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MANAGEMENT AGENCIES HANDBOOK
for
SECTION 208 AREAWIDE WASTE TREATMENT MANAGEMENT



ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

SEPTEMBER 1975

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PREFACE

This is the fifth in a series of handbooks designed to provide local agencies with additional assistance in the Section 208 Areawide Waste Treatment Management planning and implementation program. Designation, Work Plan, Cost Analysis, and Interim Output handbooks have already been published.

These handbooks are designed as a supplement to the 208 Regulations, Guidelines, and EPA Policy Statements published as program guidance (AM memoranda) by the Water Planning Division. The handbooks repeat or reference the regulations, guidelines and policies; and provide realistic examples of typical local agency responses.

This handbook discusses the actions and institutional arrangements required to implement the areawide plan through construction, financing, planning of waste water management facilities, regulations, non-point source controls, and land use practices.

Other EPA reference documents for the 208 areawide management program include:

- 40 CFR, Part 126, Areawide Waste Treatment Management Planning Areas and Responsible Planning Agencies
- 40 CFR, Part 35, Subpart F -- Interim Grant Regulations for Areawide Waste Treatment Management Planning Agencies (May 1974)
- Guidelines for Areawide Waste Treatment Management Planning (August 1975)
- Area and Agency Designation Handbook for Section 208 Areawide Waste Treatment Management Planning (January 1975)
- Work Plan Handbook for Section 208 Areawide Waste Treatment Management Planning (February 1975)
- Cost Analysis Handbook for Section 208 Areawide Waste Treatment Management Federal Assistance Applications (May 1975)
- Interim Output Evaluation Handbook for Section 208 Areawide Waste Treatment Management (June 1975)

This handbook was prepared under EPA Contract No. 68-01-3195 by Elizabeth H. Haskell under subcontract to Centaur Management Consultants, Inc., with the direction and support of James W. Meek and the Areawide Management Branch and James Lund and the Planning Assistance and Policy Branch.

A handwritten signature in cursive script, reading "Mark A. Pisano".

Mark A. Pisano
Director Water Planning Division
Washington, D.C.

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NOTE

This document is not a replacement to the Act, the Regulations, the Guidelines or official EPA Policy Statements. It is a supplement to these documents, showing hypothetical examples of local responses to 208 program requirements. The examples in this handbook do not constitute a uniform EPA standard of acceptability for 208 plans. Any clarification and specific conditions applicable to a local area should be discussed with the EPA Regional 208 Coordinator.

INTRODUCTION

In order to implement 208 areawide plans it is necessary to set up a 208 management program which includes a structure of organizations and institutions and their responsibilities in carrying out the areawide plans. These organizations may be new ones or existing agencies of general purpose state and local government, special districts, or multi-purpose regional agencies, or any combination of these. Agencies' functions, organizational structure, powers and funding are all elements of the management program. The 208 plans will describe a management program, and the governor will actually designate those agencies to carry out the plan and submit his choice of these agencies along with the 208 plan to EPA for approval within two years after 208 planning has been initiated.

The purpose of this handbook is to provide several examples of possible water quality management programs that might apply in hypothetical areas. The examples are intended to show the way the management structure can carry out a 208 management program composed of a series of functions on elements which should fit together and be properly coordinated. They do not provide details on the performance of any single function. The examples show how the functions of construction, financing, planning of waste water management facilities, regulation, non-point source controls and land use practices relate to one another organizationally and legally. The examples are simplified, since actual arrangements for implementing programs, operating facilities, financing and managing growth are extremely complex and will vary from region to region.

By offering examples, this handbook does not mean to imply that those shorthand models presented are necessarily the best, and certainly are not the only, possible water quality alternatives. Each example will briefly describe the water quality and institutional characteristics of the hypothetical region that existed during the 208 planning phase. The management program will be described in terms of organizations, geographical area served, powers and financing. The management program will also be described in terms of the functions within that structure such as regulatory programs, waste management and overall coordination. The examples are not detailed as to technological solutions specified in the 208 plan, although, to be sure, these technical recommendations in each area will greatly influence the management program selected.

While written specifically for 208 planning agencies, the handbook can also be used by potential management agencies, which should help the planning agencies identify management alternatives. From the start, 208 planning must be approached with management in mind.

Relationship of 208 Planning to 208 Management

Management can be considered the "doing" phase of the 208 process. In planning, wastewater management policies are set and agreed upon, then management agencies, one or more, take over and carry out these policies and plans on a day-to-day basis. Thus, planning is the designing phase and policy-setting element, while management is the operational phase, when policies are translated into action and implemented.

Planning is a continuous process which exists in tandem with management. Planning is not a two-year affair that concludes with the completion of the first plan, but rather continues to give guidance to all management agencies involved in areawide water clean-up and protection. The federal law calls for 208 plans to be reviewed each year, and while federal funding is provided for only two years, substantial funding at the start of planning is intended to spur continuing and even more essential planning in the long term. Applicants for 208 planning agency designations must state their intentions to provide for a financially self-sustaining planning process, including annual plan update, beyond the initial 2-year period.

The federal law provided funding authorization to develop and operate a continuing areawide waste treatment management planning process. The law also requires the annual state certification of the plan as consistent with applicable state basin plans. In a majority of cases, EPA expects that these responsibilities will lie with the designated planning agency. The planning agency should be given the responsibilities of evaluating the progress of plan implementation and monitoring the schedule set forth in the approved plan. The planning agency should report its findings to the management agency(ies) and the state. The findings should also be included in the annual certification procedures.

Care must be taken to assure that the planning agency is not regarded as a watch dog by the management agency(ies). The planning agency's main responsibility is to report to the management agency (ies) so that corrective action can be taken.

Requirements that Management Agencies Must Meet

Areawide 208 planning is planning for management, and implementation of approved plans is clearly mandated by Congress, both in the actual language of Section 208 and other sections as well as in the spirit of the law. EPA has emphasized Congress' requirements to ensure that 208 plans are carried out. While Congress was quite specific that 208 plans should be implemented, Section 208 allows states and localities great flexibility in designing areawide waste management systems, and EPA encourages 208 planning agencies to tailor an institutional network to its own water quality and financial needs and governmental style.

A governor can designate one or more management agencies to carry out the plan. There is considerable latitude within the requirements for these agencies set by Section 208 that will allow various metropolitan areas, small towns and rural areas to devise an acceptable and implementable water quality management plan.

Most of the specific requirements for 208 management agencies set forth in PL 92-500 relate to the financing, construction, operation and maintenance of wastewater treatment works. These require that areawide management, as a whole, must be able to:

- design, construct and operate waste treatment works,
- accept and use grants,
- raise revenues and assess waste treatment charges,
- incur short and long term indebtedness,
- require municipalities to pay proportionate share of treatment costs,
- be able to refuse wastes from municipalities or subdivisions which do not comply with provisions of an approved plan,
- accept industrial wastes, set pretreatment standards and refuse industrial wastes that do not meet requirements,
- be able to "manage effectively waste treatment works and related facilities". This is a more general requirement for legal, financial and organizational capability in the management of treatment works, as broadly defined to include devices for storage, treatment, recycling, reclamation of municipal sewage or industrial wastes.

In addition to these requirements that relate to treatment works, the law includes a general requirement that pertains to the entire management program. This requirement both ensures flexibility in designing an areawide water quality system, and at the same time demands innovation on the part of 208 planners, on the part of governors who must designate management agencies, and within EPA which must approve those management agency(ies) designation and 208 plans. This requirement states that the management program must be able to carry out the approved plan. This general feature of the law goes beyond those plan elements relating to treatment works, to ensure that all management functions called for in the 208 plan are handled effectively by some organization. This requires legal, financial and institutional capability. Also it requires that management is politically feasible, that organizations either exist, are being set up, or are likely to exist with enough power and funds to do the specified job.

While the particular institutional forms created by state legislatures or by local action in response to a 208 plan might vary from region to region, the central objective of 208 planning and management will be the same -- the creation of competent decision-making bodies that will work together to achieve the water quality objective, at the lowest economic, social, political and environmental cost. Water quality management must provide a comprehensive and unified approach, achieving the water quality standards by means that are agreed upon by the region, itself, to be the best for the area as a whole.

All water pollution sources must be addressed, and if not controlled, at least taken into account. All management functions must be authorized and funded, and, perhaps the most essential ingredient, a coordinative mechanism provided. The clear aim of Congress in writing Section 208 is to overcome irrational fragmentation of responsibility, in which jobs are unnecessarily duplicated and governmental agencies sometime work at cross purposes with one another. Coordination may be achieved, procedurally, through such mechanisms as intergovernmental agreements and coordinating groups. Alternatively, coordination could be achieved by structural changes in governmental organizations, such as creation of new organizations, reorganization of existing functions, or establishing whole new areawide government.

In some geographical areas and in some governmental situations where the number of local units involved is small, water quality management may be decentralized with localities constructing, operating and maintaining wastewater management facilities, zoning and regulating nonpoint sources, with only a coordinator at the areawide level acting as a planning and administrative mechanism to integrate local units. Such decentralized systems in some cases may increase responsiveness to individual public service demands, provide greater levels of political control and, in any event, be easier to implement since they require very little institutional change.

Other 208 areas, such as metropolitan regions with a great many small and conflicting political and service jurisdictions, may only be able to solve their political and financial problems by adopting more substantial institutional change. These areas may choose a two-tiered federated governmental structure in which local governments are assigned key operating functions, while other policy-setting responsibilities are handled by an areawide body. Such local/areawide split of responsibility are said to take advantage of the best of local capabilities as well as areawide approaches, achieving economies of scale with local participation and popular control.

Still other areas may have already, or choose to create, consolidated forms of government with both local and areawide functions being performed at the regional level. Supporters of such consolidations maintain that these arrangements produce economy in government, greater public service coordination and integration and more efficient program administration and equitable financing of public services.

The organizational structure selected to carry out the 208 plan will vary, depending on the water quality solutions called for in the plan, the history and characteristics of established governmental structures and governmental preferences of the people and elected officials in the planning region.

Questions When Designing a Management Program

In setting up a water quality management program, these questions need to be answered:

- (1) What geographical area shall each agency serve? Will the management area be the same as the 208 planning area, or smaller or larger? Is there a rational relationship between the task to be performed and its administering unit?
- (2) What services will each organization provide? Shall the organization be single purpose just for water quality or multi-purpose? Will the organization handle water supply, air pollution control, solid wastes management, land use regulation, land use management, or any other programs?
- (3) What functions will each organization perform, what powers are needed to perform the functions, and does the management program as a whole perform all needed assignments? In the water quality field key functions include:
 - continuing 208 planning (including policy guidance to management agencies, revising, updating the 208 plan, evaluation of performance of 208 management and the relationship of water quality system with other systems in the region and with state, federal governments). Will there be a separate planning agency? How will water quality relate to other planning?
 - facilities planning,
 - construction, operation and maintenance of facilities to collect, intercept, treat, dispose, reuse and recycle wastes from municipalities and industries, including stormwater management, nonpoint source runoff controls, sludge disposal or use,

- regulation of existing and new pollution sources, including nonpoint sources, permits, water quality and effluent standards, enforcement and penalty application,
- financing the system, including construction, operation and maintenance, planning, administration and overhead costs; setting user charges and pricing policies,
- tax policies to provide subsidies or negative incentives to abate water pollution, preserve clean areas,
- monitoring; ambient water quality monitoring, compliance monitoring, biological monitoring and support for the general data base,
- information systems -- data gathering, storage, retrieval, analysis and dissemination,
- coordination and enforcing the plan. Who will require compliance with the 208 plan? How will compliance be achieved? How will conflicts be resolved among management agencies within the same system; between management and planning functions; between the water quality management system and other systems in the same region? Will basic control be local, state or federal?

Should some of these functions, such as construction, be split between two or more organizations along subfunctional lines, or centralized? For example, should sewer collection lines be built and operated locally and interceptors and treatment plants be handled regionally?

- (4) Will all functions be assumed immediately, or will there be an interim, partial stage, with additional functions added at several times?
- (5) Does the program, as a whole, address all sources of pollution, including industrial, municipal and vessel point sources; stormwater runoff, including combined sewer overflows; nonpoint sources such as runoff from farms and feedlots, forests, mines, construction sites, streets and yards?
- (6) Is financing adequate and assured for all needed actions, including overhead and administrative costs?

- (7) Is financing of any regional organization or services adequately self-sufficient to assure a regional perspective?
- (8) Are there maximum opportunities for active and productive citizen participation?
- (9) How are key management agency decision-making officials selected -- appointed, if so, by whom? Elected, if so at-large or by districts? If districts, what will be the boundaries?
- (10) Do top officials of management agency(ies) serve part-time or full-time?
- (11) What is the relationship between boards and their staff?
- (12) How do organizations in the areawide management program get their powers--by state legislation, local referendum; service agreements signed by local governing bodies; interstate compact; state agency delegation of authority; Congressional action creating a federal agency or federal-interstate compact?
- (13) Are new powers assigned to existing agencies or are new organizations created?
- (14) How will the water quality planning and management functions be coordinated with other environmental and social activities and governmental programs in the same region?
- (15) How will water quality planning and management in the 208 area be coordinated with other water management efforts of geographical areas outside the 208 region?

Criteria for an Effective Water Quality Management Program

In deciding these institutional issues of where to place functions and how to coordinate agencies into a program, judgments must first be made as to criteria for "effective" institutional networks. Criteria for assigning governmental functions might include:

- Economic efficiency. Can the system achieve its water quality goal at minimum cost? Does it achieve economies of scale, for example?
- Equity. Are the benefits of clean water and the costs of clean up reasonably and fairly distributed over the affected population? Are external costs, such as impacts on other environmental problems and impacts on other services and social objectives, minimized? Are individuals' right protected?

- Political accountability. Are the agencies accessible to, accountable to and controlled by their affected residents in proportion to their stake in the outcome of governmental decisions? For example, are the agencies not dominated by any one special interest group? Is broadly-based citizen participation encouraged and structured?
- Administrative efficiency. Has each agency been assigned adequate powers to carry out its mission? Is the system able to pursue intergovernmental cooperation and reduce interlocal functional conflict? Do the actors in the system have adequate funds? Is the structure sufficiently compatible with existing governmental institutions in the area to be a politically feasible instrument for performing assigned functions? Does each agency and the program as a whole have functional and a real flexibility so that all alternatives and trade-offs are considered.

In some instances these criteria need to be ranked as to their importance, for some may conflict with one another, at least in the short run. For example, political accountability may favor allocation of functions to smaller local jurisdiction while equity often demands attention of larger, more encompassing units.

Institutional Change: Getting from Here to There

Depending on the degree of institutional change recommended in a 208 plan, the transition from the existing management structure to the proposed water quality management program will require varying amounts of time and governmental effort. State or local laws may need to be enacted, or additional funding provided. State or local administrative actions may be needed, or even state constitutions revised, in order to create powers and capabilities for management agencies to implement the 208 plan. Getting from here to there is a highly individualized matter, affected by a state's constitution, state and local statutes and ordinances, political climate and preferences in specific 208 regions and fiscal considerations.

The federal law requires that designated management agency(ies) must have authority to carry out the plan, before EPA can approve the designations. The management agencies must have general authority and, at a minimum, be in the process of obtaining specific authority. The schedule in the plan must set forth the time period to attain such authority. There is a difference between general authority and specific authority. For example, the 208 plan may call for passage of a local sediment control ordinance. One or more of the proposed management agencies have the general authority to adopt and enforce such legislation but there is no specific legislation now on the books. In this case the management agencies can be considered to have the necessary authority to carry out the plan, but must be instituting steps to draft the specific sediment control law.

As the planning process produces outputs each year, its policy guidance for management agencies may change. 208 planners will have interim outputs after the first nine months, which in many cases will be able to feed into and improve the management process immediately. Interim outputs must have the approval of the state water pollution control agency and Regional Administrator of EPA. If these interim outputs direct new management actions that can be performed by existing management agencies with existing powers, such new steps should be taken after the first year. The idea is that planning will begin to improve the management system as soon as possible and each year the management system will be increasingly strengthened and in some cases changed, as a result of continuing 208 planning.

If the institutional change called for in the 208 plan is expected to take more than a year, such as enacting an interstate compact, it is wise for 208 plans to develop interim management strategies and interim authorities for management agencies. For example, a 208 plan could call for a regional special purpose agency to acquire, own, construct, operate and maintain all wastewater collection and treatment facilities in a metropolitan area. However, acquisition is to be phased over a 20-year period, so in the interim the regional utility is set up, but initially contracts from the regional utility are let with local governments which continue to own some of their own facilities.

If the legislative, administrative or voter action called for in the 208 plan does not occur, 208 planners must revise the plan, formulating a new management program that is achievable, as well as able to meet and maintain the 1983 water quality goals. For example, if a recommended non-structural solution fails to be authorized, such as land use measures by local governments, additional structural solutions, higher levels of waste treatment, may be needed.

The following four examples illustrate a set of hypothetical institutional structures for the continuing planning and management functions called for in the approved 208 plans.

EXAMPLE ONE

ONE REGIONAL SINGLE PURPOSE OPERATING AGENCY THAT IS BOTH
THE 208 PLANNING AND PRIMARY MANAGEMENT AGENCY

The Area

This intra-state metropolitan area of one million people has two large local governments and seven smaller suburban and rural jurisdictions. It is a water-rich region, with coastal and fresh waters, some of which are clean, others polluted and classified as "water quality" segments.

The 208 planning agency, the Clean Water District, is a regional agency that provides wastewater management services, on a wholesale basis, to the local governments and sanitary districts and industries of the metropolitan area.

Wastewater sources are mainly point sources, about evenly divided between industries and sewered domestic wastes. Stormwater discharges into sewers are a problem. There is also troublesome urban runoff carrying debris, chemicals and bacteria into a lake in the city. Agricultural wastes and forestry sediments flow into the watershed used as public water supplies.

Areawide Waste Management Program

The governor designated the Clean Water District as the primary 208 management agency, the same regional water quality agency which prepared the initial 208 plan and is the continuing planning agency. The District performs most functions used to control point sources in the region. The State Department of Environmental Protection (DEP) is the lead agency for managing non-point sources, while planning for their control and some management duties are shared with the Clean Water District.

The District is a municipal corporation for the metropolitan area, authorized by the state legislature and approved by local voters on referendum.

The corporation is governed by a Board of Directors composed of local elected and appointed officials:

- the elected county executive of the central county,
- one member from each county commissioner district who is an elected county councilman,
- one non-elected person from each participating county, chosen by the board of commissioners of each component county containing 15,000 or more persons,

- the mayor of each participating city over 15,000 persons or, if none exists, an elected member of city council selected by the county,
- one member representing all component cities less than 15,000 persons selected by and from the mayors of these towns,
- one additional member selected by the city council of each component city of 15,000 or more persons, chosen from city council until all councilmen are members and thereafter to be selected from other officers of such city,
- one member chosen by all sewer districts or water districts which operate a sewer system and is a component part of the District,
- the Board Chairman selected by the other members of the council, who does not hold public office or work for any component city or county.

These members serve at the pleasure of the body which selected them. The Board is advised by a Water Pollution Control Advisory Committee, which is composed of one person appointed from each city or county which operates a sewer system and one person chosen by each board of commissions of each sewer or water district in the region. These persons serve at the pleasure of the appointing bodies and elect their own chairman.

The District also has a full-time staff of 70 persons, including an Executive Director that is hired by and serves at the pleasure of the Board. Staff includes planners, engineers, lawyers, scientists and public administrators and a variety of non-professionals.

The District maintains ten information and complaint centers in various sectors of the region, including one in each local governmental area.

Point Source Related Functions

The powers of this municipal corporation include planning, acquisition, construction, operation, maintenance and regulation of facilities for sewage disposal, stormwater drainage, industrial or commercial pollutants. Sewer facilities owned by a county or city or special district may be acquired or used by the municipal corporation only with the consent of the legislative body of that unit. These units may convey or lease their facilities to the corporation or contract for their joint use.

The District can require local governments and special districts to discharge collected wastes to the District. The District fixes rates and charges, sets standards for construction of local water pollution abatement facilities and approves plans for construction of facilities which are connected to the facilities of the District.

Four new sewage treatment plants have been built to replace 28 older facilities. The region is completely interconnected with trunklines.

continued . . .

EXAMPLE

Some of the facilities judged too small to be efficient for waste treatment are used for stormwater storage and connected to the four treatment plants. Other lagoon plants and outmoded facilities were phased out altogether.

The District provides some advanced waste treatment, secondary treatment at some plants, using land disposal of sludge in strip-mined areas, and building stormwater catch basins and computer control of flows into, through, and out of the system in order to maximize facilities' efficiency and minimize impacts on the environment. It provides these services on a wholesale basis to all sewered municipalities and most of the area's industries.

The District may acquire and provide facilities for local collection of sewage or stormwater in an area that has no local public sewer facilities. It may also do so in areas with local services, if the local legislative body approves, or without local approval, if the local governing body has failed for six months to correct a water pollution problem as specified by the state Department of Environmental Protection.

The District regulates discharges to its facilities, which includes setting effluent treatment requirements, standards of performance, pretreatment requirements, user charges and industrial cost recovery system. It requires all conditions of the National Permit Discharge Elimination System permits issued to the District or its component agencies to be met. Violation of regulations can result in civil penalties and fines.

The District issues revenue bonds, which are financed by user charges. The local units levy the District's service charge on communities and companies, which is determined so that communities and industries pay their proportionate share of construction, operation, maintenance and overhead of its services, including continuing 208 planning costs. It may also structure its fees as effluent charges. Sewage, stormwaters and commercial and industrial waste control are all financed in this way. The District also dries, packages and sells its sludge.

The 208 plan, approved by localities, the governor and EPA calls for all existing and new commercial and industrial sources along the harbor to connect to the sewer system, eliminating any direct discharges into coastal waters. The District itself is the only remaining major source discharging effluent with a high degree of treatment into the coastal waters.

Discharges from vessels carrying oil and hazardous materials are regulated by the State Department of Environmental Protection, EPA and the U.S. Coast Guard. Pleasure craft discharges are regulated by the State DEP.

The District sets up and maintains the regional water quality and related lands information system. It monitors water quality, its own and others' effluents and non-point flows, and biological systems in the 208 region. It also monitors discharges to its system for compliance with regulations. It also collects land use, water supply and other relevant data, computerizes it, and retrieves it for the use of the District, local

continued.

governments, state and federal agencies, and private individuals or companies. All information is available on request, and at cost to the applicant. The District also analyzes the data and disseminates it in a variety of ways, including through the mass media, in booklets, reports, movies, seminars, meetings and briefings for governmental and private groups.

Non-Point Source Functions

The District's 208 plan describes, evaluates and sets policy for all high priority non-point sources in the region, including agricultural erosion, animal wastes, and pesticides runoff; erosion from construction sites in forestry areas and urban runoff. Operating agencies include local governments, the district, state and federal agencies.

The District drafts model ordinances based on statewide "Best Management Practices" for control of agricultural and urban runoff, while local governments are the major operating agencies, adopting and enforcing these requirements. The District also recommends to local governments proper land use development patterns for incorporation by local planning and zoning bodies. The District comments on local zoning and subdivision controls and local land management practices. 208 planners also recommend to local public works departments street cleaning methods and schedules.

The District prepares an urban drainage plan to control flows into the major affected lake in the region, and local governments implement this plan. If localities fail to implement this plan and a substantial water quality problem results, the District can step in and perform the needed services, construction or operations.

Land management and runoff controls in state forestry areas are regulated by the State Forestry Service, located in the Department of Environmental Protection. The state and federal forestry services also provide technical assistance to private operators and require proper land management practices on state and federal lands. For example, design of forest roads on public lands is regulated to minimize erosion in sensitive watersheds.

Land use planning and regulatory powers are exercised mainly by local governments, with the advice and recommendations of the District. However, any land development proposed in the region that can have a major impact on water quality goals and on achievement of the 208 plan is reviewed and can be vetoed by the District, if the development is not in conformance with enforceable provisions of the adopted plan - such as waste load allocations. The District has 30 days to act, or concurrence is assumed.

Coordination

The orchestration of all participants in the water quality management program is provided in the region by the District, through its 208 planning, point source regulation, and participation in A-95 review of applications for federal grants.

continued . . .

EXAMPLE

The 208 plan sets water quality and effluent goals and strategies. Each year the plan sets performance standards and annual output requirements for all involved governmental units and major discharging industries and non-point sources in the system. At the end of each year, the 208 planners evaluate performance of participating governmental agencies and the management program as a whole. This data is published and feeds back to the planning process and the formulation of annual output requirements for the following year.

The 208 plan identifies the State Department of Environmental Protection as the coordinator for non-point source management, which includes several regional agencies in the 208 area, local governments, several state and federal agencies.

Strengths and Weaknesses

The special purpose regional agency, as the lead water quality planning and management agency, can achieve economies of scale in the construction and operation and management of point source control systems. Thus it rates high on economic efficiency in the performance of its single function. However, in limiting its concern only to water quality, and primarily to structural solutions, it may be neglecting some major interconnections between water quality and air pollution, or solid wastes problems, or economic development, transportation, housing or other social objectives. Because its powers are primarily structurally related, its planning and actions may favor such solutions to those non-structural measures that local and state governments wish to carry out, which are more difficult to achieve.

When planning is performed by the operational agency, planning may tend to favor those solutions -- primarily structural -- that the planning agency also performs. On the other hand, the close coordination of planning with operations within the same agency, increases the likelihood of 208 plan implementation and strengthens the impact planning makes on operations.

Cities of special purpose regional agencies contend that political control is weak, that the governing body of the agency is appointed for a long term, and citizen control can only be exercised indirectly, through the local government officials who appoint them. Robert Wood calls these special agencies "advantageous to the governmental process rather than to the individual".* On the other hand, because the Board is appointed for a six-year term, it can take a truly regional view and not be controlled by parochial, frequently changing local governmental interests, achieving the most equitable assignment of costs and benefits throughout the region.

The management program maintains a local control over land use decisions, while sharing power over key developments with the regional water quality agency. However, coordination point with non-point controls is not strong, depending on the regional agency and the state agency working closely together, with few sanctions if they fail to do so. The state, with its powers to certify the 208 plan each year, adopt and enforce water quality standards, is a key decision-maker in the management program.

* "A Division of Powers in Metropolitan Areas", Metropolis Against Itself, p. 61).

continued . . .

EXAMPLE

In summary, the Clean Water District is strong on economic efficiency, but weak on coordination of water quality with other goals, on coordination of point with non-point source controls, and on political accountability of the administering agency.

Example One

One Regional Single Purpose Operating Agency that is Both the 208 Planning and Primary Management Agency

I. 208 PLANNING			
<u>SCOPE</u>	<u>SOURCE OF FINANCING</u>	<u>PLANNING AGENCY</u>	<u>RELATED FUNCTIONS</u>
All Point and Non-point Sources in 208 Region	Service Charges for Waste Treatment	Clean Water District	Prepares local urban drainage plans; technical planning asst. to local govts. on water quality; drafts model local ordinances; data gathering

II. 208 MANAGEMENT			
<u>WATER POLLUTION SOURCE</u>	<u>TECHNICAL SOLUTION PROVIDED IN 208 PLAN</u>	<u>MANAGEMENT ACTION REQUIRED BY 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
<u>POINT SOURCES</u>			
<ul style="list-style-type: none"> • Sewered municipal and industrial wastes 	Collect wastes	Plan, finance, _____ construct, O&M	Local govts., sanitary districts
	Treat, dispose, reuse wastes	Regulate discharges and sewer use Plan, finance, construct, O&M Regulate discharges _____	Clean Water District* Clean Water District State Dept. of Environment Protection (DEP)
	Adequate Private Treatment	Regulate discharges through permits, pre-treat standards Regulate thru effluent & water quality standards Regulate by fiscal pricing policy Regulate siting location	Clean Water District State DEP Clean Water District Local govts., Clean Water District
<ul style="list-style-type: none"> • Direct Industrial Discharges 	Some must connect to sewers	Plan, finance, construct, O&M	Clean Water District
	Better site approval	Regulate location, design	Clean Water District State Health Dept. Local Zoning Board
<ul style="list-style-type: none"> • Septic tanks 			

continued . . .

Example One (Continued)

<u>WATER POLLUTION SOURCE</u>	<u>TECHNICAL SOLUTION PROVIDED IN 208 PLAN</u>	<u>MANAGEMENT ACTION REQUIRED BY 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
• Storm Water	Construct catch basins, use small existing treatment plants for storage; computer management of flows thru collection & treatment systems.	Plan, finance, construct, O&M	Clean Water District
	Design requirements for new systems emphasizing on-site detention	Regulate construction of new systems	Local Governments
• Vessels	Control oil & hazardous materials	Regulate _____ Clean up _____	State DEP State DEP, State Harbor Authority
	Install & use waste collectors on pleasure craft	Regulate _____	State DEP
<u>NON-POINT SOURCES</u>			
• Agricultural Runoff	Improved land management practices	Ordinance to _____ require conservation plans	Soil Conservation District Clean Water District
		Land Use Planning _____	Local Governments Clean Water District
	Pesticides Use & Better Land Management	Regulate _____ Technical Asst. _____	State DEP State Ag. Dept.
• Erosion from Forestry Areas	Better private management of road construction; cutting practices	Regulate forest _____ road construction	State Ag. Dept.; Forestry Service
	Better public management of parks, other public lands	Manage, construct, maintain facilities	State Parks Dept. Bureau of Public Lands
<u>COMPREHENSIVE FUNCTIONS</u>			
		• Establish, maintain information system	Clean Water District
		• Monitor water quality, point & non-point discharges; Discharges to treatment system	Clean Water District State DEP

continued

Example One (Continued)

COMPREHENSIVE FUNCTIONS (Continued)	MANAGEMENT ACTION	
	<u>REQUIRED BY 208 PLAN</u>	<u>RELATED FUNCTION</u>
	<ul style="list-style-type: none"> • Provide technical assistance to local governments 	Clean Water District State DEP
	<ul style="list-style-type: none"> • Coordinates all management agencies; Monitors compliance with plan 	Clean Water District
	<ul style="list-style-type: none"> • Manpower training for own staff, local govts. industry 	Clean Water District

* Primary Management Agency for Point Sources

EXAMPLE TWOCOG AS A 208 PLANNING AGENCY AND A SPECIAL PURPOSE
PRIMARY REGIONAL MANAGEMENT AGENCYThe Area

The 208 region is an intrastate, middle-sized metropolitan area, with a total population of 150,000, serving ten local governments. Included is a middle-sized city, suburban areas and rural farming areas, located on the coast, with a major river basin and a large, clean lake used for public water supply and recreation.

The designated 208 planning agency is the council of governments for the region, a voluntary regional association of local governmental officials, with planning powers, A-95 review and technical assistance to local governments regarding land use and other planning.

The Areawide Management Program

The COG is the designated agency for continuing 208 planning, and receives funds for this as specified in the 208 plan, as a percentage of the user charges assessed by the operating agency.

The operating agency is the Metropolitan Water Management Agency (Metro), a regional service agency, with limited governmental powers to supply water and intercept, treat and dispose or reuse wastewater, on a wholesale basis. Local governments build and operate wastewater collection lines and water supply facilities.

Regional Facilities Service

Metro was authorized by the state legislature in 1965, when local wastewater treatment was not available but beginning to be required by the state. Localities voted at that time to either join or not join the regional system, and all but two decided to join. Those two built and continue to operate their own treatment facilities under the 208 plan, but must meet the requirements and specifications in the plan for levels of treatment, size of and timing of additions to treatment works, operation procedures, timing and location of discharges, stormwater and combined sewer overflows, etc. If these localities fail to comply with the plan, Metro can, on its own initiative, perform the necessary construction or management services, and bill the community.

Boundaries of the Metro are the same as that of COG, and of the 208 region. Although the wastewater facilities are provided by a regional system, the treatment plants are locally placed, but regionally managed and operated. Septic tanks continue in use in rural areas.

The Board of Directors of Metro are members of COG's Board. The Board of Directors are elected to five-year terms one from each of the

continued . . .

EXAMPLE

City Councils of each participating local government. They serve part-time and elect their own chairman.

Metro builds, owns, operates and maintains interceptors, treatment plants, stormwater control facilities, sludge disposal and reuse facilities for municipal and industrial wastewater. It regulates the quality and timing of discharges into its system from individual sources and imposes user charges proportionately on 10 local governments to reflect the costs of construction, maintenance, and administration, including continuing 208 planning. These user charges finance revenue bonds which are issued by Metro.

All water quality and waste discharge monitoring is performed by Metro, which acts as a subcontractor to COG for gathering such data for the 208 planning process. Such water quality data is stored and retrieved and made available to the public through Metro. Metro also conducts manpower training and research related to its facilities responsibilities.

Seepage from septic tanks into the lake used as a public water supply has been a problem, and the homes around the lake have been required to hook up to a newly constructed sewer. This requirement has been implemented through a state delegation of authority to Metro. The sewer was financed in part by the whole region, which receives benefits in the form of water supplies from the lake.

Also to protect the lake from non-point source runoffs, Metro was given permitting authority over new land developments. Anyone proposing to construct around the lake, including road construction, must first secure a Metro permit, by establishing that the discharges will not harm the quality of the lake.

COG Planning

COG conducts 208, regional air quality, transportation and land use planning. For example, it has prepared, in cooperation with the coastal zone planning staff for the area, an emergency oil pollution control plan for the harbor and coastal areas and identified key vulnerable fisheries in the salt waters that merit particular protection by local governments, Metro and the state. Powers to implement such plans are limited to A-95 review of applications for federal grants. COG also certifies applications for wastewater discharge permits, which are issued by the state water pollution control agency, and applications for EPA construction grants, that they are in conformance with the 208 plan.

COG provides technical assistance to local governments on land use planning and zoning. All local governments, except for center-city, rely on COG planners for all land use planning.

Non-Point Sources

This 208 region is located in a state that has pre-empted planning for non-point sources. The state is also the coordinating and enforcing government in the management system for non-point source control. The Metro is designated by the state 208 non-point source plan as a major

operating agency. Metro builds drains and catch basins for stormwater runoff control, and regulates flows through the treatment facilities. Local governments, state and federal agencies are the other operating agencies.

Coordination

For point source management, Metro is designated the primary operating and coordinating agency, although some resolutions of conflicting roles between Metro and local governments are resolved in COG's 208 planning process. If conflicts occur between Metro and COG or between these regional agencies and local governments that cannot be resolved locally, the state water pollution control agency is the final authority, with permits, grant sanctions, and mandamus proceedings. For non-point source management, the state is the coordinator and conflict arbiter among parties in the management structure. Thus, the main coordinator of the non-point source management is the State Water Pollution Control Agency.

Strengths and Weaknesses

An obvious drawback of this system is that the individual actors are not regularly and strongly tied together into an integrated network, but continue in large part to pursue their separate functions. The primary operating agency, Metro, dominates the regional water quality field, having a larger, more expert staff with greater political support than COG, which is supposed to design and ensure coordination of the system. In negotiations with COG, Metro usually prevails. If Metro disagrees with the plan's provisions, it will delay, seek plan revisions, or contravene the plan's recommendation. The only recourse COG has is to seek state action to block the move, which happens only rarely and only when the violation is a major one over which the state or EPA has some sanction. It must involve a pending NPDES permit, a construction grant application, a violation of permit conditions or a water quality standard, before state or federal enforcement action is possible.

Planning is separated from the operating agency, which means that the structurally-based operational function do not dominate the planning process, but also means that on occasion the plans are not implemented.

Because the state performs non-point source planning, it is difficult to integrate the point source planning of the COG with the state's work. Coordinating agreements or contracts between the COG and state could alleviate this integration problem.

Metro, as an organizational arrangement, ranks low on political accountability. There is no direct electoral control for the public, but only through the indirect process of electing local officials who chose board members. Metro has a high degree of financial independence, so that it can pursue regional facilities strategies, even in the face of local parochial opposition. However, when this fiscal independence is combined with low political accountability, the result may be troublesome.

An advantage of this system is that it is highly compatible with existing structures. Therefore, it is not difficult to establish and

EXAMPLE

maintain such a system, politically. Also, Metro ranks high on economic efficiency -- able to maximize economies of scale and equitable distribution of treatment costs in the region.

Example Two

COG as a 208 Planning Agency and a Special Purpose Primary Regional Management Agency

<u>SCOPE</u>	<u>SOURCE OF FINANCING</u>	<u>I. 208 PLANNING</u>	
		<u>PLANNING AGENCY</u>	<u>RELATED PLANNING FUNCTIONS</u>
All Point Sources	Percentage of User Charges Collected by Metro	Council of Govts.	Comp. land use planning. Tech. Asst. to local govt. planning for land use Regional air quality. Trans., coastal zone planning
All Non-Point Sources	State & federal revenues	State DEP	State Water Quality Management planning

II. 208 MANAGEMENT

<u>POINT SOURCES</u>	<u>TECHNICAL SOLUTION IN 208</u>	<u>MANAGEMENT SOLUTION IN 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
● Sewered munic. industrial wastes	Collect	Plan, finance construct, O&M Regulate	Local govts. Metro*
	Treat, dispose, reuse	Plan, finance, construct, O&M	Metro 2 local govts.
		Regulate discharges and sewer use	State DEP Local govt.
		Certify for federal, state construction grants	COG
● Direct discharges of industry	Adequate treatment Reduced waste generation	Regulate thru permits (certify) Issue permits	COG State DEP
● Septic Tanks	Hook up to sewer around lake	Plan, construct, finance, O&M	Metro
	Require land developments around lake to have development permit	Regulate	Metro
● Storm Water	Construct catch basins Regulate flows thru treatment plants	Construct, finance, plan, O&M	Metro 2 local govts.
	Design requirements for new systems emphasizing on-site detention	Regulate construction of new systems	Local Governments

Example Two (Continued)

<u>NON-POINT SOURCES</u>	<u>TECHNICAL SOLUTION IN 208</u>	<u>MANAGEMENT SOLUTION IN 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
• Agricultural Runoffs	Locate in proper site	Regulate (zoning) _____	State DEP** Local govts.
	Better land management	Technical Assistance —	State Agricultural Dept.
• Construction Runoffs	Better land management	Regulate _____	Local govts.

COMPREHENSIVE FUNCTIONS

- | | |
|---|--------------|
| • Regulate siting, discharges of all developments around lake | Metro |
| • Coordinate all point source control | COG |
| thru A-95 review, 208 plan, certify permits and grants | COG |
| evaluation compliance with plan; schievement | |
| • Information systems all monitoring | Metro |
| • Land use decisions other than around lake | Local govts. |

* Metro is primary management agency for point sources.

** State DEP is primary coordinator, management agency
for non-point sources.

EXAMPLE THREE

A RURAL IRRIGATED FARMING REGION
WITH DECENTRALIZED POINT SOURCE CONTROLThe Area

This 208 region is composed of two rural counties including four towns in a Western water rights state. Irrigated farming is responsible for many jobs, as well as most of the water pollution, of the region. Total dissolved solids build up with repeated use for irrigation as water flows through the basin, and concentrations instream, as well as pesticides, are very high. To complicate the problem, water flows in one river basin in the area are very low most of the year, providing very little waste assimilative capacity. The water rights law, in which a farmer must make continuing beneficial use of his allotment of water in order to maintain his future rights to this allotment, encourages over-irrigation, and exacerbates water pollution.

The four towns in the region are located considerable distances from one another and each of the three larger communities has its own treatment plant. The fourth depends on septic tanks.

The designated 208 planning agency is the COG for the region and its boundaries are the same as the 208 area.

The Areawide Management Program

The COG has concentrated most of its 208 planning on non-point source problems. The plan called for a mix of management, legal and structural solutions, assigning COG some coordinative and technical assistance responsibilities but assigning the major job of enforcing the plan and ensuring its implementation to the state water quality agency.

The plan called first for a review of the Water Rights Law, so that farmers would not be required to establish future use of water by over withdrawals. One of the alternatives suggested for this review recommended that water use rights be apportioned to those requesting water through a permit system administered by the State Department of Natural Resources. This agency would impartially allot water rights according to demonstrated need for water and would consider the reasonableness of the proposed use, including the environmental impact.

Pesticides use is regulated by the State Department of Environmental Protection. The 208 plan calls for farming areas to line their irrigation ditches to prevent ground water pollution, and also to preserve maximum possible flows instream. This requirement would be implemented through the adoption of statewide "Best Management Practices". Financing of these structures is provided by state and federal water pollution control agencies, through a new program which combines partial grants and long-term, interest-free loans to farmers.

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COG is designated the continuing 208 planning agency, and coordinates all point and non-point sources and management agencies in the process. It also has established a Farmers Service Bureau to provide technical assistance and information to irrigating farmers, for the control of erosion and prevention of overuse and runoff of pesticides. This Bureau works in conjunction with the U.S. Soil Conservation Service, the Bureau of Reclamation and the state Department of Agriculture. COG is composed of local elected officials. It has established a 208 advisory committee that recommends and comments on 208 plans, and management actions.

Point Sources

The coordinator for point source management is COG. By interlocal service agreement, COG was assigned power to coordinate the discharges and provide administrative services, as well as planning, for the municipalities. This agreement is a voluntary agreement on the part of the localities; the affected parties may withdraw when dissatisfied. However, these communities must meet the guidelines set forth in the 208 plan, whether or not they sign the service agreement. The economies of regional administration, coupled with local control over facilities, have persuaded all affected communities to participate.

Construction of septic tanks is regulated by the State Health Department to conform with the requirements set forth in the 208 plan.

COG performs monitoring of irrigation return flows and instream water quality, as well as evaluating performance of all management agencies.

Coordination

Coordination at the areawide level depends on the COG and its 208 planning, while plan enforcement depends on the State Water Quality Agency. If individual farmers or local governments fail to comply with the plan, enforcement action must be initiated or sanctions applied by that state agency, or a sister state agency, such as the Agriculture Department.

Strengths and Weaknesses

One of the vital links in the management structure, the possible revision of the Water Rights Law, will be difficult to achieve, and in any event will likely take several years. Other plan elements are only recommendations and no sanctions are authorized for the primary management agency -- the COG -- for non-compliance. Persuasion and technical assistance remain its strongest tools.

Integrated management of municipal discharges is tenuous, since the localities can pull out of the service agreement at any time. COG thus may not be able to implement long-range plans, making such an arrangement weak on economic efficiency criterion and maybe also on equity grounds, since redistribution of costs and benefits may result in a locality cancelling its contract and pulling out of the administrative coordinating system. Knowing this, the COG may select methods that appeal to the lowest common denominator of the localities.

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Because COG also has other assignments, if only in a planning context, it can integrate water quality with other environmental social and economic concerns. It does, however, add another layer of government onto local and state governments. Also, COG as an alliance of local governmental officials can rarely take a truly regional perspective, for every member speaks for some local interest. However, since selected officials participate on COG, political accountability is increased. A final strength of the management system for point sources is that it is easy to establish. Procedural action and not structural action is all that is required.

On the non-point side, far reaching legislative change is required to consider potential revisions of the Water Rights Law of the state. A constitutional amendment will probably be required, as well as changes in the political perspective of elected officials, and standard operating practices of farmers and other water users in the state.

Implementation of non-point source control depends on the desires of the state and national legislatures, for structural solutions to polluted irrigation return flows will not likely be undertaken without financial aid.

Example Three

A Rural Irrigated Farming Region with Decentralized Point Source Control

I. 208 PLANNING			
SCOPE	SOURCE OF FINANCING	PLANNING AGENCY	RELATED PLANNING FUNCTIONS
All Point, non-point sources	Point source planning funded by percentage of user charges collected by 3 local govts.; Non-point funded by state & ad-valorem taxes on farms.	COG	

II. 208 MANAGEMENT			
WATER POLLUTION SOURCE	TECHNICAL SOLUTION IN 208 PLAN	MANAGEMENT ACTION IN 208 PLAN	MANAGEMENT AGENCY
<u>Point Sources</u>			
• Sewered Munic. Wastes	Collect, treat, reuse, dispose	Plan, finance, construct, O&M	Local govts.
		Administration, control of practices, timing & location of discharge	COG*
		Regulate	State Water Quality Agency**
• Septic Tanks	Approval of site, type	Regulate	State Health Dept.
<u>Nonpoint Sources</u>			
• Irrigation return flows	Do not overirrigate	Revise Water Rights Law, set by Constitution	State Legis., Voters
		Establish water use permit	State Legis., State Dept. of Nat. Resources
	Better land management practices	Technical Asst. Information	COG, State Ag. Dept., federal agencies
	Better pesticides use	Regulate	State Water Quality Agency
		Technical Asst.	COG, State Ag. Dept., Federal agencies

Example Three (Continued)

<u>WATER POLLUTION SOURCE</u>	<u>TECHNICAL SOLUTION IN 208 PLAN</u>	<u>MANAGEMENT ACTION IN 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
<u>Nonpoint Sources</u>			
• Irrigation return flows (Continued)	Line Irrigation Ditches	Finance _____	State Water Quality Agency, Federal EPA
		Build, maintain _____	Farmers

COMPREHENSIVE FUNCTIONS

- | | |
|---|-------------------------------|
| • Monitors water quality, discharges | COG |
| • Monitors compliance with 208 plan | COG |
| • Evaluates management agency performance | |
| • Certifies for A-95, NPDES permits & construction grants in region | COG |
| • Chief enforcer of 208 plan provisions | State Water
Quality Agency |
| | COG |
| • Establishes & maintains water quality information system | |

* COG is primary management agency for point sources, established by interlocal service agreement.

**State Water Quality Agency is primary management agency & enforcer of 208 plan

EXAMPLE FOURTWO-TIERED, MULTI-PURPOSE STRUCTURE FOR AN URBAN, INTERSTATE AREAThe Area

This 208 region is an interstate area, including two states and ten local governments. The designated 208 planning agency is a council of governments for the region, which exercises comprehensive planning and advisory powers and A-95 review of local application for federal grants.

Three million people live in this metropolitan area, which is drained by one major riverbasin and several small feeder streams. The river is used by municipalities as public water supply, but many uses are impaired by severe pollution resulting primarily from sewer municipal wastes from the fast-growing population, as well as from urban runoff from streets and yards, commercial areas and construction sites.

The area has other environmental problems. Air pollution and solid waste management problems are rapidly accelerating and those solutions depend also on effective regional planning and management.

The major obstacles to adequate water supply and waste management are institutional and financial, rather than technical and engineering. There is a highly fragmented pattern of governmental organizations for planning and service delivery. Local and state wastewater, water supply organizations work at cross-purposes with one another. Communities have also failed to approve the necessary funding to adequately handle the rapidly growing wastes.

The 208 plan called for a major effort, including significant institutional rearrangement to meet and maintain the 1983 water quality requirements. When issuing its 208 report, the COG consolidated its water quality recommendations with other institutional recommendations developed in other plans to recommend a new governmental structure that could efficiently and effectively handle a range of environmental needs.

The Areawide Management Program

The institutional structure selected for the region is a two-tiered federated, governmental system for water quality and water supply, air pollution control and solid waste management. At the areawide level an elected Metropolitan Environmental Council plans and sets policies for matters of areawide environmental concern, such as land use planning, conducted by all political jurisdictions in the urban region. Boundaries are similar to those previously designating the COG. The new system replaces the areawide environmental planning performed by the COG, taking over all its existing responsibilities primarily environmental regional planning and technical assistance.

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An Environmental Facilities Service, the regional operating arm of the areawide Council acquires, owns, builds, operates, maintains wastewater and solid waste management and water supply facilities. These services are supplied on a wholesale basis to affected communities. Thus, at the regional level, policy and planning responsibilities are separated organizationally from the operating agency. Local governments continue to perform local functions: collection of wastewater and refuse, and water distribution.

Metropolitan Environmental Council

The areawide organization was created by interstate compact. The Metropolitan Environmental Council is the governing board for the region, consisting of 10 members, one from each of the participating local jurisdictions, elected at-large by these jurisdictions to serve for six-year overlapping terms. Council members serve full-time and elect their own chairman.

Council decisions are made by a 100 vote weighted voting system, based on the population in each local government. Also included on the council are a federal member, one member from each state and one member from each major areawide operating agency, such as the transportation agency, all of whom serve in a non-voting capacity.

The Council sets all areawide policies for wastewater management, water supply, solid waste and air pollution control. All decisions affecting these matters of areawide impact made by the Environmental Facilities Service and other areawide agencies must be reviewed by the Council, such as location, size and timetable for new treatment plants. Actions of the Service and other regional agencies can be vetoed by the Council if they conflict with regional environmental goals or plans. Local governmental actions can be postponed for 60 days, and the Council can ask the two affected state legislatures to review local areawide disputes that are not locally resolved.

Environmental Service

The regional Environmental Service, performing under the supervision of the Council, will be, within 10 years, the sole agency for the area providing its environmental services. It acquires, designs, constructs, operates and maintains water quality facilities (interceptors, stormwater facilities, treatment plants, reuse and disposal facilities) as well as solid waste treatment, disposal and recycling facilities and water treatment and supply facilities. It collects and manages, from a central point, whatever local agencies and sanitary districts discharge. In acquiring facilities of local governments, those communities are given a credit against future user charges for existing facilities. The Service also assumes the local debt on those facilities.

The Council finances the construction, operation, administration and overhead including planning costs of the areawide system. The expenses of the Council and the Environmental Service are both covered. It can issue revenue and general obligation bonds, financed through user fees.

EXAMPLE

It receives and uses state and federal grants. Fees are set on a wholesale basis, with local governments paying their proportionate share of the cost of treating wastes and supplying its water. Costs of providing capacity reserved for future use are included also. Some system components may benefit the entire metropolitan region and in these cases, the costs are spread region-wide.

In the water quality management field, the Service monitors discharges into and out of its system to maintain pretreatment standards and regulates discharges into its own facilities. Initially the Service operates by contract with existing waste management agencies and eventually buys and operates all of these facilities. The Service maintains locally based complaint centers to hear and solve public complaints about service delivery.

The Service has a part-time Board of Directors appointed by the Council. Its budget and key decisions are also set by Council. The Council is advised by an Advisory Board which consists of members with a variety of technical expertise, including planners, lawyers, engineers, bankers, scientists, political scientists, that represent the spectrum of affected interests in the region -- environmentalists, regulated industries, chambers of commerce, etc.

The Council is the continuing 208 planning agency, and also conducts regional air quality planning, and planning for water supply and solid waste management. Its full-time staff monitors environmental quality, pollution effects in the community, and discharges to the environment from the Service, and any individual point and non-point sources discharging to the environment. The Council evaluates regularly and on a formal basis the impacts of local governments, the Service and all other members of the water and waste management system.

Every year the Council revises the 208 plan, and issues policy guidance to all operating agencies impacting environmental protection within the region. The Council is the policy decision-maker for the environmental management program, resolving conflicts among local governments, and among regional agencies, as well, when the conflict has a major impact on the environmental protection of the region. The Council certifies applicants for NPDES permits which are issued by the two states and certifies that applicants for federal and state grants which affect water supply and environmental protection conform to areawide 208 and other plans.

In addition to the Environmental Service, other regional operating agencies may exist, such as for transportation, or be provided later by amendment to the compact, such as for housing or parks and recreation.

The Council conducts comprehensive land use and development planning, for various environmental, social and economic goals. An integrated development guide is prepared and periodically reviewed and revised. The development guide for land use, economic development, public facilities and services, govern all affected areawide agencies, and is advisory to local governments. In the process, policy statements are issued and annual guidance for programs developed to encourage orderly growth and

development within the public and private sectors.

Land Use Decisions

Land use planning and regulatory controls are split between local governments and the areawide Council, with local governments having exclusive control over decisions of a completely local nature. The Council has power to review and veto locally issued permits if they will have a major areawide impact affecting the environmental responsibilities assigned the Council. Also, the Council must certify before the state agencies can issue an air quality indirect source permit or a wastewater discharge permit that the resulting environmental impact conforms to the areawide plans. Similarly certification of local applications for federal and state grants is required before the A-95 and environmental impact process can be said to be completed.

Non-Point Sources

This land use power is the major control the Council exercises over non-point sources, as well as location of point sources. The Council also in its 209 and solid waste planning develops strategies for control of erosion, pesticides use and urban runoffs from yards and streets. Local governmental and state agencies are the principle management agencies to implement these strategies.

The Council formulates model land management practices to control erosion. New state laws in each state require local governments to adopt and enforce erosion control ordinances, or the states' Departments of Environmental Quality are authorized to adopt one for the locality.

The two states' Departments of Agriculture regulate the use of pesticides and with the aid of the U.S. Department of Agriculture encourage proper land management and pesticides use in the region through education efforts and technical assistance in suburban areas and to the few farmers in the region.

The state Highway Departments are requested to use lesser amounts of snow and ice control chemicals and to require erosion controls of all highway construction contractors.

Facilities for storm runoff into storm and sanitary sewers are the responsibility of the Environmental Facilities Service for the region. Some combined sewers are being separated, some catch-basins constructed and control of wastewater flows through treatment plants is scheduled and controls to ensure adequate waste removal.

Coordination

Coordination among water quality management agencies is very strong in the two-tiered system, with the Council being the main agency establishing leadership, overall policy guidance, and exercising a wide array of powers to ensure that the plans are implemented.

The environmental agency of each state is the lead coordinator of

the non-point source management system within that state, although the Council also coordinates non-point with point source management through planning, land use review and permit and grant certification power.

Strengths and Weaknesses

This governmental structure can integrate well the water quality system internally and with objectives of other environmental programs -- air quality, water use and solid waste management. The functional as well as geographical perspective of the Council is sufficiently broad to equitably distribute the cost of pollution control. The Council can also assess the trade-offs among several environmental, social and economic objectives in the preparation of the development guide and land use planning and review. However, these larger trade-offs are assessed largely in the planning context, with operational aspects, apart from waste management and water supply, being decentralized to local governments. In this sense, because the regional Council is not a general purpose government, it lacks total interfunctional flexibility.

The two-tiered structure is able to take advantage of the benefits of regional approaches -- economies of scale and equitable distribution of costs and benefits among service areas and individuals -- while maintaining local governmental functions and agencies to a great extent for strictly local matters, such as water delivery, and sewage and trash collection. Local agencies are easily available to citizens for review and control. The upper tier incorporates political accountability, since key decision-makers must stand for election within districts, and do not receive their jobs by appointment.

The Council has substantial powers to plan and see that their plans are carried out, without actually performing operational tasks. However, implementation of 208 and other plans that depend on state and federal actions must be achieved by persuasion only. The Council can limit state and federal funding and permit issuance powers to some extent, by requiring the Council's certification prior to state and federal approval.

Perhaps the main drawback of this institutional structure is that it is difficult to create. Many existing agencies, procedures and relationships must be changed and creation of an interstate compact is time-consuming. Many special interest groups and governmental officials will undoubtedly oppose such major changes in the status quo, feeling that the established ways of doing business are preferable. Fears of regional government beyond the control of the average person will be aroused.

Such a major rearrangement will create administrative confusion within new agencies and loss of morale among some affected government employees, may occur, at least in the short run. Environmental programs may suffer delays because of the confusion.

It can also be said that the Metro Environmental Council adds another, new layer of government, making government overall less responsive and less accessible to the citizenry. However, the new layer does not duplicate local functions, but divides them along subfunctional lines. Citizen participation is also formally structured and encouraged.

Example Four

Two-Tiered Multi-Purpose Structure for an Urban Interstate Area

I. 208 PLANNING			
SCOPE	SOURCE OF FINANCING	PLANNING AGENCY	RELATED PLANNING FUNCTIONS
All point and non-point sources in the region	Specified percentage of user charges of Environmental Service	Metropolitan Environmental Council*	Comprehensive land use planning; regional development guide; transportation planning; all solid waste, water supply, air poll. control planning.

II. 208 MANAGEMENT			
WATER POLLUTION SOURCE	TECHNICAL SOLUTION IN 208 PLAN	MANAGEMENT ACTION IN 208 PLAN	MANAGEMENT AGENCY
<u>Point Sources</u>			
● Sewered Munic. industrial wastes	Collect wastes	Plan, Finance, construct, O&M	Local govts., sanitary districts
		Regulate	Two State Dept. of Environmental Quality, Environmental Service**
● Direct Industrial Discharges	Treat, dispose, reuse wastes; sludge disposal and use	Plan, O&M, construct	Environmental Service
		Finance (revenue & g.o. Bonds)	Council ***
	Adequate private treatment; Reduced waste generation	Regulate site locations	Local govts., Council
		Regulate wastes; Certify for permit	Council
● Storm Water in Sewers	Construct catch basins; separate some combined sewers; Regulate flows thru treatment plants	Issue permit	State DEP's
		Regulate thru fiscal, pricing policy	Council sets rate for service
	Design requirements for new system emphasizing on-site detention	Regulate thru site location	Local govts., Council
		Plan, Construct, O&M Finance	Environmental Service Council
		Regulate construction of new system	Local govts.

Example Four (Continued)

<u>WATER POLLUTION SOURCE</u>	<u>TECHNICAL SOLUTION IN 208 PLAN</u>	<u>MANAGEMENT ACTION IN 208 PLAN</u>	<u>MANAGEMENT AGENCY</u>
<u>Nonpoint Sources</u>			
• Construction Site Runoff	Erosion control	Develop model land management practices _____	Council
		Require local govts. to adopt & enforce erosion control ordinances _____	State DEP's
		Adopt, enforce ordinances _____	Local govts.
	"Clean City" campaigns, more frequent street cleaning	Plan, develop strategies _____	Council
		Operate, maintain _____	Local Public Works
	Pesticides used less	Regulate _____	State Dept. of Ag.
		Education programs _____	State Dept. of Ag.
	Proper use of chemicals on highways	Operate, maintain _____	State Highway Depts.
<u>COMPREHENSIVE FUNCTIONS</u>			
• Land use decisions		Plan comprehensive land use _____	Local govts., Council
		Zoning, issue development permits over purely local developments _____	Local govts.
		Issue permits over developments of area-wide impact on environmental quality _____	Local govts., Council
• Monitor water quality discharges to water, biological systems; (also air quality, solid waste effects)			Council
• Monitor compliance with 208 plan; Evaluate management agencies performance			Council
• Maintain information system			Council

Example Four (Continued)

COMPREHENSIVE FUNCTIONS

DESIGNATED MANAGE- MENT AGENCY

- Develop policies, strategies for all local & regional agencies with water quality, air quality, solid wastes, water supply impact.
- Stop any regional agencies action that will prevent implementation of 208, regional air quality, solid waste or water supply plans & policies.
- Postpone any local govt. decision for 60 days that will prevent plan accomplishment.
- A-95 review, certify all applications for federal grants, NPDES permits.

Council

Council

Council

Council

* Metropolitan Environmental Council is overall program coordinator.

**Environmental Service is primary management agency

*** Metropolitan Environmental Council

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