly meetings. Attendance has been improving noticeably, although it definitely drops when notices are not followed up with phone calls.

In addition to the CAC, the general public has been kept informed in several ways. The Project Director has been on radio and T.V. and several newspaper articles have appeared. Also, there have been a series of surveys and public meetings concerning the comprehensive plan, of which water quality is one element. There has been significant response to an input from these presentations.

The County Council, Planning Board and Town Council were most directly involved in the original application stages, most likely because they perceived WQM as a vehicle for getting more money for the comprehensive planning program. Most individuals had difficulty in understanding the significance of the issues, however, due to their complicated, technical nature. Also, because of the many other demands on the officials' time (most are unpaid and have businesses in town), the elected officials are not as involved as the staff would like.

An Agency Board which advises the project consists of two County Commissioners, two Town Councilmen, two County Planning Commissioners and a Citizens Representative. The Forest Service, National Park Service, and Fish and Wildlife Service are non-voting members. Although they have been involved in many issues, it was necessary to reduce the Agency Board quorum from seven to four.

E. State and Federal Involvement

Several Federal agencies (Forest Service, National Park Service, Soil Conservation Service, Bureau of Land Management, Bureau of Reclamation, Corps of Engineers) are members of the Technical Advisory Committee and, as noted above, also have work task responsibilities. This involvement is essential because so many of the problems originate on Federally-owned lands.

The Project Manager feels they have an excellent relationship with the EPA Regional Office. He feels EPA has been helpful in both administrative and technical matters, (The Regional office even loaned a person to give technical assistance for agriculture work).

The biggest involvement from the State comes from the WQM agency which hired a State employee for 21 months of the study period. He is coordinating State activites, performing certain monitoring and assisting in nearly all aspects of the project. This arrangement has been praised by both the Project Manager and the State agency.

F. Scheduled Outputs

The current work plan was not changed from the original plan prepared by the consultant and the Forest Service. A full-time Project Director and staff on loan from the State began in August of 1975. Although there is some feeling that the staff would have done things a "little differently," they agree that, by accepting the plan, they saved four to six months time. It also means, however, that most of the work will be done by the consultant and the Federal agencies while the staff plays merely a coordinating and oversight role. The State agency was worried that these would limit the in-house capability, and the program would disappear after two years.

The planning consultant received $94,500 of the $370,000 grant. In turn, they are responsible for tasks in four phases. (A detailed description that shows the combined work program for the comprehensive plan and WQM plan is shown in Exhibit 1)

- The first phase, July, 1975 to December, 1975 involved compilation and mapping of environmental data (water, soil survey, geologic, groundwater, etc.).

TETON COUNTY COMPREHENSIVE PLAN AND IMPLEMENTATION PROGRAM: WORK PROGRAM (Including Shared Section 208 Planning Studies)

1975 July August Sept. Oct. Nov. Dec. | 1976 January February March April May June July August Sept. Oct. | 1977 Nov. Dec. Jan. Feb. March April

ENVIRONMENTAL STUDIES

- Water Quality, Wastewater Treatment, Solid Waste Disposal
- Soils, Vegetation, Climate
- Wildlife Management
- Outdoor Recreation
- Geology
- Surface and Groundwater Hydrology, Flood Hazard
- Visual Surveys (U.S.F.S.)
- Public Review

SYNTHESIS, INTERPRETATION, AND PROJECTIONS

- Synthesis and Interpretation of Environmental Studies
- Visitation, Employment, Population, and Housing Needs Projections
- Critical Issues
- Growth and Development Alternatives
  - Summary Report and Questionnaire
  - Full Report
- Public Review

THE COMPREHENSIVE PLAN AND IMPLEMENTATION ALTERNATIVES

- Preliminary Comprehensive Plan
  - Land Use
  - Housing
  - Densities
  - Visitor Accommodations
  - Recreation
  - Traffic Circulation
  - Airport
  - Open Space Preservation
- Implementation and Financing Alternatives
- The Proposed Comprehensive Plan and Implementation Alternatives
  - Summary Report and Questionnaire
  - Full Report
- Public Hearings

FINAL REPORT AND IMPLEMENTATION ORDINANCES AND PROGRAMS

- Comprehensive Plan and Implementation Program Final Report
- Land Use and Development Regulations
- Capital Improvement Programs
- Other Implementation Programs

- The second phase identified development constraints imposed by water quality factors and was conducted from January to April, 1976.

- The third phase, to be completed by September, 1976, involves an analysis of point and nonpoint source impacts of the comprehensive plan proposals and examines the technical and regulatory management alternatives for pollution control. Outputs of this phase include a report on alternative management solutions to be incorporated in the summary report as well as a questionnaire on the proposed comprehensive plan which will be mailed to all households. A second section will incorporate the responses to the questionnaire.

- The fourth and final phase of work for the planning consultant calls for an analysis of WQM alternatives and selection of a final plan. The output will be a document that will be included in the comprehensive plan and implementation program.

U.S. Forest Service received $99,000 of the $370,000 grant. This money is for monitoring point and nonpoint pollution on forest lands and will be carried out over the full two year period (July 1975 to June 1977). Types of pollutant sources will include: six timber sales (three active, the others for baseline data); three recreation complexes; two grazing allotments; two burning and two herbicide spraying projects; and one elk feedground. In addition, testing will be done on waters draining from a mining operation and an oil drilling site (both of which pass near a reservior); waters near a construction project; waters near a naturally occuring landslide; and a town water supply. The Forest Service will also prepare orthophotoguad maps and will operate a computer terminal facility for storage and retrieval of accumulated data.

Other work elements are primarily technical in nature and are described in the next Chapter. Their outputs are generally data from monitoring. The engineering consultant will prepare alternatives for wastewater and and stormwater facilites in developing portions of the County.

G. Achievements to Date

lack of data

Several things have been learned from the technical monitoring programs. It now appears that the Elk Refuge is not the major problem it was once believed to be. Baseline data is available for all major rivers, some for the first time. They have not begun to monitor stormwater runoff in Jackson because the equipment has not arrived yet.

Inventory of existing conditions and analysis of constraints have been fully completed. This work went quickly in order to be ready for the timetable of the comprehensive plan program. All households have received environmental information known about the area and have been given a series of growth alternatives in conjunction with the comprehensive plan.

The agency has requested and received an extension for completing its interim outputs until the comprehensive planning effort is firmly established. It is expected, for example, that preliminary population projections will have to be modified.

The Project Director listed three things he considers as achievements:

- The several agencies involved (Federal, State, County and town) have been coordinated so that they are all working together. The staff was involved in bringing together several agencies charged with responsibility for settling a dispute over location of the treatment plant.

- The program is becoming better known to the public. At the December meeting there were only 10-15 people; only one who was not directly connected to the program. At the last meeting, there were 35 persons not connected.

- Baseline data needed for such tasks as making the decision about regional wastewater facility have been collected and analyzed.

III. EXPECTATIONS

A. Water Quality

Water quality problems in this area center around preserving and maintaining the existing quality of the waters. Most area water quality is considerably higher than State standards. Two persons (a citizen and the town administrator) indicated that Fish Creek may not be able to meet the standard. A second citizen expressed concerned that, although the area currently has high water quality, people do not realize how fragile the area climate is. If certain practices continue (e.g., plowing winter manure into the creek), several of the creeks such as Fall, Flat and Catch will not meet the standards.

B. Plan Approval and Implementation

There was general agreement that there is a very good chance the plan will be approved both locally (most answer 8 or 9 of 10) and by the State (most said 10 of 10). Most everyone recognized that approval depends on whether it fits community objectives and the WQM project seems to be working in that direction.

The Project Director said that the plan would be effectvely be implemented (seven out of ten). He felt that the Federal agencies, county commissioners and town council members would be most essential and that the Federal agencies, particularly the Forest Service, could most easily implement their portions of the plan.

One of the citizens said that, to be implemented, the plan must enter at a "fundable level." A second citizen was more specific. She said likelihood of implementation was only five of ten because money is involved. She said this area, more than others, is greatly affected by national politics. She said that whoever is elected President will determine what funds are available to aid small communities.

Both the State Liaison and a local official mentioned that new septic tank restrictions probably will be needed. The State Liaison said that Soil and Water Conservation Districts have much of the authority needed to implement plans, but theirs was often a cumbersome process, so it probably would not be relied upon. The recently enacted State Land Use Planning Act assumes that implementation authorities will remain local.

One of the citizens noted that being so closely associated with the comprehensive planning program may jeopardize implementation of the WQM plan. She said there is an active anti-planning faction in the community which intends to make the land use studies backfire and use the data as arguments against planning. Certain candidates running for local offices are known to be against the planning, and the WQM may "go along with it," (terminating the plan). She is concerned because the plan is only as good as its enforcement.

C. Continuing Planning Process

not all

The Project Director said that most of the necessary planning would be completed within the initial two years. He believed management would stay with the existing controlling agencies (i.e., the Town, County, and Forest Service). He felt that the Agency Board would stay on in a coordinating role. He hoped that a technical expert would be retained to be responsible for inspection and monitoring. He believed this person would cost $25,000 per year and the monitoring costing an additional $25 - $50,000. He did not believe the County would pay this kind of money on its own. He felt the State might come up with 25% if they were convinced it is to their advantage, but the rest of the money would have to be Federally funded.

inadequate for future planning

Others interviewed gave various statements supporing the description outlined by the Project Director. The State Liaison said plans would be updated by the County. A County official felt continuation should be County funded and operated. He hoped to see a monitoring system, probably in the County Planner's office. A local official said there would not be local money. The Town Administrater felt there is no need for personnel beyond the Planner and Engineer and he saw "no practical reason to update something as stable as geology."

The State legislator felt continued work should be done by State and local agencies and not by Federal agencies. He thougt the legislature might be willing to give money to study nonpoint source problems but not money to regulate. He noted that last session was not generous in providing money for enforcement personnel.

D. Relation to Other Water Quality Programs

Because the WQM project is so closely connected with the comprehensive planning program, they will clearly impact each other. The three citizens each expressed hopes that the WQM would be a major determinant in decisions for placement of sewer infrastructure. The Project Director noted that facility planning is a priority item that dovetails with discussion over where growth will take place. There is currently a controversy over the growth consequences of building a new sewer treatment plant versus expanding the exising one. The WQM staff will be deeply involved in this issue.

Permitting is almost entirely handled by the State. There are five permits in the WQM area: the U.S. Fishery; the Jackson treatment plant; two for subdivisions and one for a ski area. Data from WQM project monitoring will be made available to the State.

E. Local Definition of Success

Responses to the question, "what is your definition of success?" ranged from the generalized hope for a better environment to special desires for elimination of septic tanks in a particular community. The full responses are listed below:

- Project Director- A good set of implementation regulations, the resolution of the 201 controvercy, and the hiring of a technical staff person.

- State Liaison- They can't do everything in the "regs", but what they do should be reflected in the County land use plan. They should identify the problems on Federal lands.

- Town Administrator- 100 percent clean water in the entire county.

- County Commissioner- A complete in-depth analysis of water quality in the area showing where the problems are, and giving recommendations for solving them.

- Town Councilman- Helping to improve the sewer system and passage of some zoning or control ordinances that do some good.

- Citizen- Enabling the sewage plant to handle the summer people and setting definite standards (for density, septic tanks) for unincorporated communities.

- Citizen- Stopping and rectifying point and nonpoint problems and bringing human problems under control.

- Citizen- Sewering the town of Wilson so it doesn't affect the water system

In addition to their definitions of success, interviewees talked about benefits from WQM planning. The County Commissioner hoped it would instill better confidence in the political structure by getting the planning started. One of the citizens thought that it brought needed expertise to the staff while another citizen hoped it would stabilize growth. One citizen and the Project Director both saw increased public awareness as a benefit of the planning. The Project Director added that he hoped an improvement in the Forest Service's methods would be a benefit.

IV. VARING PERSPECTIVES OF WQM

A. WQM Staff

The Project Manager felt that the project's greatest strengths were reflected by more people's increased awareness of water quality and that WQM staff are developing rapport with agencies, elected officials and the general public, resulting in a spirit of cooperation. He believed one factor in this rapport is that the two staff members are both living in the Community rather than serving as outside consultants. Because outsiders are viewed with suspicion and disdain by members of this tight knit community, the WQM staff has had to gain acceptance both as individuals and as members of a Federally-owned program. The Project Manager feels it is important that a technically qualified person monitors water quality and that he should remain on the County payroll. The Town Administrator is adamently and somewhat hostiley opposed to this idea. He thinks there is enough in-house expertise to answer any questions which may arise.

The Project Manager feels the biggest problems so far have been keeping tabs on everyone. The Forest Service acts automonously and the WQM staff does not always follow them as closely as they would like. Likewise, the planning contractor, because of the dual position he holds, has his own set of ideas about the way things should be done. For example, at first, he would not do the agriculture element of the plan and now he claims the environmental assessment is not part of his contract. The WQM staff has had to gear its outputs to the timebable of the comprehensive planning program.

The Town Administrator's biggest compliant is that the entire process goes to slowly. He feels the WQM plan should have been done before, so it is known where density can and cannot occur. He sees WQM as a one time collection of information of water in the area that can then be used by those who must make decisions for the town.

B. Citizens

Three members of the Citizen Advisory Committe were interviewed. Each appeared very knowledgeable about the WQM project and about citizen opinions in the community. None felt that their own views were a reflection of the typical attitudes. Rather, each believed themselves to be more in favor of planning and control than might generally be the case.

Many citizen views were presented at a joint County Commission/County Planning Board Meeting held during the time of the interviews.[1] In particular there is one element totally opposed to any planning. The opposition sees growth as a threat to their present lifestyles and they associate planning with promoting growth rather than stopping it or minimizing its impacts.

One of the most threatened groups is the ranchers. Fewer acres are devoted to ranching each year and the ranchers fear the comprehensive plan will result in further regulations that will accelerate the loss.

The first citizen interviewed represents the League of Women Voters on the CAC. She, like others is most concerned with understanding how measures to clean the waters will affect development and limit growth. She believes that something must be done and feels that the County Council is committed to carrying out both plans. She also feels that most of the public does not understand the issues and, therefore, will look for the "cheapest way" to solve water quality problems. (She noted the outright opposition from cattlemen) For these reasons, the representative felt it would take an "outsider" to get the plan implemented.

The second citizen interviewed represents the cattlemen on the CAC and represents citizens on the Agency Board. He indicated that citizens don't understand the project and that there is natural opposition to any Federal program. This individual believes the WQM agency should concentrate on collecting statistical data (not on decision-making) so that the problems are documented before solutions are tried or before there are any plans for growth. He feels that, at present, the County's development and environmental goals are in conflict. But he added that the decisions should be made by the politicians while the WQM planners should act merely as researchers.

The third citizen interviewed feared that the WQM project was too closely tied to the comprehensive planning project and, specifically, to the issue of density. She felt people were rejecting sewers even in areas where they are badly needed becauce they will promote additional development. She feels this area, like most of the State, is "90 years behind the rest of th County," adding that this planning should have been done in the '50's. She looks toward the local and national elections, as an indicator of what the future will be like. Local elections will show how much support there will be for further planning and control regulations, national elections will show how much money is available for expenses

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1 The Comprehensive Planning Program holds periodic meetings in the community to present their findings. This meeting (attended by one field team member) was a preliminary presentation to the joint boards. Because it was an open meeting, citizens were allowed to give comments and ask questions at the end.

such as sewer treatment plants.

This citizen felt that, although local officials are not opposed to the WQM project, support has not been as strong as potentially possible. She said there is a danger that if WQM is locally administered, it will be subject to the whims of whoever is elected and, therefore, subject to preseures form the anti-planning element. She favors a commission consisting of the Town, County, State, National Park Service and Forest Service.

C. Local Elected Officials

The first elected official interviewed is Chairman of the County Commission and Chairman of the WQM Agency Board. He said that the County became involved in WQM because it complements the comprehensive planning process and because it was financially advantageous to do both at the same time. He was pleased that the project is being efficiently administered and on schedule. He hoped that one result of the effort will be establishment of a monitoring system that can be carried on by the City/County Planner but he does not want the system to be tied to an extensive financial commitment. Because of its importance as a national tourism area, the Commissioner feels that the Federal government and Federal agencies have special responsibilities.

The second elected official interviewed is a Town Councilman who serves on the Agency Board. He doubted the project's value and expects that no one will listen anyway. The Councilman said no EPA or WQM office can tell them what to do and that the key is self-government.

D. Appointed Officials

An EIS on whether to expand the present sewer treatment plant or to build a new one has recently been started. Many of the growth implications are being studied under the comprehensive planning program. The interview with the Town Administrator, who is the ranking appointed official, is discussed in Section IVA.

E. State Legislators

The State Senator from Laramie, Wyoming was interviewed. He was not aware of the Teton County WQM Project although he was familiar with the comprehensive planning effort as established by the State Law.[1] The Senator felt that environmental issues held a high priority with the legislature and the governor, but they seem more inclined to providing

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1 Another interviewee explained that commercially and otherwise, Teton County is "in Idaho". Laramie is located in the southeast corner of Wyoming, over 300 miles from Jackson.

planning money rather than enforcement money. He noted that ranchers have a particularly difficult problem with water but this has not been discussed by the legislature.

F. State Water Quality Personnel

The State Liaison is coordinating with the WQM agency to make sure it is consistent with the State program, but so far he has not been directly involved except to review the workplan.[1] The three Wyomining WQM agencies have met to discuss common issues such as suggesting best management practices for the Highway Department.

The State has permit responsibility, but this is not much of an issue in Teton County since all streams are classified effluent limited. 303(e) plans are complete for all areas in the State and the data is available to the WQM agencies. The Liaison was hoping for guidance from EPA concerning how the State is expected to combine basin plans and WQM plans into a statewide Strategy.

The Liaison believed that Teton County has a better chance of "success" than the others in the State becuase it is so closely tied to the local government.[2]

He added that, in the other two areas, WQM will have to be "sold" to the counties. In those areas, the problems are more widespread. There is tremendous area development and energy-related pressures and employment is tied to those who must be regulated. For these, he saw no guarantee that they would exist beyond the first two years, whereas in Teton County, he felt the County could continue WQM related work.

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1 The Liaison is an IPA from Region VIII. He works most closely with the State person who has been loaned to Teton County for the WQM project.

2 The Liaison felt that all funds should have passed through the State because the counties and cities as well as the State agencies and Conservation Districts can become involved to a greater degree. This was not a problem in Teton County, but it was in the other two areas.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

There is little reason to doubt that the plan will be completed on time. All of the initial data gathering is already completed and has been mailed to households. Management and facility alternatives are tied to the comprehensive planning program which is proceeding on schedule. Monitoring will continue throughout the next year.

Plan approval and implementation are unpredictable. County officials (the Commission, Planning Board and Town Administrator) seem genuinely committed to doing something. As indicated in all the surveys conducted, citizens have shown both an interest in what is happening and a desire to prevent degradation of their environment. The issues, however, can be very complex[1] and citizens are often unable to understand the consequences of certain alternatives. Within this atmosphere, an anti-planning group is able to capitalize on people's fears. Several of the candidates for local office are vocal opponents of the comprehensive planning program and, by association, of the WQM project. This attitude also capitalizes on anti-Federal sentiments which are prevalant throughout the area.

Thus, the close association between the comprehensive planning and the WQM planning projects is both a help and a hinderance. It is likely that the two either will be carried out or defeated together. The greatest support for implementation will occur at the County level. Town officials, however, do not understand the purpose and scope of the project as well as County officials and are totally opposed to the expenditure of funds. County officials expect that planning will be completed within the two years and that appropriate monitoring can be conducted by the Town Engineer and the City/Council Planner. Of course, all this pertains only to the privately owned lands. The lands controlled by the Federal agencies are of even greater consequence, particularly to the Forest Service. There is no way to predict how much of the plan they will implement at this time.

B. Public Involvement

There is a very high level of interest in the combined planning programs. Meetings of the public boards are as crowded as the community meetings.

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1 For example, they are considering the possibility of transfer of development rights based on carrying capacity, a highly specialized planning tool. At the same time, the National Park Service is considering the purchase of scenic easements. What can be accomplished under these programs is vague and often misunderstood.

Most everyone seems to understand that they are discussing the area's future outlook, even if they do not understand all the technical issues. Most individuals - whether it is the lady worried about unsecured Wilson, or the gentlemen who owns hundreds of acres - perceive a high personal stake in WQM. All meetings are covered in depth by the newspapers and reported on T.V. and radio news.

In addition to the multiple rounds of community meetings, all households received a summary of the technical reports which include a survey of alternative growth preferences. A number of the most active citizens were concerned that the first survey may have been too difficult for most people to understand. They have since formed an ad hoc committee to assist in preparation of the next survey. There seems to be general agreement that conducting the survey is the "right way" to go about things. In addition to the general survey, the planning consultant completed a confidential survey of the large land owners (100 acres or more) to discover what plans, if any, were being made for development.

Members of the CAC seemed satisfied with the way their input had been utilized. The addition of a citizen to the Agency Board seemed to please those who felt that "the politics must be watched."

C. Current Planning Process

The WQM planning is inextricably linked to the comprehensive planning program. This means that WQM work tasks and schedules were designed to meet the needs of the comprehensive plan (with greatest emphasis on land use). Given the fact that the County is not zoned, the town has a weak zoning law based on septic tank suitability. It is probably appropriate that the emphasis is greatest on the comprehensive planning program, since existing waters are of high quality and since future development presents the greatest threat to water quality.

So far, planning has consisted of technical water quality studies for input into land use planning. Monitoring is progressing which will lead to a more complete data base and specific analysis of several nonpoint source problems.

Currently, very little management planning has taken place, but this seems appropriate given the kind of opposition that can be anticipated. Any management alternative can be expected to have serious economic implications and, unless there is sufficient proof that a problem exists, there will be no support, which may lead to a defeat of the entire plan.

D. Continuing Planning Process

The most likely scenario following the intial two year period will be a monitoring of known problem sources by either the County Engineer, the City/County Planner, or both. It is doubtful that a staff solely responsible for water-related issues will continue. Whatever staffing structure

exists, it will definitely be scaled down from the present effort and it will exist as the County, not the Town level.

E. Significance of Local Elected Official's Involvement

There are not a large number of local elected officials. Only one town (Jackson) is incorporated. Two of three County Commissioners, two of three town Councilmen, and two of five County Planning Commissioners make up the WQM Agency Board. Thus, over half the elected officials have a direct link to the project. Because the comprehensive planning project has such major implications for the County, virtually every official is aware of what is happening even if they do not always understand the technical issues. Future area development and planning programs are issues in the upcoming local elections.

Elected officials will be most influential in creating a management system and the Planning would never have been successful without their involvement. Nevertheless, they have a difficult and sometimes impossible task in trying to satisfy all the competing interests. Any regulations or controls will be unpopular with certain elements. County officials will have to perservere to see the two projects through to completion. Election of unsupportive officials could destroy any chances of implementation.

AGENCY: VENTURA REGIONAL COUNTY SANITATION DISTRICT (VRCSD)

REGION: IX - (San Francisco)

GRANT AMOUNT: $928,000

GRANT RECEIPT: June, 1975

STARTING DATE: June, 1976

STATUS AT TIME OF INTERVIEW: VRCSD had entered its third month of official WQM planning. For a year prior to that time, VRCSD had been engaged in work plan development and helping to establish a framework for actually conducting planning.

REASON FOR INCLUSION IN SAMPLE: The WQM planning agency is a single purpose, wastewater treatment planning and management agency.

I. BACKGROUND[1]

A. Area Description

The Ventura County WQM study encompasses the lower portion of the Santa Clara River Basin which lies northwest of the Los Angeles metropolitan area. The designated area coincides with both the County's jurisdictional boundaries and the Ventura-Oxnard SMSA. It includes both sparsely settled, highly erodable mountain areas in and near the Los Padres National Forest and increasingly urbanized areas in the valleys, the Oxnard plain and along 35 miles of Pacific coastline. A large naval complex and several industrial centers and oil processing plants are located along the coast but agricultural activity, particularly citrus and truck farming, remain a vital part of the economy. Parts of Ventura County also serve as bedroom communities for greater Los Angeles.

The 1970 U.S. Census population for the WQM area was 450,000. The area recently has experienced substantial growth which is anticipated to continue with increasing pressures from Los Angeles. Population projections for 1990 range from 605,000 to 878,000 according to the State Department of Finance. In anticipation of further development, two of the area's foremost goals are to avoid annexation by Los Angeles and to retain Ventura County's rural atmosphere with green belts separating individual cities. Environmental concern runs high among the general public and local officials of Ventura County because of their familiarity with Los Angeles' air quality, coastal zone and water supply problems.

The profile of government in the designated area is characterized by a variety of local, County and State authorities. There are only nine incorporated cities throughout Ventura County; eight of them are in the lower Santa Clara basin and, therefore, are included in the Ventura County WQM study area. The majority of land is still unincorporated and exists under the auspices of the County Board of Supervisors. Both the cities and the unincorporated areas are within the jurisdictional control of special purpose bodies including the Regional Water Quality Control Board (RWQCB), the Regional Water Resource Board (RWRB), the Air Pollution Control District (APCD), the Flood Control District (FCD) and the Ventura Regional County Sanitary District Commission (VRCSD). The RWQCB was created by the State for the purpose of monitoring local water pollution problems and recommending punitive and/or remedial action where needed. The RWRB is concerned with regulating and ensuring adequate water supply. The APCD and the FCD have been involved primarily in planning activities but do have latent regulatory powers. The VRCSD is responsible for wastewater treatment and disposal and has the authority to control the types of wastes entering the systems.

B. Water Quality Problem

The lower Santa Clara River Basin includes the Santa Clara River and its tributaries, the Ventura River and its tributaries, and the Calleguas-Conejo

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[1] Information for this Chapter was taken from the Ventura County Areawide Waste Treatment Management Planning Work Program, VRCSD, April, 1976; and various interviews.

system of creeks. Although the area's natural geological conditions historically have contributed to poor water quality, sufficient water for irrigation and fishing purposes existed before the turn of the century. Intensification of agriculture, industry and associated urban expansion, however, have led to further quality degradation and dewatering. Today, surface water problems include high salinity from irrigation runoff, irrigation water recycling and fertilizer applications. Erosion from the coastal hills contribute to the river and bay siltation. A variety of other problems, including low dissolved oxygen levels from sewage discharges and other point sources are also common to the area. Groundwater problems center around saltwater intrusion from overdraft and insufficient recharge while increasing mineralization can be attributed to downward percolation of irrigation return flown.

Parts of the County now rely on the Feather River for their water supply but the area's primary source is marginal quality groundwater. Each year the quality of this water suffers as a result of ever-increasing consumptive uses. The absolute necessity of protecting the remaining supply is an obvious priority.

The State of California has been aware of water supply problems in southern California for many years and created Regional Water Resources Board and Regional Water Quality Boards in response to these situations. The Ventura County RWRB and RWQB have been involved in several county-wide planning efforts. In particular, both were responsible for the Santa Clara 303(e) basin plan which generated water supply, groundwater, wastewater and water reclamation data now being used in the WQM project.

The Ventura County WQM study also benefits from a number of regional studies completed by the VRCSD. In the course of developing a masterplan for a regional system of wastewater treatment and disposal in 1974, the VRCSD developed information requiring future wastewater treatment needs, current design deficiencies and cost and construction priorities. The VRCSD also completed a master plan of water reclamation and reuse in 1974 and a solid waste plan in 1972. Information from these studies will be useful particularly in WQM nonpoint source studies. A number of other reports prepared by State and local agencies have generated data on solid waste management, transportation, population, land use and air quality.

C. Designated Agency

The Ventura Regional County Sanitation District is the official WQM planning agency for the Ventura area. The District was formed six years ago for the purpose of providing county-wide coordination and management of wastewater planning, treatment and disposal, and water reclamation activities. The District boundaries include all of Ventura County and the submerged land extending three miles from the County's shoreline. Each of the nine member cities entered the District on a contractual basis and send their mayors (or representatives) to serve on the Board of Directors. There are sixteen special sewage districts within the VRCSD.

As a wastewater treatment management agency, the VRCSD was a rather unique applicant for WQM planning. Although the area was designated early in 1975, the program did not begin planning officially until a year later, partly because of delays in work plan approval but also because of controversy over the nature of the VRCSD.

Generally speaking, VRCSD is respected by local communities for its efficient handling of wastewater treatment systems. The nation of regionalism is common to southern California, especially in matters related to water supply. Some local residents expressed fears that unnecessary regionalization would destroy the unique character of individual communities and might possibly result in extensive urbanization similar to Los Angeles. Regionalism as represented by VRCSD is, therefore, accepted but only in moderation.

Although the VRCSD is concerned primarily with 201 facilities planning and management, it is also currently involved in solid waste planning and a residuals study on agriculture liquid and waste. The WQM project holds medium priority among VRCSD planning activities which are all related through the use of common staff and shared technical information.

Only 8 percent of VRCSD's total WQM grant is being used in-house to salary two full-time positions -- the Project Manager and the Assistant Project Manager. The WQM staff is responsible for overall program management, development of work plan, development of scope of contracts, technical work on sewage systems and some public involvement, particularly for conducting general public meetings. The remaining 92 percent of Ventura's WQM grant is divided among:

- Ventura County Planning Commission;
- Ventura County Air Pollution Control District;
- Ventura County Association of Governments;
- State Department of Water Resources;
- State Water Quality Control Board;
- Ventura County Flood Control; and
- 8 participating municipalities.

Staff collaboration later

The VRCSD chose to contract a large portion of its study because the consulting agencies already had in-house expertise and/or because they were already in the process of collecting data needed by the WQM program. Most importantly, however, VRCSD recognized the need to coordinate its activities with other agencies which may have an indirect effect on water quality or may play a role in WQM implementation. For these reasons, the DWR was selected for modeling cause and effects of groundwater mineralization; the WQCB for some technical work and State policy interpretation on NPDES; the Flood Control Commission for a saltwater intrusion study; and the eight cities for

individual land use and population projections. The most significant relationship, however, is between the VRCSD and the Ventura County Association of Governments (VCAG), the Air Pollution Control District (APCD) and the Local Agency Formation Commission (LAFCO) through the Regional Land Use Program (RLUP).

RLUP is a cooperative planning effort among the four participating agencies conducting concurrent county-wide programs. All four programs require similar methodologies, land use and growth management data, liaison and coordination functions, project management systems and public involvement processes. RLUP was designed to increase the effectiveness of each individual program, achieve coordination among plans and avoid duplication of effort. Under the orchestration of the County Planning Commission, common data collection tasks, analysis and committees structures are jointly funded by all four agenices. Tasks are then delegated to the individual agencies according to their qualifications and previous experience in related areas. In the end, each agency will have its own individual plan. The County Planning Commission also hopes to coordinate the land use elements into a comprehensive land use plan which addresses the concerns and constraints of the individual programs, i.e., water, air, transportation and annexation.

Although the VRCSD is contributing over half of the funds for RLUP, the VRCSD actually is doing the least amount of common work. The County Planning Commission is responsible for, among other things, identifying the potentials and constraints for growth and development, and assessing social and economic impacts of various land use schemes. VCAG is chiefly responsible for committee management, APCD for coordinating air quality concerns with water quality concerns, and VRCSD for point source investigation, delineation of sewage service areas and development of management planning alternatives. Common analysis and integration of planning elements provide coordination necessary for a comprehensive areawide perspective.

Overall coordination and communication among the four programs occur through the RLUP Steering Committee which consists of an elected official from each of the four participating agency policy boards. The RLUP Steering Committee is responsible for policy level contact between RLUP and the respective participating agencies. Similar to the Steering Committee is the RLUP Staff Advisory Committee consisting of the chief officer of each of the four RLUP programs. Acting as staff to the Steering Committee, the Staff Advisory Committee's responsibilities are to coordinate staff services, resolve inter-agency staff matters, and answer policy-makers' questions. The RLUP program also has established a Citizens' Advisory Committee which is, basically, an extension and modification of VCAG's committee structure and a Technical Advisory Committee consisting of representatives of all participating cities, agencies, selective special districts and extra-county entities. These four RLUP committees basically fulfill the WQM committee structure requirements.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

The overall goals of the Ventura County WQM Study are to complement county-wide planning efforts of RLUP, to enable achievement of 1983 goals of PL 92-500 and to meet the water quality objectives identified in the State 303(e) basin plan. The goals of the RLUP program were established by advisory committees before the WQM program began and served as guidance for VRCSD in setting EQM goals. The 1983 water quality goals purposely were left for local definition and, therefore, only served as broad indicators for the WQM project. The 303(e) plan, on the other hand, specifically identified a number of water quality problems in Ventura County, established beneficial uses, and proposed structural systems to meet 1977 goals. Non-structural alternatives were touched upon only in the 303(e) plan, thereby leaving most of this work to the WQM program.

The specific objectives of Ventura's WQM project are:

- To identify all nonpoint source pollution on a sub-area, and land use basis, and to test out several land use/population alternatives;
- To test the ability of existing and proposed treatment facilities to meet 1983 goals;
- To develop detailed financing and implementation arrangements for the areawide treatment system suggested in the 303(e) plan;
- To detail finances for a brine line proposed in the 303(e) plan;
- To devise an impact assessment procedure for structural and nonstructural alternatives which is consistent with the Air Quality Management Plan for Ventura County;
- To develop local support for WQM plan implementation; and
- To develop objectives and controls for storm runoff.

According to the Project Director, VRCSD's priorities were to develop an environmentally and economically acceptable program to deal with agricultural problems and to determine the most efficient type of regional sewage system to be developed. Although the Director felt the project would have more than enough work to keep it busy for two years, he recognized the need to conduct more technical studies, especially in nonpoint source areas. The Project Director also thought it necessary to conduct more extensive financial and institutional planning than could or would be handled during the course of the project.

B. Technical Component

The technical planning component was designed to examine the area's major water quality problems, the constraints in dealing with these problems and alternatives to achieve water quality goals. Sampling, modeling and analysis focus on the saltwater intrusion problem, the causes and effects of groundwater mineralization, NPDES and municipal as well as industrial point source problems. While attempting to identify various methods of land use controls which local governments can utilize to control pollution, the relationship between land uses and water quality will be determined, as well as conversion factors developed. Existing and proposed land use plans will then be analyzed for their projected effect on water quality and their consistency with other program goals.

The WQM study will consider treatment requirements beyond best practicable levels where necessary and will develop plans for abatement of separate industrial discharges. Other considerations include flow and waste reduction measures, sludge generation and potential growth inducement. Since the area needed so much sampling, modeling and analysis of nonpoint source problems, VRCSD limited its point source studies to a reassessment of data collected previously through the 303(e) study.

C. Management Planning

Management planning was recognized by VRCSD as an essential part of WQM planning and, therefore, scheduled it to take place concurrently with technical planning. Management planning was designed to include development of regulatory and fiscal controls, institutional arrangements and financial programs for an approval and implementable WQM plan. A regulatory program was anticipated for local agencies to administer and enforce land use and pollution control measures recommended in the technical component of the study. More specifically, institutional planning aspects outlined include:

- A description of existing legal authorities and suggestions for additional powers where necessary;
- An evaluation of each technical-management plan in terms of operational effectiveness, practicability, coordinative capacity and public acceptability;
- The development of the recommended final institutional plan; and
- The financial arrangements necessary to carry out the plan.

An evaluation of social, economic and environmental impacts of the plan was anticipated throughout the planning process as alternative management schemes are developed and analyzed.

The bulk of management planning will be done by VRCSD but in cooperation with the RLUP program. Since CRCSD already has a legal foundation for county-wide wastewater treatment planning, it will concentrate on encouraging non-participating areas of the County to join the system and focus on improving

the current system's financial and management practices. Much of the management work related to non-structural solutions, particularly land use controls, will be handled through RLUP.

A Program Review Board has been established in order to avoid major disagreements and misunderstandings between the WQM plan and policies of concerned State and Federal agencies. The Program Review Board is composed of policy-level personnel from the State and Regional Water Resources Control Boards, the Air Resources Board, the State Office of Planning and Research and EPA Regional Office. The Board is responsible for reviewing program outputs throughout the course of the study.

D. Public Involvement Program

The WQM public involvement process was designed to facilitate continuous public input throughout the plan's development. The VRCSD chose to rely on the RLUP Citizens Advisory Committee in addition to its own WQM Citizen Advisory Committee as the primary vehicles for public involvement. The RLUP committee basically was an expansion and modification of an existing VCAG Transportation Planning Advisory Committee composed of various geographic and public interest representatives. The Committee was scheduled to review and evaluate the progress and all output of the RLUP program including those specifically related to the WQM study. The WQM Citizens Advisory Committee was similar in function to the RLUP Committee, however, the focus of its attention specifically was on the WQM study and concerns. Its membership consisted of representatives from environmental organizations, civic groups and various economic interests such as agriculture and industry. At the time of the interviews, the WQM Citizens Advisory Committee was beginning discussions on overall program goals and objectives.

With the exception of public hearings anticipated at the time of final plan approval, the advisory committee was the only formalized avenue for general public and interest group involvement in the WQM process. The Project Director voiced some frustration over the WQM project's low public involvement budget which did not direct more attention to the general public. He also felt that dispersing the committee efforts between RLUP and WQM reduced the effectiveness of the public participation staff's efforts and that the WQM program needed a coordinator to integrate the two communities.

Local elected officials were to be informed of the WQM program through workshops on plan alternatives as they develop and through the RLUP Technical Advisory Committee. The Executive Director of VRCSD was certain that local elected officials would be involved sufficiently throughout the WQM program if for no other reason than because they had contracted VRCSD to participate in data collection efforts. The Executive Director was relying on frequent contact on the work task to ensure local officials' awareness of, and input into, the process.

E. State and Federal Involvement

The Ventura WQM study's staff contact with the State occurred through a liaison from the California Water Resources Control Board and through the

Program Review Board. The WQM agency contracted the State for a liaison to overview and monitor the program so as to eliminate conflicts between WQM and the 303(e) plan and/or State regulations. According to the Project Director, the State has acted chiefly as a watch-dog to date, making sure that State policies are not contradicted. The most recently assigned liaison, however, has also provided technical assistance when requested and has attended all CAC meetings to answer citizens' questions. Nevertheless, the Project Director still felt there was room for improvement in intra-State WQM coordination planning effort, thereby contributing more positively to the WQM. The Executive Director felt that State involvement through the Program Review Board would ensure State approval at the time of final plan approval.

As to the Federal relationship with EPA, the Project Director noted that the Regional Office Personnel were very helpful during the designation and work plan preparation stage. However, he did find that EPA's guidance on overall program policy and direction was vague, thereby causing some concern in the Ventura program about the area's compliance with national expectations.

F. Scheduled Outputs

It is anticipated that the major outputs of the plan will be:

1. Land Use (task elements 3, 4, 5, and 7).

   - Tables showing population projections for the planning period (output of subtasks 3.2C, 3.8, 5.10.1);
   - Working maps showing residential, commercial, industrial, and other land uses (output of subtasks 3.2.B, 3.2.C, 3.8, 5.10.1);
   - Working maps showing critical water quality/environmental areas (partial output from subtasks 3.2.2, 3.4.2, 3.3, 3.4.3, 4.12, 5.4.1, 5.4.2, 4.4, 4.8, 4.7) (complete output of subtask 4.9);
   - Working maps depicting the type, pattern, amount, and location of growth (output of subtask 3.1);
   - Identification of land use regulatory controls to meet water quality objectives with and without structural solutions (output of subtask 7.4.2).

2. Point Sources[1]

   - Definition of municipal service areas which consider topography, drainage, political boundaries, and LAFCO spheres of influence (output from subtask 5.4.1);

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[1] The basis for this point source work has been provided during the 303(e) planning process. This effort would provide more local input (population projections, local industrial surveys, local land use) and the additional detail needed in the 208 planning process.

- Residual waste disposal needs (subtask 5.6);
- Inventory of point source dischargers (output from subtask 5.4.2, 5.5.1);
- Wasteload projections for each service area and industrial dischargers which include constituents limited by 1983 goals (output from subtask 5.4.2, 5.5.2, 5.5.3);
- A detailed cost estimate for point source facilities needed over a 20-year period to meet the 1983 goals and known wasteload constraints (partial output of subtask 5.6);
- Establishment of construction priorities for municipal treatment works and the time schedule for their initiation and completion (partial output of subtask 5.6);
- Identification of industrial treatment works construction and schedule of discharges from such works to receiving waters or to municipal treatment works (partial output of subtask 5.6);
- Industrial pretreatment requirements and ordinances (output of subtask 4.5);
- Urban runoff control requirements (subtask 5.14).

3. Nonpoint Source

- Identification of major nonpoint pollution sources and their impact on water quality (partial output of subtask 4.3.1, 4.3.2, 4.7);
- Identification of those nonpoint source problems compatible to solution (partial output of subtask 4.3.1, 4.3.2, 4.7);
- Specification of nonpoint source control mechanisms (partial output of subtask 5.12.1, 5.12.2, 5.12.3, 5.13).

4. Regulatory-Institutional Recommendations

- Identification of management agency(s) to carry out the plan (subtask 7.4.3);
- Description of management agency(s)' authorities needed to carry out the plan (subtask 7.4.2);

- Certification that the management agency(s) have the authority to carry out the plan (subtask 7.4.2);

- Specification of land use controls to carry out the plan (subtask 7.4.2);

  - Existing
  - Needed

- Specification of nonpoint source controls to carry out the plan (subtask 7.4.2);

  - Existing
  - Needed
  - Examples

- Specification of the institutional arrangements to carry out the plan. For example:

  - Description of the relationship between the management agency(s) and other agencies whose actions will significantly affect plan implementation (subtask 7.4.2);

  - Identification of the agencies responsible for (subtask 7.4.2);

    - Facilities construction
    - Regulatory control
    - Wastewater treatment
    - Planning
    - Monitoring and enforcement

  - Interagency mechanisms such as contracts or joint powers agreements;

  - Target abatement dates.

5. Financial Program (subtask 5.17)

   - Legal authority to finance;

   - Industrial cost recovery provisions;

   - User charges provisions;

   - Provisions that participating communities pay a proportionate share of treatment costs;

- Projection of financial means to provide wastewater treatment works over 20-year period, with detailed projections for first five years;

- Provisions for funding and continuing planning process.

6. Environmental, social and economic impacts of the recommended plan (subtask 6).

Every attempt will be made during the WQM process to include all pertinent work done during the 303(e) process, and avoid duplication of effort. Current and proposed 201 planning efforts will be coordinated with the WQM planning process to assure maximum water pollution control results.

Since the program had been engaged only in official WQM planning for three months (at the time of interviews),[1] it was too early to evidence any problems in meeting the program's schedule. The program has had to make one adjustment already, however, in response to the Flood Control District's decision not to conduct groundwater sampling and modeling. In order to compensate for the time lost in renegotiating these services, the VRCSD reduced some of its sampling tasks, thereby averting other scheduling problems. The Project Director predicted, however, that the WQM's overall tight schedule and limited staff probably would necessitate further reductions in order to complete a final plan on time. Schedule breakdowns could cause major problems in the end because of the highly integrated nature of the program's work elements.

G. Achievements to Date

Again, due to the early phase of official WQM planning, the VRCSD had few achievements to report. The Project Director did feel, however, that assembling and establishing the RLUP structure was itself a major achievement which the WQM project helped to realize. In his opinion, the RLUP program had already heightened local political awareness of the need for regional approaches to problem solving. The RLUP and WAM committees had also been organized and were meeting regularly at the time of interviews. Most of the technical studies were also underway.

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1 VRCSD was designated for WQM planning in 1974. After some EPA disagreement over designating a single purpose, management agency, VRCSD began WQM planning in 1975. However, not until a year later when its work plan was approved, did the agency begin officially.

III. EXPECTATIONS

A. Water Quality

All persons interviewed anticipated an improvement in water quality as a result of the WQM program. The Project Director looked forward to improved groundwater resources and a halt to further degradation as a result of aquifer recharge systems, brine lines and more rational land use controls proposed through the WQM program. The State Water Quality Liaison added the possibility of water importation to the Executive Director's list. All of these measures were expected to contribute to higher quality drinking supplies without necessitating a reduction in agricultural use. One citizen felt that improvements were inevitable since the WQM plan would prove to local officials that these actions were both environmentally necessary and economically efficient.

The 1983 water quality goals had not been identified yet by Ventura County. According to the State Water Quality Liaison, EPA Region IX is waiting for local definition which it has promised to support and uphold. The VRCSD Executive Director was confident that the WQM plan would help the area meet these 1983 goals as they are determined throughout the designated area. An appointed official, on the other hand, felt that the County would need more time to achieve reasonable goals. The State Liaison and another local official felt that, even if all communities support cooperative efforts toward 1983 goals achievement, financing these activities would most likely present a problem to local communities and, therefore, impede complete success. The local official predicted that the high cost of recharge wells in particular would force the County to ask for a waiver on compliance in order to prevent bankrupcy of local agricultural interests. One citizen felt that all water quality goals which related to health issues would be met on time but that others may go unfulfilled. Only one citizen anticipated complete improvement and antidegradation of all County waters.

B. Plan Approval and Implementation

Optimism concerning plan approval at both the local and State levels ran high among all interviewees. Their positive outlooks stemmed from what they perceived as an admirable public involvement process which provided effective ways to resolve differences of opinion. The VRCSD Executive Director felt that the WQM program had engendered local support because of its reasonable approach to problem solving and because of the respect VRCSD had earned from past planning and management efforts. The Project Director felt that the FLUP Technical Advisory Committee structure was particularly helpful since it provided a way for program information to filter up from the staff to local elected officials. He hoped that keeping local officials informed throughout the process would facilitate plan approval. He also felt that local communities' direct involvement in the WQM project through contracts for land use and population projections was a clear sign of their support.

One citizen interpreted local support of the plan in a very different manner. In her opinion, cities agreed to formulate projections for the WQM plan because the task had to be undertaken, even if the WQM program had not materialized. Rather than finance projections themselves, the cities chose to avail themselves of WQM funds. The interviewee felt that the cities would become trapped into accepting the management scheme proposed by the WQM plan and would probably approve the plan since, from all recent indications, none were carefully examining its financial ramifications.

Interviewees, including the State Liaison, felt that the Ventura WQM program provided excellent opportunities for State involvement in the local process, particularly through the Program Review Board. Active interchange with the State throughout the planning process was interpreted as insurance for plan approval.

The prospects for plan implementation were more uncertain than those for plan approval. According to the Project Director, WQM recommendations related to sewage collection and treatment probably would be implemented because of substantiating information in the 303(e) plan and the WQM plan itself. However, he expected nonpoint source controls to arouse a fair amount of controversy as rivalries among existing agencies began to surface. Several persons interviewed, including local officials and citizens, noted that, if implementation required substantial outlays of local funds, only parts of the plan would be realized no matter how much support it received at the time of approval. One citizen suggested that the communities could meet their financial responsibilities only if local funds could be collected in a non-obtrusive way. Anti-regionalism sentiments presnet an impediment to plan implementation. Some special interest groups, particularly farmers concerned about agricultural trade-offs, feel threatened by areawide decisions.

VRCSD was most often cited as the group to become the WQM management agency. The Executive Director explained that the VRCSD probably would assume expanded regional responsibility for wastewater treatment, planning and management while the local units of government, the County and most special purpose districts, would be responsible for non-structural controls. All interviewees felt that sufficient State and local legal foundations for plan implementation were already in place. They felt, however, that many statutes were not consistently operative or enforced.

C. Continuing Planning Process

Most interviewees expected WQM planning to continue beyond the initial two year time-frame. As one local official stated, "The plan will be most relevant at the time immediately following its completion". In order to maintain this relevancy it will need constant updating. The State Liaison implied that the State would rely on WQM data to update 303(e) plans. Another local official noted that the County government's support of the plan would help ensure continued planning efforts without Federal funds.

The Project Director's picture of continuing planning implied that this was considered a vital part of the WQM project from its inception. In his opinion, continuing planning will be concerned with:

- Political decisions surrounding division of management and enforcement responsibilities;
- Financial arrangements to pay for planning and management; and
- Additional work on nonpoint sources.

The Executive Director noted that he had no desire for VRCSD to conduct any continuing WQM planning beyond 201 related issues. He hoped that VCAG would do the bulk of the remaining planning in the future since it was the only organization which was not a single-purpose agency and, therefore, the best candidate for a comprehensive perspective. VCAG had not been designated the WQM planning agency originally because, at that time, VCAG was just beginning to get local approval and support. Two of the citizens interviewed assumed VRCSD would be the prime contracting agency and that they would sub-contract planning work to other agencies.

The Project Director estimated the cost of continuing planning to be between $25,000 and $50,000. He felt that each of the agencies involved in WQM management would be responsible for part of the planning responsibilities.

A variety of suggestions for financing continuing planning were expressed. The Executive Director immediately discounted the possibility of increased local property taxes or Federal subsidy. Instead, he suggested some kind of local tax that would create the least burden on local residents, e.g., a tax on property exchange, a sewer fee, or a service connection charge. A local appointed official expressed a similar sentiment, stressing the equity of taxing those who benefit most from the WQM program. As the program was just entering its fourth month of planning, none of these suggestions had been presented to the public.

D. Relation to Water Quality Programs

Clearly, all persons interviewed considered selecting and promoting cost effective regional approaches to wastewater treatment, one of the most important functions of WQM planning. This is understandable in view of national legislation, and the VRCSD's function as a single purpose agency specifically designed to deal with this issue. It is understandable that all interviewees felt the WQM plan would be the basis for future 201 planning and, that through the plan's land use element, the WQM process would determine future needs.

The WQM plan was viewed similar as a basis for action in the NPDES program. One local elected official noted that the WQM plan would help give the NPDES program a perspective that would reach beyond individual communities' boundaries. The State Liaison felt that this relationship between WQM

planning and the NPDES process was somewhat guaranteed since the State's WRCB which administers the NPDES program was working with VRCSD on the day-to-day project level.

E. Local Definition of Success

All local definitions of success centered on establishing a cooperative working relationship among cities and areawide planning agencies, and enforcing incremental steps toward water quality improvement. Among the particular responses given by interviewees were the following:

- The State Liaison felt the Ventura WQM program was already a success since it established a system for communication and coordination among various environmental groups and areawide planning programs;

- The Project Director and Executive Director defined success in terms of convincing all local elected officials to recognize the area's water quality problems and to use the plan as a guide when dealing with these problems;

- An appointed official defined success in terms of enforcement. (He did not want to see the plan shelved as a useful but inappropriate document for his men.) A citizen shared the latter point of view indicating a hope that the WQM conclusions would be so attractive that local communitiws logically would tend to follow the plan's recommendations; and

- Two other citizens felt that the WQM would be a success only if it solves one of the area's water quality problems without destroying the agriculture industry or introducing degradation in other areas (e.g., promoting rapid growth in currently undeveloped areas).

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

VRCSD's in-house WQM staff was concerned primarily with point source problems and structural solutions proposed in the 303(e) plan. Such concentration is clearly understandable given the orientation and expertise of the District, i.e., wastewater treatment, planning and operation. Coordination with non-point source and lans use studies through RLUP is an organizational factor which distinguishes 201 planning from the WQM project. The staff noted that, for the first time, they were able to take a comprehensive look at the County's water quality problems and to have an impact on future land use decisions as they relate to facilities' needs. The Project Director felt that this approach would be particularly useful in providing economic and environmental justifications for stronger regional approaches to wastewater treatment problems.

The staff was somewhat worried, however, that limited time and manpower restrictions, and insufficient coordination with the State and EPA might lead to problems in final plan completion and approval by the State and EPA. Some staff members felt that VRCSD had accepted too much work considering the size and duration of the project; especially in view of the fact that VRCSD did not intend to be the continuing planning agency. They also were unsure as to how well the Ventura County WQM program complied with State and Federal program expectations. They anticipated little time for adjustments in latter stages of planning due to the tight work schedule.

Generally, the VRCSD staff was pleased with the working relationship established with RLUP. They were relatively optimistic about RLUP's ulitmate contribution to water quality if for no other reason than that they expected RLUP to heighten public's awareness of water quality problems, thus making the public more sympathetic to VRCSD suggestions.

Whether or not WQM project would result in substantial non-structural changes, however, was still questioned by these individuals. The outlook on further regionalization of facilities planning and management was much brighter.

B. Citizens

Two members of the WQM Citizen Advisory Committee and the Chairperson of the RLUP Citizen Advisory Committee were interviewed during the site visits. One member was invited to participate in the committee because of his association with agricultural interests in the County. Others were asked because of their involvement with environmental groups. All three interviewees felt that committee effectiveness was somewhat limited during the early stages of the program because some committee members were not well attuned to water quality problems and concerns. However, they did feel that meetings had become more productive over time, and that the program staff generally were receptive to citizen input. One rather strong exception was

registered by a VRCSD CAC member who was annoyed that citizens were consulted on program goals and objectives after they had already been set and in operation by the VRCSD. She felt that more citizen input would have resulted in stronger emphasis on non-structural solutions.

Two of the three interviewees noted that local elected officials were not sufficiently involved in the WQM process. Although they did not expect local officials to participate directly in advisory meetings due to their other political duties and responsibilities, citizens felt that the WQM staff should have made a more concerted effort to keep decision-makers informed of the program's concerns and developments. Unlike the VRCSD Executive Director, one interviewee interpreted municipal contracts for population and land use projections as more a matter of reluctantly accepting the "coopting" of VRCSD than enthusiastically supporting the WQM effort.

One member of the CAC indicated that their participants primarily represented environmentalist organizations, with only a few people taking agriculture and industry perspective. The interviewee felt that, since the committee structures were almost the sole avenue for public education and involvement, more diversified groups should have been included in the committee roles. As it stood, environmentalists were already in support of the WQM program while the general public was almost totally unaware of it.

Despite these program shortcomings, all three interviewees anticipated that improvements in water quality would occur as a result of the WQM plan. They felt that communities were beginning to recognize the connection between local environmental goals and growth goals, especially since preservation of agricultural land is such an important issue in Ventura County. Therefore, they felt the time was ripe for WQM planning.

C. Local Elected Officials

Two elected officials were interviewed. One was involved in county government and is a member of both the RLUP Steering Committee and the VRCSD Board of Directors. The other official is a selectman, a member of the RLUP Technical Advisory Committee and also is on the VRCSD Board of Directors. Both people were, therefore, well-informed about both the RLUP and WQM programs. Since the local communities and the County as a whole are concerned with balanced growth, efficient delivery of services, protection of water supply and preservation of agricultural land, the interviewees felt that the WQM program in conjunction with the RLUP program was just what the area needed.

Unlike the interviewees, however, most local elected officials in the County were not involved sufficiently in either program. According to the interviewees, this situation might contribute to plan approval problems since decision-makers might not be aware of the overall thrust and long-term benefits of the program. They also felt that the WQM program may be too comprehensive to be completed within two years; and definitely is too broad to receive quick approval from all communities potentially effected by it. The fact that elected officials

who are aware of the program may leave office before the end of two years was another problem that the interviewees recognized. Interviewees, however, felt the WQM staff may have overlooked this fact. Interviewees suggested that the WQM program spend more time and money reaching the general public and public interest groups to ensure that the staff will have public lobbying support when the plan is presented to local officials.

D. Appointed Officials

The appointed official interviewed was serving in a non-salaried County position and as representative of her organization on the WQM Program Review Board. The interviewee was pleased with her role in the WQM process. She felt that it offered an excellent opportunity to ensure that her Board's concerns were incorporated in the WQM plan. She also felt that the WQM program had a good chance of being implemented because of the relating compact nature of the designated area and because of the immediate importance of water supply issues in Ventura County. Her one complaint was that the general public was not aware of WQM planning. She felt that this oversight would lower the likelihood of widespread plan acceptance and enforcement.

E. State Legislators

The State Legislator interviewed was only informed indirectly about the WQM program through the legislative Committee on Natural Resources. In his opinion, WQM planning is just another unnecessary drain on tax revenues. The Assemblyman hinted that work being done under the WQM could have been done as easily by existing planning organizations and staff without duplicating efforts of common elements.

F. State Water Quality Personnel

The State Liaison to Ventura's WQM project was a staff member of the State Water Quality Control Board. He was quite pleased with the VRCSD's activities to date and, unlike some persons interviewed, was not distrubed to see that the program was slightly off schedule since he anticipated corrections for minor shortcomings during continuing planning. He did not anticipate any problems with plan approval from the State level since the State has been working so closely with VRCSD throughout the process. He felt that, if any problems arise, they will come from local communities themselves.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

Unlike most WQM agencies, the Ventura Regional County Sanitation District (VRCSD) is a single purpose agency created for wastewater treatment planning and management. It is, therefore, understandable that the agency's first and foremost concern was with point source pollution and structural solutions --its area of expertise. Ventura's WQM plan was not restricted to 201 related issues but was designed to address a wide range of items including saltwater intrusion, groundwater mineralization, protection of water supply and preservation of agricultural land.

The Ventura County WQM program was entering its third official month of planning at the time of the site visit but some indicators of the future could be seen already in the structure of the program. The bulk of WQM planning was not being done by VRCSD alone but in conjunction with a consortium of planning agenices working in the Regional Land Use Program (RLUP). RLUP is a cooperative planning effort sponsored by four regional planning agencies (including VRCSD) which are engaged in concurrent county-wide planning efforts. Its purpose is to conduct common planning elements, particularly land use, in order to eliminate duplication of effort and to ensure coordination among the final individual plans of the participants.

What appears to be Ventura's strength, however, may also be its weakness. Should coordination and cooperation among the participants break down, the land use component may be produced too late to be of use in the final WQM plan, or may be lost altogether. There was no indiciation of any problems at the time of the site visit, however, whether or not RLUP will be as effective as it promises remains to be seen.

All of the sampling, modeling and nonpoint source analysis in the WQM program is being done by the Ventura County Flood Control District and the State Water Resources Board. The problem of relying heavily on consultants has already arisen. After agreeing to undertake modeling tasks, the VCFCD changed its mind, thereby necessitating a renogotiation with the State WRB. This, in turn, caused a further delay in the schedule.

Given the ambitious WQM work plan, it is very likely that some downward adjustments in expectations will have to take place as these and other delays occur. Indeed, the Project Director has already admitted that a truly effective public involvement program will need more staff and time than originally was budgeted.

Despite the existing and potential problems, the commitment of the Executive Director to the WQM program and, particularly to further regionalization of wastewater treatment planning and operation, suggests that the VRCSD will complete a plan at the end of the WQM project. The plan may not include as much as originally desired, but it will most certainly address 201 issues delineated in the State's 303(e) plan. Pre-existing data on those issues and the VRCSD's experience in this field will help make this possible.

Given the early phase of the WQM program it is difficult to speculate on plan approval. Most people agree that local elected officials have not been involved sufficiently in the WQM process to date. Meanwhile, the concept of regionalism is not popular among local communities even though it is an accepted practice throughout the County. VRCSD has tried to allay locals' fears by involving local communities directly in the WQM planning process. From all indications it appears that this type of "coopting" will work if only because the local communitities will feel they have no choice but to abide by WQM plans, especially since water supply and preservation of agricultural land is at stake.

Plan approval by the State and EPA appears far more certain. According to all parties involved, the Program Review Board has provided adequate opportunities for input and review throughout the WQM process. Any differences will have been resolved before the plan is completed.

Speculation on implementation is even more difficult since the WQM plan has not yet materialized. The management powers of the VRCSD, however, should work to the program's advantage. The VRCSD is already in place and more than willing to assume more responsibility. Implementation of non-structural recommendations is somewhat more uncertain because:

- Some local communities will be hard pressed to raise the revenue if the plan calls for local expenditures;
- The VRCSD does not anticipate, nor does it seem to want, responsibility for nonpoint source pollution. These responsibilities will have to be divided among existing or newly created bodies;
- Rivalries among existing agencies may surface as the division of responsibilities for non-structural solutions takes place.

Since the political climate appears ripe for approval and implementation of any plan that proposes to clean up and protect the water, it is very reasonable to expect that something will actually be implemented.

B. Public Involvement

The Ventura County WQM program has concentrated its public involvement efforts on reaching public interest groups and representatives from various economic fields through the formal committee structures of both the RLUP and WQM program. Representation on these committees was quite diversified and attendance rather high for several reasons.

- RLUP's Citizen Advisory Committee structure was borrowed from the Ventura County Association of Governments which meant that the committee members were familiar with procedures at meetings as well as with discussions related to regional concerns.
- Reliance upon existing committees meant that the interest of active citizens was not lost by dilution throughout many groups. Rather, citizens' interest in regionalization was fortified by awareness of similar concerns among other planning programs.

- The WQM Citizens Advisory Committee had been organized only a short time before the site visit. Interest was naturally high at that time but it was too early to determine whether this would continue.

Despite the apparent merits of committee structures, some problems were evident in the WQM committee. The most obvious problem was that citizens were asked to participate in setting program goals and objectives long after work schedule decisions were made by the WQM staff. Some citizens had taken their role very seriously and were disturbed when they realized their input would have little effect on planning. Such untimely requests for input not only decreased citizens' interest in communities, but also tended to lower the WQM staff's credibility in the eyes of committee members. Since the WQM program in Ventura is relying heavily on committees, it should devote careful attention to ensure their support. The Project Director indicated that the program has insufficient time and staff to conduct an effective public involvement program. If such was the case, perhaps the WQM staff should heed the citizens' advise and eliminate some scheduled work tasks in order to ensure completion and approval of the most crucial elements of the program.

In addition to committees, the WQM program was relying on newsletters, bulletins, press releases, etc., from RLUP to the general public. Some public hearings related to the WQM program were held but no comments on them were made. Some WQM committee members complained that information was not reaching all members of the public. Obviously, the existing committees could not be expanded since their broad representation already makes decision-making somewhat unwieldy. However, greater efforts to keep the general public informed about the WQM program perhaps should be made in order to allay local fears of being coerced into something about which they know little or nothing.

C. Current Planning Process

The Ventura County WQM planning strategy revolves around the use of RLUP, the VCFCD and the SWRB to supplement VRCSD's work in 201 related areas. Working through RLUP's cooperative arrangement and with State-established planning bodies rather than building up VRCSD's in-house expertise or rather than relying on private consultants, was a wise decision by Ventura for several reasons.

- Addressing nonpoint sources, water supply, land use, etc., should quell fear that the VRCSD simply is promoting regionalization to aggrandise itself. Demonstrating that regional approaches are needed in other aspects of water planning and management should give more credibility to VRCSD's position.

- Working with other respected agencies should also contribute to the final WQM plan's cridibility.

- Since VRCSD had no intention or interest in planning or management outside of wastewater treatment, it probably was wise to invovle other agenices which appeared to be likely candidates for those duties. This arrangement may contribute to smooth transition from planning to management.

A few problems may arise with this arrangement. The primary problem involves information flow both among participating agencies and from agencies to local communities. As the number of actors increase, the focus of attention is distorted and the chance that communications will flounder also increases. As to the substance of the planning efforts, a great deal of water sampling and modeling was designed into the program. The models may be calibrated but as one interviewee stated, there might not be enough data to make the models useful. Again, the scope of the program should have been trimmed back to address a few problems in-depth rather than a large scale superfically.

One of VRCSD's primary concerns in the WQM program are management issues, since the 303(e) plan already identified needs and because the VRCSD already has planning and management authorities. As mentioned earlier, the Executive Director's primary goal appears to be the promotion of further local cooperation in the regional wastewater treatment system.

Unlike many WQM agencies, VRCSD has scheduled specific time in its work plan for the financial planning of continuing WQM activities. Fiscal planning is scheduled, however, at the end of the process where it is likely to feel the pressures of earlier delays in work plan elements. Whether or not there will be sufficient time for fiscal planning remains to be seen.

D. Continuing Planning Process

VRCSD's interest in continuing planning centered on 201 issues which the agency expected to carry out as part of its legally mandated functions. The Project Director considered continuing planning in both nonpoint source areas and land use as equally important. However, since VRCSD had no interest in conducting such activities, it had given much less time to developing an overall scheme for continuing planning. The Executive Director hoped that the Ventura County Association of Governments would use its experience with RLUP to strengthen its credibility, thereby making it the most likely candidate for continuing non-structural planning and nonpoint source management. It appeared that continuing WQM planning generally would involve refining selected alternatives and continuing technical studies where needed.

E. Significance of Local Elected Officials Involvement

Local elected officials were not invited to join the Citizens Advisory Committees of WQM or RLUP, however, they were given an active role in determining policy through the RLUP Steering Committee. The Steering Committee is responsible for review of all program outputs as they develop. This arrangement should provide reasonably adequate time to resolve any disagreements before the end of the planning process; at least for those officials who are involved and are aware of the program. Local officials also had access to program information through RLUP's Technical Advisory Committee composed of technical staffs of State agencies, EPA and local communities.

The Executive Director was pleased with local communities' direct involvement in the WQM process through contracts for population and land use projections. He thought that this participation indicated local willingness to cooperate with the program. One would tend to agree with the Executive Director if for no other reason than contracting was a clever way to "coopt" locals into the process. However, according to some citizens, communities primarily agreed to participate because they felt WQM was a good source of revenue to cover a necessary task with or without EPA support. Therefore, local official support of the program through contracting arrangements must not be taken for granted. Now that the WQM program has their attention, it must work at getting local officials directly interested and more active in the program.

AGENCY: YELLOWSTONE-TONGUE AREAWIDE PLANNING ORGANIZATION (YTAPO)

REGION: VIII - (Denver)

GRANT AMOUNT: $540,000

GRANT RECEIPT: June 4, 1975

STARTING DATE: November 15, 1975

STATUS AT TIME OF INTERVIEWS: YTAPO data collection activities and facility planning subcontracts are currently underway.

REASON FOR INCLUSION IN THE SAMPLE: The semi-rural area is susceptible to rapid growth induced by energy extraction and conversion projects.

I. BACKGROUND[1]

A. Area Description

The Yellowstone-Tongue area covers a vast, semi-rural section of Southeastern Montana. It stretches for 18,300 square miles across six counties (Custer, Powder River, Carter, Fallon, Rosebud and Treasure) and the Northern Cheyenne Reservation, comprised of portions of Rosebud and Big Horn counties. Over 75 percent of the area is grazing land with irrigated and dry land farming increasing.

Although the largest designated WQM planning area, the population served by the YTAPO numbers only about 30,000. Sixty-eight percent of the area's towns have fewer than 100 residents.

Trends in the area population have been changing in recent years. Previously showing a 5.3 percent decrease in population between 1960 and 1970, energy development has caused a significant population increases. One town was noted to have grown 1400 percent since 1970. Future population estimates relate directly to existing and proposed coal gasification, mine-mouth power plant, oil field and uranium mining projects. However, the Director of the Yellowstone-Tongue Areawide Planning Organization (YTAPO), which serves the area as the WQM planning agency, noted that the timing and extent of future energy-related activity remains uncertain. He indicated that, although the area received WQM designation in anticipation of immediate energy development, it now appears that impacts may not be realized until 1990. Accordingly, this uncertainty complicates WQM designation and planning for secondary impacts as it has thwarted YTAPO's attempts to project future population. The YTAPO Director also commented that the Northern Cheyenne Reservation was seeking designation as a Class I Air Quality Region which would inhibit mine-mouth operations and affect development potential.

B. Water Quality Problem

The three rivers comprising the major focus of the WQM effort are the Tongue, Powder and Yellowstone. The Tongue River has reasonably good quality. The YTAPO Director noted that area adjacent to the Tongue River will be a site of extensive road and soil construction

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1 Information in this Chapter was taken from the Region VIII Review of Yellowstone-Tongue 208 Designation, the Final Work Plan (November, 1975), the Semi-Annual Report (May, 1976) and interviews.

related to energy development. The Powder River has poor quality water due to natural and man-made sedimentation. According to the YTAPO Director, the "man-aggravated" contribution is difficult to define as it is relative to some reference point. The Yellowstone and Powder Rivers both have high saline content which are of area concern particularly because of the potential long-term impacts of oversalting soils and the impact of irrigation return flows on the Rivers. The Yellowstone River also shows sizable sediment loads, although less than the Powder River, and some minor impact of substandard municipal facilities. As existing water quality is fairly good, the YTAPO staff as well as other interviewees were concerned primarily with preserving water quality and somewhat recognized the need to plan in advance of energy development.

Consequently, most foresaw the need to upgrade municipal facilities in preparation for future population influxes. Most non-staff interviewees did not believe nonpoint sources to be a significant problem, although a county official expressed concern that mining activities may contaminate groundwater supplies. Although one effect of future power plant cooling or coal gasification projects is dewatering, the YTAPO Director believed dewatering the Powder River may be beneficial insofar as its poor quality impacts on the Yellowstone River would be reduced.

C. Designated Agency

The Yellowstone-Tongue Areawide Planning Organization was formed for the sole purpose of undertaking WQM planning. The State Water Quality Bureau initiated the development of the areawide effort and, in concert with local officials, applied for WQM funding. Subsequent to funding, local officials selected the YTAPO Director. He is assisted by an Urban Planner in charge of public participation and portions of the sampling program, and a temporary full-time Groundwater Analyst. The State provided a Water Quality Specialist who has technical responsibilities in surface water sampling and coordinating the YTAPO project with the State.

The YTAPO project boundaries intentionally align with the sub-state areas defined by the State Department of Community Affairs. The YTAPO Director commented that these boundaries were not logical for the WQM effort as they exclude a considerable portion of the coal fields which is the site of two of the larger operations.

The YTAPO area boundaries are also coterminous with the Air Quality Maintenance Region, currently a Class II Region. However, the

YTAPO Director noted that, within the region, the Northern Cheyenne Reservation was seeking Class I designation which, if achieved, would have some inhibitive impacts on energy development.

For assistance in completing plan components, YTAPO has awarded a number of subcontracts which total 75 percent of their allocated WQM funds. Four sewage system plans are being conducted by various private consultants. Groundwater quality interpretation is the subcontracted responsibility of another private firm. Various public agencies are also committed by contract to providing planning assistance. The Montana Testing Laboratory is analyzing nonpoint source data collected by the Conservation Districts. Mapping activities include the Conservation District and the EPA-EPIC.

Groundwater data will be completed by the Montana Bureau of Mines and Geology. Finally, the Montana Water Quality Bureau is receiving $40,000 for water quality assistance, which includes the full-time services of the Water Quality Specialist loaned to YTAPO by the State.

The Northern Cheyenne Tribal Council received $50,000 for developing the WQM sub-plan for the Reservation. Although the Tribal research staff will proceed fairly autonamously with plan development and implementation will be directed by the Tribal Council, the Northern Cheyenne WQM plan is being coordinated with YTAPO's efforts and will be included in the overall plan.

II. PLANNING STRATEGY AND RESULTS TO DATE

A. Agency Objectives

Because YTAPO determined that a formalized planning process was politically unacceptable to the area, the YTAPO WQM project was designed to respond to local interests. Accordingly, the YTAPO Director indicated that developing a data base was the WQM project priority. He and other interviewees emphasized the data base as providing support to future local planning efforts preparatory to the secondary impacts of energy development. For example, a data base, including land use mapping and land capability analysis, available to counties as well as developers might assist siting decisions either in an informal advisory capacity or perhaps more formally through performance standard techniques. In addition to developing a data base and land use mapping, YTAPO is also emphasizing municipal facilities planning in light of local needs for upgrading facilities and expanding their capacity to meet future growth demands. Further, the YTAPO Director noted that the YTAPO staff responds to short-term problems, e.g., well disinfection assistance, so that people associate YTAPO action with the overall WQM planning effort.

Overall, the YTAPO Director noted that their efforts were constrained by several aspects of the WQM program. First, he believed greater program flexibility was necessary to attend to the more critical areawide issues of water supply and quantity of stormwater drainage. Second, he believed an overall watershed management approach was preferable to limited areawide water quality management. Third, he noted that belatedly issued EPA guidelines commonly followed critical decisions.

B. Technical Components

According to the YTAPO Director, technical planning emphasizes the development of a data base and basic mechanisms for adapting technical analytic tools to future local uses. Existing surface water quality is being supplemented by sampling efforts of the USGS and YTAPO in cooperation with the State of Montana. Groundwater quality data is being compiled by the Montana Bureau of Mines and Geology while YTAPO conducts checks of well log data and samples approximately 200 additional wells. The nonpoint source consultant has been active since April, 1976 in establishing an irrigation return flow sampling program and coordination with the Conservation Districts. The land use mapping phase of the nonpoint program

is a major interest of the area, as heretofore, no basic land use inventories have been compiled. The land use maps as well as the groundwater data base will be available in both a computerized form and a lay interpretation.

As discussed in Section I A, YTAPO efforts to project future population are frustrated by the uncertain timing and extent of potential energy development. To plan in the face of uncertainty, YTAPO has assumed no major change in Federal energy policy and the YTAPO Director observed that a change in Federal policy would be detrimental to their WQM planning efforts. He also noted that the uncertainty surrounding future population rendered municipal facilities planning efforts somewhat tenuous.

Under YTAPO WQM-funded subcontracts, wastewater treatment facility plans, equivalent to Step I of the construction grants program, are underway in five communities. Completion of one of the facility plans was expected June 30, 1976.

Under subcontract to the YTAPO, the Northern Cheyenne Research Project staff is conducting an analysis of the Reservation's water quality problems. The Water Management Coordinator of the Northern Cheyenne Research Project indicated that the information collected would provide a basis for determining the compatability of future coal mining activities and related development with Tribal objectives. The Research staff is examining the water quality problems caused by sediment, irrigation return flow, septic tanks and sewage lagoons.

C. Management Planning

The YTAPO Director indicated that management planning began early in an informal manner with YTAPO staff taking a "seat of the pants" approach to assessing likely management agencies and mechanisms. On YTAPO's draft interim report, alternative implementing agencies, their authority, staff and funding resources were postulated.

YTAPO staff assessment of management agencies has input to the technical alternatives developed along with a legal capability analysis. Under subcontract to YTAPO, a Montana attorney is reviewing relevant legislation and existing authority for implementing WQM plan recommendations.

D. Public Involvement Program

The most structured aspect of the YTAPO public involvement program is the manner in which agency representatives and local elected officials are involved in the WQM planning project. Initially, local elected officials responded to the State Water Quality

Bureau's initiative to form an areawide WQM planning body. Coming together as the YTAPO Board of Directors were the elected county and municipal officials, with the exception of two towns which chose not to participate. A Technical Advisory Committee of 30 members includes 13 elected officials with the remainder of representatives from public agencies.

To date, the YTAPO staff believed the ranching season and the great travelling distances involved in attending meetings inhibited the involvement of officials. Two County Planners noted that the technical information was difficult for officials to absorb and, further, they believed officials did not fully understand the potential value of the information generated by the WQM project.

Other YTAPO efforts to reach the public include news releases, a newsletter, and conducting irrigation water sample analyses at county fairs. In addition, YTAPO has held three informational meetings regarding nonpoint sources and has visited various organizational meetings to present the WQM program and its objectives. YTAPO staff tentatively plans to develop a slide presentation, conduct surveys and develop a citizens advisory group.

Although the YTAPO staff believed that people were beginning to recognize YTAPO as a resource for short-term problem-solving, they felt that people were not particularly aware of the ramifications of future energy development, e.g., potential incompatability of strip mining and agricultural activities. The YTAPO Director noted that reaching the public would be attempted but he was not sure it was practical considering the limitations of YTAPO resources.

E. State and Federal Involvement

The YTAPO Director commented on the assistance provided by the EPA Regional Office. Contact is maintained somewhat consistently by telephone and mail, and EPA Regional Office staff have visited the YTAPO area twice since its inception. The YTAPO Director felt guidance from the EPA Regional Office was "fairly good" but also noted that the EPA Regional Office staff "did not seem to know what they want", (e.g., procedural details).

The YTAPO Director noted that he appreciated the limited EPA guidelines but also added that most EPA guidelines had been received after contracts had already been signed. The YTAPO Director was also concerned that duplication of efforts would occur because the timing of the various studies would preclude coordination. He also desired more and better indexed information from EPA's energy offices and suggested EPA use library techniques or microfiche documents to reduce storage and mailing.

Two State Water Quality Bureau staff members outlined the State's involvement in designated WQM planning areas. Initially, State involvement was considerable as Water Quality Bureau staff wrote all of the work plans for the designated areas. Following funding, YTAPO proceeded fairly autonomously, with the State only moderately involved through contract approvals, occasional meetings among the areawide projects, and general technical assistance. A large portion of the State's $40,000 contract for coordinative services and technical assistance was allocated to providing a full-time engineer to YTAPO. Coordination of State WQM planning efforts which are just beginning, and the YTAPO and other designated WQM plan, is of greatest concern to State Water Quality Board staff members. They indicated that the Board has not had sufficient resources to enable adequate, ongoing coordination, and believed more State involvement was desirable. However, in light of the limited resources, the State Water Quality Board staff members noted that the State was more active in other designated WQM projects having greater difficulties. They believed the YTAPO project was proceeding relatively well and required less State attention.

F. Scheduled Outputs

YTAPO expects to produce five to seven facility plans and various interim reports, land use mapping and groundwater data base collections in computerized form, and a final plan which includes the Northern Cheyenne Reservation Sub-plan. Although YTAPO has experienced some delays in regard to land use mapping and nonpoint source project phases, the YTAPO Director expects plan completion within the time allotted. He believed interim reports provided useful information for areawide distribution.

G. Achievements to Date

YTAPO has already achieved a number of results in keeping with YTAPO's intent to focus on short-term problems of immediate concern to its constituents. Facility planning efforts are well underway with one community's plan completed in July, 1976.

- YTAPO's analysis of a community's water supply has expanded upon the previous limited assessment.
- The YTAPO staff has responded to specific requests for well disinfection measures.
- YTAPO has conducted limited analysis of saline and sodium content of irrigation water at county fairs and distributed information regarding impacts of sprinkler irrigation systems.
- As part of its interim report, YTAPO has proffered a set of tentative recommendations relative to implementing "a practical water quality management plan" with the purpose of soliciting comments on their desirability.

III. EXPECTATIONS

A. Water Quality

Most interviewees did not expect significant improvement in water quality. Rather, they believed that further degradation of water quality would be prevented. The YTAPO Director expected some minor improvement, but noted natural pollutants precluded achieving 1983 swimmable goals. He also expressed greater concern for irrigation use of the highly saline streams than for achieving recreational uses. A facility operator believed upgrading municipal facilities would contribute to water quality improvement. Two State Water Quality Bureau officials emphasized nondegradation and better information available for decision-making as their expectations for water quality impacts and noted that, to date, the State has not enforced its nondegradation policy. They also believed 1983 goals could not be reached due to sediment loads but that streams would be "suitable for present beneficial uses".

B. Plan Approval and Implementation

At this stage of the planning process, several interviewees expected the plan to be approved. Their expectations for plan acceptability were couched in terms of anticipating the plan's role as only advisory to local actions, and that the plan would recommend a locally controlled management arrangement. The State Water Quality Board staff members expected State approval of the plan provided that ongoing coordination of State and designated area planning assess the compatibility of the two processes.

The outlook for plan implementation according to most interviewees depended on local action in response to plan recommendations. Most believed that the plan should be only a suggestive guideline or information base and that a stronger plan would be locally opposed, particularly in light of prevalent attitudes hostile to "too much government", and overall planning and land use controls - all of which are perceived to threaten locally independent action.

Accordingly, the YTAPO Director believed implementation would occur through existing local units of government with technical assistance provided by a locally supported and controlled "Technical Support Project". As stated in YTAPO's Tentative Recommendations, the Technical Support Project would be formed by counties in the energy impacted area and would provide environmental, engineering and related assistance to local units of government.

YTAPO's Tentative Recommendations for plan implementation include 24 items. In addition to the Technical Support Project, YTAPO has proposed specific WQM action in the below listed areas.

- Establish a high quality data base for the entire energy development area which is accessible to all private and governmental agencies.

- Require industry and mines to provide adequate mobile home sites for construction workers.

- Develop a service center to serve the coal development projects, (i.e., "new towns", including appropriate facilities and bus access to sites).

- Modify enabling legislation for county zoning to allow uniform county control over buildings and roads accessory to the mines.

- Enforce existing county wastewater regulations and State household waste disposal guidelines for flexible incorporation into county regulations.

- Tie petroleum and uranium mining techniques to deep well wastewater injection permitting system.

- Expand the role of the Soil Conservation Service to include monitoring and assistance to local governments and private developers.

- Investigate irrigation projects in terms of poor water quality impacts on soil productivity prior to investment.

- Streamline and coordinate State and local water quality monitoring systems, including municipal self-monitoring procedures.

- Classify rivers and streams to reflect saline and sediment limitations on consumptive and irrigation uses and restrict further saline discharges.

In the case of the Yellowstone and Tongue River and reservior sites, strict effluent restrictions would be designed to assure nondegradation.

The YTAPO Director expressed concern that implementation may be affected by the lag in energy development. With a lack of development pressure,

he believed area awareness and support of the WQM planning effort may wane, such that ongoing activities preparatory to secondary impact planning may be hindered. He believed updating information in the context of the rapidly changing area to be the most critical aspect of providing a readily usable tool.

Nevertheless, the YTAPO Director believed the people essential to plan implementation had been involved in the WQM project from the outset. He felt local elected officials' awareness and support of the project had been achieved because of YTAPO's immediate response to officials' concerns. YTAPO staff reported that elected officials were attending meetings about fifty percent of the time, but were satisfied with this attendance record considering the great distances involved. YTAPO staff have an ongoing working relationship with local agencies including County Planners. The conservation districts are working with YTAPO under subcontract for nonpoint source data collection and soils mapping.

Two State Water Quality Board staff members commented on YTAPO plan implementaion. Both indicated that YTAPO would provide valuable data to the State in terms of nonpoint source problems which the State could potentially utilize in agricultural regulations. They did not expect any areawide or new authorities to be established, but rather anticipated exising agencies with their basic authority clarified and strengthened to provide a vehicle for local implementation. They also noted that the State could assume some implementing responsibilities in the event that a local effort is not instituted.

The YTAPO Director indicated that YTAPO has not made any direct attempt to establish legislative contacts. As the Montana Legislature convenes biennially, he noted that the Fall, 1977 session would offer the first opportunity for such contact. Primarily, he believed legislative action may be necessary to clarify existing county authority. Two State Water Quality Board staff members concurred with this view of legislative needs as they believed basic Authority essential to plan implementation, including sediment and erosion controls, currently exists.

C. Continuing Planning Process

Following the initial planning period, the YTAPO Director did not anticipate that a centralized areawide office of the Council of Governments would continue. Rather, he believed the continuing planning function would more likely be in the form of a technical planning staff or "pool" available to assist county planning board and conservation district activities. He expected possible funding support to depend on local sources,

coal tax monies available for such purposes[1], and federal grants.

Other interviewees commented on the likelihood of a continuing planning function. A county official believed there would be a local support for further data analysis and technical assistance functions of a centralized planning staff. Another county official believed the planning period was sufficient for problem identification and wanted continued planning only if focused on assisting local problem-solving actions. Two other interviewees, a County Planner and operating facility manager, were skeptical that continued planning would receive local funding support due to other priorities competing for local resources. Generally, two State Water Quality Board staff members did not expect continuation of areawide WQM planning despite their hopes for the regional function. They indicated that the State retains responsibility for continuing planning and, in the event that areawide efforts do not continue, the State Water Quality Board would perform the ongoing planning function.

D. Relation to Other Water Quality Programs

The YTAPO Director did not expect substantial interaction between the WQM planning effort and construction grants program. He indicated that the plans equivalent to Step I of the contruction grants program were being completed for five to seven communities under YTAPO WQM funding. He also noted that future facilities would not be significantly affected as regionalized waste treatment was not generally feasible in the semi-rural area. A county official hoped the WQM plan would indicate priority facility needs in the area. A State official hoped that the area would recognize the State/EPA priority system for awarding construction grants. Another State official simply stated that through YTAPO WQM funding, facility plans for communities could be developed preparatory to construction funding.

Regarding the NPDES permit program, the YTAPO Director noted that no critical permits were located currently within the area and the YTAPO's WQM plan is accordingly designed for zero discharge. State water Quality Bureau staff member expected the YTAPO project to generate data for input to establishing effluent limits.

E. Local Definition of Success

Most interviewees were asked to define what they would consider a success for the WQM planning project. The local non-staff interviewees generally considered success to be a response to the concerns of the WQM planning participants which include facility planning, identifying contaminating

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1 The Gross Proceeds Coal Tax is assessed on the mine-mouth price of subbituminors and legnite coal and the revenues are portioned to local areas impacted by energy development activities.

sources of groundwater, air interior census for Rosebud County and land use mapping. A County Planner also desired some mechanism, (e.g., land development permitting system) for siting future development and a county official wanted guidance for future local actions. The YTAPO Director believed success would constitute "no major future impacts on water quality" and "pressure to maintain high water quality standards". One State Water Quality Bureau staff member believed that a successful outcome comprised an overall plan for local decision-making, while another desired coordination of studies in the energy development areas and local education regarding the agriculturally induced water quality problem and overall land use-water quality relationships.

All interviewees expected the WQM planning project to generate area benefits. Expected benefits centered on the informational support to county planning activities and public education regarding existing and potential problems related to growth. A State official hoped information would stimulate local action to correct and/or prevent water quality problems.

IV. VARYING PERSPECTIVES OF WQM

A. WQM Staff

According to the YTAPO Director, YTAPO's role is to serve the immediate concerns of local officials which includes developing a data base, land use mapping, and municipal facilities planning. All of their activities are preparatory to planning for the secondary impacts of energy development in the area. In addition, YTAPO has responded to local problems such as disinfecting wells.

The YTAPO Director emphasized the technical planning role of the YTAPO staff in the current planning period. He believed data gathering and analysis were YTAPO tasks endorsed by local officials, whereas areawide planning per se was not. Hence, YTAPO is providing tools for future local efforts and decision-making, and making suggestions for local action. A continuing role for YTAPO may evolve into a technical support staff or "pool" to provide ongoing data analysis and technical assistance to local units of governments.

B. Citizens

Two interviewees were County Planners who had ongoing contact with YTAPO and were involved in various sub-elements of the WQM planning process, (e.g., interim census for one community and land use mapping). Both felt that YTAPO suffered from a lack of public and officials' understanding of the project's value. They anticipated some opposition due to a perception that local control is being pre-empted or otherwise interfered with by Federal regulations. Both believed planning was "unpopular" in the area. One County Planner felt nonpoint source control implementation would best occur through county agents of the SCS.

The third interviewee was the Water Management Coordinator for the Northern Cheyenne Research Project. He explained that the Tribal Council had not been eligible for WQM program funding and consequently approached YTAPO for assistance. Originally, the Northern Cheyenne had subcontracted for specific elements of the YTAPO project, but ultimately EPA directed that a WQM plan for the Reservation be developed. The Research project staff is establishing baseline data to determine the relationship of water quality to potential coal mining activities and related development, and will feed into a larger ongoing research effort regarding coal development. Although the Northern Cheyenne Sub-plan will be incorporated in the overall YTAPO plan, the Tribal Council has implementing authority within the Reservation.

C. Local Elected Officials

Two County Commissioners were interviewed, both of whom were active on the YTAPO Board of Directors. Both believed the YTAPO project provided a means for preparing for the future impacts of coal development. However, obtaining baseline data for impact assessment and planning was secondary to one official who was more immediately concerned with sewage disposal. The other official stated that he was primarily concerned with water supply.

Both officials strongly believed that the WQM plan should be advisory to local actions. While one official supported the idea of continuing areawide planning and a technical support staff, the other official was more reticent to support continued planning until the value of the YTAPO project could be determined.

D. Appointed Officials

The appointed official interviewed headed an operating facility which is being studied for upgrading under YTAPO WQM funding. He noted that the community was too small to receive construction grants funding and the oxidation project would likely be funded through the Farmers Home Administration, the State Coal Board and/or local sources. He believed the community had been "dormant" in correcting municipal facility problems until Federal regualtions forced compliance with discharge permit requirements.

Although his role in the WQM planning effort is largely limited to manageing the operating facility, he commented on the overall YTAPO project. He felt the main problem to be a local concern that the YTAPO program threatens Federal interference with traditionally independent actions of ranchers and local governments. He also believed WQM funding sources to be uncertain; especially questionable was the availability of coal tax revenues to the area as well as the ability of the WQM project to compete with local priorities for use of those revenues.

F. State Legislators

One State Representative to the Montana Legislature was interviewed. He served in the State Environmental Quality Council which is an interim legislative Committee examining uniform permitting. His awareness of the WQM program was limited to committee briefings and he had not been contacted by any WQM agencies.

The State Representative commented on the legislative climate for environmental issues. He believed that utility plant siting, strip mine reclamation, groundwater protection and stream preservation numbered among priority environmental concerns in the Montana legislature. He also cited water quality as a great concern, especially where potential conflicts may occur between users for agricultural and energy development purposes. Although he permally favored land use legislation, he expected the rather conservative legislature to oppose land use control measures.

F. State Water Quality Personnel

Two staff members of the Montana Water Quality Board were interviewed. One staff member had written the YTAPO work plan which was the basis for YTAPO's designation. The water quality specialist on loan to YTAPO from the State is the primary vehicle for State participation.

Generally, they believed the State had not been involved as much as it should to assure coordination of State and designated area WQM planning. Because the State did not have the resources to become extensively involved in each of the four designated WQM planning areas, the State Water Quality Bureau attended to the other WQM planning areas having greater difficulties and left the relatively successful YTAPO project alone. Overall, they expected the YTAPO effort to have some impact, and emphasized their confidence in the YTAPO staff as a primary reason for the expected success.

V. ANALYSIS AND CONCLUSIONS

A. Likelihood of Plan Completion, Approval and Implementation

At this point, YTAPO is reportedly on schedule for meeting the plan completion date, and will likely achieve its objective of developing a data base, providing the area with good quality land use maps, and completing five to seven facility plans. Because of the apparent confidence of local and State interviewees in YTAPO efforts, gaining plan approval seems likely. YTAPO is also understood to be serving local concerns and to be generating recommendations which are only advisory to local actions. Hence, YTAPO actions, in themselves, do not seem to arouse local opposition. However, with the WQM program hinting at Federal interference, plan approval may be hindered by the frequently mentioned attitudes of "anti-big government".

The current outlook for plan implementation is not clear. As noted by the YTAPO Director, a lag in area energy development would allow awareness of the effort to subside. The plan would then only become advisory to local governments. Implementation would potentially occur as local actions are deemed timely and appropriate. Considering the anti-planning attitudes in the area, local actions could arise as a reaction to development, rather than in anticipation thereof. Although energy development may not be realized for five years or more, maintaining a current data base and viable processing mechanism would seem desirable to ensure a dynamic adaptability to the rapidly changing area. A reactive response would be insufficient to the task.

YTAPO is currently proposing tentative recommendations for plan implementation. Although less than one year into its planning period, the tentative recommendations circulated for areawide comment should provide a milestone indicator to local governments and other interest groups of the project's progress to date, as well as its future direction. YTAPO may obtain indicators of the local receptivity to the WQM project with responses to these recommendations.

One of the most important aspects of plan implementation is the proposed Technical Support Project. A staff of Technical Analysts would provide ongoing technical assistance to local governments and provide a means for maintaining an up-to-date information system available to local decision-makers. Local officials may keep well appraised of the needs for local action by relying on the technical staff to provide indicators and analysis of development trends in the future. Further, the technical staff could work with the SCS County agents in a variety of educational efforts to reach the ranching and farming groups, (e.g., information regarding impacts of irrigation water with high saline content). However, at this stage of the planning process, it is not clear what actual local support exists for the establishment of a technical services pool.

B. Public Involvement

Aside from YTAPO contacts with officials through the Board of Directors and informal liaison with county planners and SCS agents, no extensive public involvement effort has commenced. To date, a few activities have been aimed at disseminating information and heightening local awareness of the YTAPO effort and its objectives, (e.g., informational meetings, newsletters, news releases, and conducting irrigation water sample analysis at county fairs). However, public involvement *per se* is yet to be evidenced and may not occur. The YTAPO Director had noted that reaching the public may not be practical given the limited YTAPO resources and the vast distances involved.

Considering the objectives of the YTAPO project, public involvement at this stage of the WQM planning process may not be practical. Developing a data base, land use inventories, and municipal facilities plans are not controversial activities in generating technical products. More important for public review is the manner in which these tools will be used at the local level. As YTAPO has not assumed a stance of effecting local action other than in air advisory capacity, public comment may be more essential in determining the appropriate direction of future local actions. In essence, YTAPO is not telling communities how they should grow, but only advising them on the base of analytical results as to what changes are presently occuring and will potentially occur in the course of growth. Nevertheless, through information dissemination efforts, YTAPO may stimulate local interest in preparing for growth and enhance the prospects for local action.

C. Current Planning Process

From the outset, YTAPO was directed by local officials who form the areawide organization, to devote attention to specific concerns. By focusing on the local interests in municipal facilities, data gathering and land use mapping, YTAPO assumed the role of technical advisors to local governments. This has resulted in a straight forward technical approach to the WQM planning task which is manageable within the planning period and resources available.

Enhancing the project's manageability is the object of YTAPO as a single purpose, short-term agency, unencumbered by predecessor, concurrent activities or complex institutional arrangements. The management question is answered by the few municipal and county authorities presently operating. For example, regionalized facilities in this sparsely populated area do not emerge as a management complexity and, consequently, municipalities will retain control over their operating facilities. Moreover, the YTAPO area is not suffering from degraded water quality due to heavy urban and industrial activity. Rather, its relatively good quality waters are contaminated primarily by natural man-aggravated sources of pollution (e.g., high sediment and saline content).

Hence, the water quality issue is one of nondegradation in the context of an area susceptible to rapid growth induced by energy development.

Probably the most vexing problem for YTAPO planning is the uncertain advent of energy development. Without explicity knowing the timing and extent of energy development, determinating population projections became a difficult task. Municipal facilities plans were seen as particularly tenuous, as population to be served was a rather gross assumption.

Planning in the fact of uncertainty requires flexibility. The YTAPO staff recognized the potential for rapid change in the area, and therefore must be in a state of continual readiness to cope with emerging problems. Developing tools for decision-making and creating an awareness of the water quality issues attendant to growth seem appropriate first steps. Applying those tools in preparation for growth is the second step. The extent and timing of growth related to energy development remains uncertain, and may force local governments into a reactive position.

D. Continuing Planning

An ongoing means for providing technical assistance to local actions would seem critical to plan implementation. The Technical Support Project would offer that continuing role in specific technical tasks, such as updating information and advising local governments. However, if development pressures are not sufficient to cause officials to value the continuing function, ongoing planning responsibilities may fall to the County Planners or to the State, neither of which has sufficient staff to thoroughly attend to the areawide issues. Should coal tax revenues be available for a continuing planning function, the question remains as to whether local governments would divert funds from other priorities to support the effort.

E. Significance of Local Elected Officials' Involvement

Clearly, local elected officials are the primary constituents of the YTAPO project. YTAPO responds to the immediate concerns of officials and conducts WQM planning in a manner which seemingly renders YTAPO an extension of local staff. YTAPO is providing data previously lacking in the area, including land use mapping and, in one community, an interim census. Both of these efforts have considerable transfer value to other local activities. Most interviewees, including two County officials, recognized YTAPO's contributions to their efforts and expressed appreciation for YTAPO's responsiveness to their concerns.

In its advisory capacity, YTAPO has seemingly established a rapport and credibility with local officials which will hopefully enhance their receptivity to YTAPO recommendations for plan implementation. However, should local officials balk at under-taking action, the impact of YTAPO's efforts may be short-lived.