

Water

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Water Quality Management Five Year Strategy FY 80-Baseline





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

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TO: Participants in the Water Quality Management (WQM) Program

The five-year strategy, attached, is an important part of EPA's overall policy for the Water Quality Management (WQM) program under sections 106 and 208 of the Clean Water Act. The strategy is intended to help States, areawide agencies, and others involved in the WQM program plan their long-term activities, develop future State/EPA Agreements, and make other necessary plans. This is the first strategy the Water Planning Division has issued under its annual policy development cycle, which also includes a needs assessment and a work program. Thus, this year's strategy is the "FY 80 Baseline," next year's is the "FY 81 Baseline," and so on.

Although this strategy is the most complete statement of overall Water Quality Management program policy available, it is a transitional strategy in two respects. First, it is being published at a time when most States and areawide agencies are well into planning for FY 80, which reduces somewhat its potential impact on FY 80 work programs. Second, its treatment of priorities for the use of section 106 funds is extremely brief, due to data limitations regarding historical uses and needs for 106 funds. Both of these shortcomings will, hopefully, be corrected in the FY 81 Baseline strategy, scheduled for publication early in 1980.

As you will see as you review the strategy, it covers goals, priorities, funding policies, future funding, strategic directions, and long-term objectives for the WQM program. We view the strategy as a dynamic document, one which will improve in usefulness to program participants over the next few years. As always, we welcome your comments and suggestions on the content, format, and approach of the strategy. Please address your comments to Peter L. Wise, Chief, Policy and Evaluation Branch, Water Planning Division (WH-554), 401 M St., S.W., Washington, D.C. 20460.

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WQM FIVE-YEAR STRATEGY
(FY 80-BASELINE)

WATER PLANNING DIVISION
OFFICE OF WATER PLANNING AND STANDARDS
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E X E C U T I V E S U M M A R Y

I. INTRODUCTION

A. Purpose

The purpose of this WQM FY 80-Baseline Strategy is to provide long-range direction for the water quality management (WQM) program to assist EPA Regions, States, and areawide agencies with program planning in FY 80 and beyond. It will also provide EPA management, the Congress, the Administration, and the public with descriptions of program needs and directions for a five-year period.

This strategy affects primarily those in the EPA Regions, States, and designated areawide agencies who manage the WQM program. It is not a comprehensive water quality strategy, since its focus is on WQM activities defined by sections 106, 208, and 303(e) of the Clean Water Act. The strategy discusses some related programs, such as monitoring, water quality standards, and enforcement but does not set policy in these areas.

B. Background

Since FY 73, EPA has awarded approximately \$600 million in grants to States, interstate commissions, and areawide agencies under sections 106 and 208 of the Act. Section 106 provides annual grants to States and interstates for operation of their water quality programs. Section 208 provides matching grants to designated State and areawide agencies for solving water quality problems through the preparation of implementable WQM plans. EPA has promulgated new consolidated regulations which cover the entire WQM program.

II. GOALS AND PRIORITIES

A. Goal

The goal of the program is to assist development and administration of State and local decision-making processes to control point and nonpoint sources of pollution and meet the clean water goals of the Act.

B. Management Priorities

The two highest management priorities for the WQM program in FY 80-84 are improved program management and completion of the 208 grant program:

Improved Program Management

In FY 80 and beyond, EPA will initiate a more active management stance for the WQM program including increased emphasis on priority problems; provision of technical assistance through technical experts; provision of financial management assistance to States, areawides, and local agencies; assessment of WQM needs; participation in State/EPA Agreements; expanded use of public participation mechanisms; and emphasis on better EPA Headquarters and Regional Office management.

Completion of the 208 Grant Program

Given adequate funding, EPA anticipates completion of the 208 grant program and expects no 208 grants after FY 83. This will represent the successful completion of a framework for solving water quality problems allowing EPA, the States, and others to make the transition from planning to implementation of controls. After FY 83, EPA will recommend a restructured program focusing on implementation of nonpoint source controls.

Since FY 74, State and areawide WQM agencies have, with 208 grants, identified their water quality problems, developed solutions for the less-complex problems, and identified responsible units of government to implement the solutions. In FY 80-83, these agencies will fill in the gaps in their WQM plans, largely through the use of prototype problem-solving projects for more difficult problems. EPA will provide funding, expert technical assistance, and information transfer to ensure the success of their efforts and the transferability of their results.

Thus, by FY 84, EPA and the WQM agencies will have gained much knowledge on both problem-solving techniques and future program needs. Based on this information, EPA will decide on future directions for the WQM program, roles for the various levels of government involved, and necessary changes from the existing program. As an illustration of this approach, in FY 83 EPA will make a report to Congress on urban storm runoff, summarizing the progress of the Nationwide Urban Runoff Program (NURP) and making recommendations for action.

C. Problem Priorities

The WQM program will address four priority problem areas in FY 80-84: urban storm runoff, nonpoint sources, groundwater quality, and waste treatment facilities. Generally, the highest priorities are urban runoff, agricultural pollution and groundwater protection. The WQM program also supports Regional, State, or local priorities which differ from the national priorities if they are implementation-oriented and will have a major impact on water quality. (The strategy discusses each priority problem area in detail.)

III. FUNDING

A. Description of Sources

Through the process of work plan development and State/EPA Agreement negotiations, the States, areawide agencies, and EPA will develop and implement a problem-solving process which utilizes all available sources of funding. This

approach will bring about significant program integration by matching the complementary aspects of various EPA programs, State and local programs, and programs of other Federal agencies such as USDA. Integrated programs will solve difficult environmental problems at a lower overall cost to the public.

Although section 106 and 208 grants are the primary Federal funding sources for the WQM program, other sources also provide assistance: facility planning grants (201), construction management grants (205(g)), Clean Lakes grants (314), Rural Clean Water Program grants (208(j)), State and local governments, and other Federal agencies.

B. Funding Policies

The strategy presents an overview of WQM funding policy. For additional details, see also the supplemental WQM program guidance.

C. Projected Funding--FY 80-84

Future funding data is sketchy and subject to change. Nevertheless, an attempt to project funding levels is necessary. For FY 80, the section 106 appropriation should be approximately \$48.7 million and the 208 appropriation approximately \$40 million, based on the President's budget. (Regional 208 targets and State 106 targets are presented.) In FY 81-84, 106 funding should, at a minimum, remain constant. EPA anticipates no 208 funding after FY 83, assuming the Congress provides full funding until then.

IV. STRATEGIC DIRECTIONS

This section of the strategy presents five discussions of new or cross-cutting issues which relate to the management and problem priorities. For some of the issues, the strategy is still in the formative stages. The issues are (1) the WQM role in toxic controls, (2) the WQM role in water conservation, (3) nonpoint source controls on Federal lands, (4) the WQM contribution to the urban strategy, and (5) water quality/quantity relationships.

V. OBJECTIVES

The purpose of this section of the strategy is to give the major participants in the WQM process a firm idea of EPA's expectations for FY 80-84 for solving priority problems. For each problem area, the strategy includes a statement of an overall objective, a set of related "givens," and an example. Detailed objectives follow in a matrix format. They show specific concrete targets or sub-objectives which will contribute to the attainment of the overall objectives.

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I. INTRODUCTION

A. Purpose

The purpose of this WQM five-year strategy is to provide long-range direction for the water quality management (WQM) program to assist the EPA Regions, States and areawide agencies with program planning in FY 80 and beyond. The Water Planning Division (WPD) has initiated an annual policy development process, which includes a problem assessment, strategy, and work plan. This management process is similar to that required of the States by the WQM regulations [1].* The strategy's long-term perspective will contribute to the development of State strategies, work plans and State/EPA Agreements.

The five-year strategy will also provide EPA management, the Congress, the Administration, and the public with descriptions of immediate and long-term needs and program directions. These descriptions will assist in policy, resource, and funding decisions. Finally, the five-year orientation of the strategy will place the WPD work plan [2] and supplemental WQM guidance [3] in a long-range policy framework, allowing program participants to anticipate and deal with changes, thus avoiding crisis planning and management.

The strategy addresses program goals, priorities, funding, strategic directions, and objectives for the baseline year and the subsequent four years. (Thus, this strategy is the "FY 80-Baseline" strategy, next year's is the "FY 81-Baseline" and so on.) It affects primarily those in the EPA Regions, States, and designated areawide agencies who manage the WQM program. It is not a comprehensive water quality strategy, since its focus is on WQM activities defined by sections 106, 208, and 303(e) of the Clean Water Act. The strategy discusses some related programs, such as monitoring, water quality standards, and enforcement but does not set policy for these programs.

This FY 80-Baseline strategy is a transitional strategy for two reasons. First, its discussion of priorities for State programs funded under section 106 is open-ended, since WPD is now conducting a national assessment of State problems and needs to assist EPA in analyzing 106 priorities. Although State and Federal resources for water quality programs are--at best--not increasing demands on the States are. The needs assessment will place State requirements in a realistic perspective, and the FY 81-Baseline strategy will discuss the findings of the assessment.

*This strategy makes frequent references to legislation, EPA regulations, guidance documents, and other related documentation. For convenience, a list of references is attached. Where the text refers to one of these documents, the number of the reference appears in brackets. e.g., [5].

Second, the FY 80-Baseline strategy is transitional with respect to its timing. It is out of phase with the optimal timing, as the policy development time-line, Figure I, shows. The FY 81-Baseline strategy, which EPA will publish in early 1980, will be better-timed to assist State and areawide program planning for FY 81.

This strategy is an update of two previous WQM strategies which the Water Planning Division published in April 1976, [4] and March 1978 [5].

B. Background

The goal of the WQM program, as discussed below, is to assist State, local agencies, and the public to develop a decision-making process for solving point and nonpoint source problems and meeting the water quality goals of the Act. To accomplish this goal EPA has, to date, awarded grants under sections 106 and 208 of the Act to State, interstate, and areawide agencies totalling approximately \$600 million.

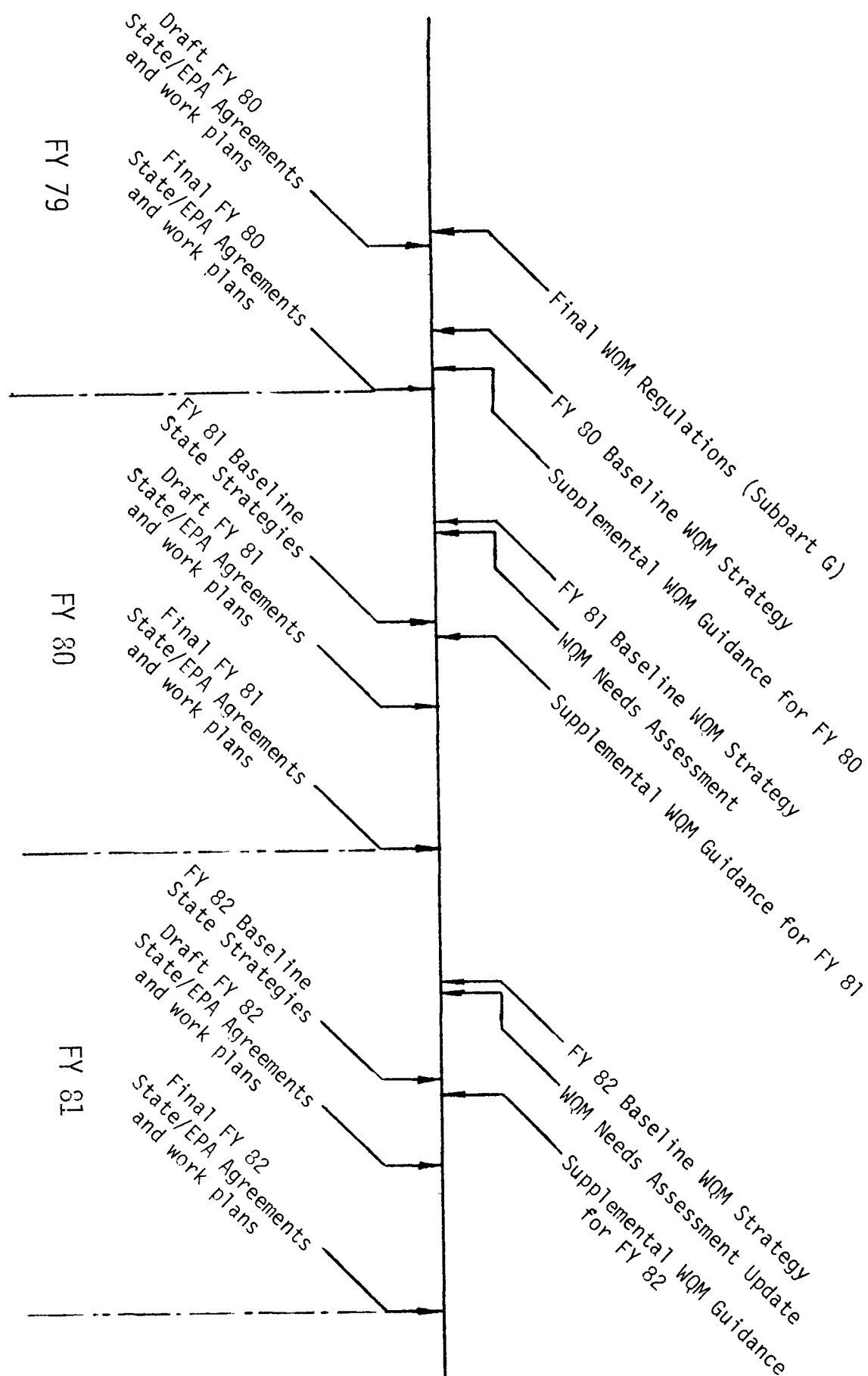
Section 106 of the Act provides for annual grants to the States and interstate basin commissions for operation and maintenance of their water quality management (WQM) programs. 106 funds are flexible; they support a wide range of activities, such as monitoring, enforcement, planning, and point and nonpoint source management.

Section 208 provides matching grants to designated State and areawide agencies for solving water quality problems through the preparation of implementable WQM plans. These plans, when certified by the State and approved by EPA, serve as the basis for future planning, management, and implementation activities. As of July 1979, of the 225 agencies which received 208 grants in FY 74-76 to prepare WQM plans, 129 had obtained State certification and 77 had obtained EPA approval. EPA plans to have 200 plans certified and approved by October 1979.

EPA has promulgated new regulations [1] which cover the entire WQM program. The regulations are a consolidation of three former regulations (40 CFR Parts 130 and 131 and portions of Part 35) and they emphasize that activities funded under 106 and 208 must be integrated. They also demonstrate EPA's policy of reducing regulations and stressing integration wherever possible.

FIGURE 1

WQM POLICY DEVELOPMENT TIME-LINE



II. GOALS AND PRIORITIES

A. Goal

The goal of the WQM program is to assist the development and administration of a State and local government decision-making process to control point and non-point sources of pollution to meet the clean water goals of section 101 of the Act.

B. Management Priorities

This strategy is primarily concerned with management of two types of grants under the Clean Water Act: sections 106 State program grants and section 208 waste treatment management grants. EPA manages these grants together in the WQM program. As mentioned above, this FY 80-Baseline WQM Strategy is a transitional strategy and does not set priorities for the use of 106 funds.

It is difficult to set priorities for 106 grants since they support a wide range of activities in the State agencies and EPA Headquarters has traditionally delegated program management to the Regional Offices. But now that demands on State programs are increasing because of the addition of activities such as spill prevention, nonpoint source control, and toxic controls and because of further emphasis on traditional areas such as enforcement, EPA must address 106 priorities. The WQM Needs Assessment will provide the data EPA needs, and the FY 81-Baseline strategy will discuss 106 further after EPA has analyzed the data.

Given that this is a transitional strategy, the following items are high management priorities for the WQM program in the next five years: improved program management and completion of the 208 grant program.

Improved Program Management

In FY 80 and beyond, EPA will initiate a more active, rather than reactive, management stance for the WQM program. Examples of EPA's more-active management are:

- increased emphasis in the continuing planning phase on filling in the crucial gaps in State and areawide plans by identifying cost-effective solutions to priority problems
- continuation of problem-specific technical assistance contracts with technical experts for groundwater, urban runoff, and municipal treatment

- initiation of a long-term Financial Management Assistance Project (FMAP) to assist State, areawide and local agencies develop fiscal expertise for water quality management planning and implementation
- assessment of five-year costs of planning and administering solutions to point and nonpoint source water quality problems for budget justification and analysis of priorities
- participation by EPA Regions, State and areawide staffs, and the public in annual State/EPA Agreements which coordinate and integrate programs, identify high-priority problems, lay out approaches to solving these problems, and assign responsibility
- use of WQM public participation mechanisms to support not only planning activities but also State/EPA Agreement development, WQM plan implementation, and refinement of WQM plans through site-specific projects
- emphasis on better Headquarters and Regional Office management of the WQM program through training for project officers, development of management strategies, and annual management reviews; EPA will use contract funds to expand management capability at all levels of the program

The new WQM regulations [1] and the supplemental WQM guidance [3] present policies which support the priority on improved management. See Funding Policies, pages 15 through 17.

Completion of the 208 Grant Program

The concept. The WQM program has made great progress in cleaning the Nation's waters. The program has brought about documented water quality improvements and cost savings, and will bring about more as additional WQM plans enter the implementation stage. In FY 80-83, the States and areawide agencies will fill the important gaps in their plans with 208 grants, particularly for urban runoff, groundwater pollution, and other nonpoint source pollution. Then, EPA will recommend a restructured program focusing on the implementation of nonpoint source controls.

In FY 83, EPA anticipates completion of the 208 grant program, given adequate funding, and expects no 208 grants after FY 83. The end of the 208 grant program will represent the successful completion of an important task--development of a framework or blueprint for solving most water quality problems. Between now and FY 83, EPA, the States, and the areawides will evaluate progress and problems, develop technical knowledge to solve the problems, and identify needed changes in program direction for the future.

The Nationwide Urban Runoff Program (NURP) illustrates the concept of 208 grant completion. Having already identified urban storm runoff as a problem, the States and areawides will determine the extent of the problem in FY 80-83, develop and test best management practices, and develop financial arrangements for urban runoff management programs. Based on the experience in the NURP, EPA will make a report to the Congress describing progress and proposing new starts or directions for urban storm runoff control. At the same time, State and local management agencies will implement feasible BMP's in their own areas as appropriate.

Actions--FY 80-83. EPA is now relying on prototype projects to develop cost-effective controls on selected sites for transfer to other sites, reducing duplication of effort and stressing technically sound approaches. The 208 funding emphasis is on good, implementable projects which will solve water quality problems, rather than on general planning activities. The rationale for this emphasis is to provide a technical base from which to develop and implement solutions nationwide.

EPA is also directing 208 funding into projects which will bring about implementation of previously developed WQM plan elements. For example, 208 grants may fund development and adoption of ordinances and financing to control specific nonpoint source problems in specific areas. For a 208 grant program which includes this emphasis on prototype problem-solving projects, it is estimated that full funding in FY 80-83 would be approximately \$50 million per year.

Information Transfer. Information transfer is a key aspect of the concept of 208 grant completion. EPA recognizes that only a certain level of information is transferrable and that it must be tailored to each exact situation. EPA Headquarters and the Regions will be responsible for information transfer and are investigating available transfer techniques.

To enhance the potential of information transfer, EPA has selected prototype projects in a variety of settings with different types of receiving waters, different designated uses, different types of possible controls, and different pollutants. Thus, a State or local environmental manager wishing to use the results of the prototype projects can concentrate on examples which match his or her own situation. To further promote transfer, Water Planning Division will also develop a technology transfer methodology which will employ various tools of use to Federal, State, and local agencies and the public.

After FY 83. After FY 83, although EPA will not award 208 grants, there will still be a WQM program and a need for planning and decision-making as States, areawide agencies, and local governments continue to manage point and nonpoint sources. The Water Planning Division will provide guidance and assistance well in advance to ensure that completion of the 208 grants occurs smoothly, and that 106 grants and State and local funds continue to support effective problem-solving activities after FY 83.

There are, of course, many demands on 106 funds, and these demands are increasing. Thus, EPA is taking steps such as the WQM Needs Assessment to evaluate State, areawide and local demands, requirements, and priorities for future 106 funding.

As mentioned above, full funding for the 208 grant program through FY 83 is approximately \$50 million per year. If the 208 program does not receive full funding through FY 83, EPA has a fall-back strategy: First, with less than full funding, 208 grants would follow priorities the Agency sets in the Zero Base Budget (ZBB) process. Second, EPA would attempt to extend completion past FY 83 if necessary to counter lower funding.

C. Problem Priorities

Because water pollution is a complex problem involving many technical and institutional variables, management of water quality requires a systematic problem-oriented approach. Based on legislative mandate, the difficulty of developing solutions, and the degree of the problems, the WQM program will address four high-priority problem areas in FY 80-84: urban storm runoff, nonpoint sources, groundwater quality, and waste treatment facilities. Coupled with the management priorities, above, the problem priorities will contribute to the meeting of the WQM program objectives and achieving the goal of clean water.

The order in which the strategy lists the four priorities does not necessarily indicate their relative priority. Since conditions vary drastically from Region to Region, State to State, and locality to locality, all these problems are high priorities. Generally, however, the highest-priority problem areas are urban storm runoff, agricultural pollution, and groundwater protection. For each problem area, the detailed discussions, below, describe high-priority activities.

Although the four priority problems are quite broad, there are other important problems in various locations that are not covered. The WQM program supports Regional, State, or local priorities which differ from the national priorities if they are implementation oriented and would have a major impact on water quality. An example of such a project is the Colorado River Salinity Study.

Urban Storm Runoff

While it is generally believed that urban storm runoff is a major water pollution problem, exact impacts and effectiveness of controls are largely unknown. It is also a major pathway for the entry of toxic substances--lead, cadmium, pesticides, hydrocarbons, and others--into the aquatic environment.

Since structural controls for urban storm runoff would be prohibitively expensive, EPA and State and areawide planning agencies are developing cost-effective non-structural controls. The 1978 Construction Grants Needs Survey [6] estimated the cost of controlling urban runoff from pipes (not including overland runoff) at over \$60 billion. Over 90 areawide agencies gave high priority to urban runoff problems during the initial phase of the WQM program, but lack of data on sources, impacts, and controls frustrated them.

Given this background, the WQM program has undertaken a National Urban Runoff Program (NURP) to test various controls in different geographic settings to find a set of transferrable cost-effective controls, that is, best management practices (BMP's). Starting in FY 79 and continuing in FY 80, EPA will initiate about 30 three-year prototype projects for urban runoff control. EPA will fund these projects directly from the total 208 appropriation each year. Headquarters, the Regions, States and areawide agencies will work jointly to select the specific locations for the projects.

Headquarters has contracted with a team of technical experts to assist State and areawide agencies in work plan development, project management, analysis, and information exchange for the NURP. The Financial Management Assistance Project (FMAP) is also available to provide expertise on financial aspects.

Nonpoint Sources

Together, nonpoint sources are the largest source of water pollution in the country. Runoff from farming, logging, mining, and other activities degrades surface and groundwater with sediment, nutrients, salinity, BOD, and toxic chemicals. Nonpoint sources are difficult to control institutionally and politically. BMP's, while generally known, are not consistently applied.

Although other agencies have programs to consider parts of the nonpoint source problem (e.g., erosion) the WQM program is the only Federal program with a comprehensive legislative mandate to address nonpoint source pollution. The program both identifies solutions to problems and implements solutions which planning agencies have identified in WQM plans.

With respect to agricultural and silvicultural problems, EPA is cooperating with the USDA on funding and management of different types of pilot projects. For agriculture, they are cooperating on Model Implementation Program (MIP) projects, Agricultural Conservation Program (ACP) projects, Small Farmer Demonstration Projects, Great Plains Conservation Program projects, and others. For silviculture, USDA and EPA are cooperating on State Forest Resource Programs, National Forest Land Management Planning projects, Forest Incentives Program (FIP) projects, and Agricultural Conservation Program (ACP) projects. For more details on WQM activities in these cooperative efforts, see the WPD work program for FY 79 [2], and the EPA/Forest Service Statement of Intent [15].

Under section 208(j) of the Act, EPA also participates in an implementation program for rural nonpoint sources, the Rural Clean Water Program (RCWP). Under the RCWP, USDA will cost share the application of BMP's by owners or operators of rural lands, if the BMP's are contained in certified and approved WQM plans. The RCWP projects are of a 5-to-10 year duration, are initiated by the Governor's Office, and are managed by the Soil Conservation Service (USDA).

A related priority nonpoint source problem which generally occurs in urban or developing areas, is construction runoff. Since BMP's are readily available, WQM efforts in FY 80-84 will focus on States developing regulatory programs for construction runoff, giving special attention to financial approaches with assistance from the FMAP.

Groundwater Quality

Groundwater, as a national resource and water supply source, is of tremendous significance. Increasing reliance on groundwater is a result of growing demand and the high costs of treating surface water. However, many pollution sources are threatening groundwater. Contamination from such sources as landfills, saltwater intrusion, underground injection and the storing of hazardous wastes, has reduced groundwater quality. Once a source is contaminated it is difficult, if not impossible, to restore.

As with nonpoint sources in general, the WQM program is the only Federal program taking a systematic approach to the protection of groundwater quality. The Safe Drinking Water program impacts groundwater through regulation of underground injections and sole source aquifers. The Solid Waste program will control hazardous wastes and land disposal activities, protecting groundwater from leachates. However, the WQM program has the capability to consider the entire groundwater problem in an area and to develop and coordinate controls.

Since groundwater protection is an area for which no cohesive national policy exists, WPD has initiated a major three-year contract to develop a framework for a national policy. WPD, the Office of Drinking Water, the Office of Solid Waste, the Office of Water Program Operations, and the Office of Research and Development, will, through a contractor, assist State and areawide agencies with work plan development, program management, analysis, and evaluation. With this hands-on technical assistance, EPA will gain information and experience to develop a groundwater policy framework. Where groundwater protection is a priority, State/EPA Agreement negotiations will determine project objectives and funding levels.

In coordination with the technical work in the groundwater area, the Financial Management Assistance Project (FMAP) can provide necessary financial analysis, providing tools for the development and implementation of the financial components. The State/EPA Agreement process is the management process for coordinating groundwater protection needs with available assistance and resources.

Waste Treatment Facilities

Municipal waste treatment problems exist in every State. Many of the problems lend themselves to straightforward solutions, via EPA's construction grants program, with construction of secondary treatment facilities. Sometimes, however, municipal waste treatment problems are

complex, and require extensive front-end planning before EPA and the municipalities can proceed with construction. This front-end planning involves not only technical considerations but also financial arrangements and public participation.

In the first round of 208 grants, many State and areawide agencies successfully addressed municipal waste treatment problems, identifying service areas, making population disaggregations, and identifying necessary levels of treatment. Often, however, where advanced waste treatment (AWT) appeared to be necessary for the solution to a problem, further planning was required to confirm the need.

Because the costs of AWT are potentially quite high, it is EPA policy that proposed AWT projects undergo careful planning and review to justify proposed levels of treatment. The role of the WQM program is to help establish a process in each State to ensure that water quality standards, total maximum daily loads, waste load allocations, and population/economic projections which drive facility decisions are technically sound, and that financial arrangements and public participation are equally sound. The process must consider point/nonpoint source control tradeoffs, innovative or alternative technologies, and alternative approaches such as water conservation.

To assist with development of State processes for municipal facility planning EPA is funding about 15 AWT planning and review projects in FY 79 with 208 grants. In these projects, EPA, the States, areawide agencies, local agencies, and the public will work together to arrive at site-specific decisions. Starting in FY 80, point source projects are ineligible for receiving 208 grants, but funding for AWT reviews will still be available from 106 grants and, for waste load allocations in certain cases, from 201 grants. (For details on using 201 funds for waste load allocation work, see the 201/WLA policy statement [7].) Although the WQM program won't be using 208 funds for municipal waste treatment planning after FY 79, it will have a major management involvement with the projects funded in FY 79, which will continue through FY 81, and with projects funded with 106 and 201 funds.

Where waste treatment facilities are a high priority, EPA, the States, and areawide agencies should determine the location, scope, and funding of necessary planning projects in their State/EPA Agreement negotiations. For these projects, EPA can provide financial management assistance through the FMAP. The FMAP contract will work with planning agencies during work plan development and project management to assist with fiscal/financial aspects.

Another aspect of the WQM priority on waste treatment facilities is the problem of pollution from malfunctioning septic systems. There are nearly 17 million septic systems nationwide producing about a trillion gallons of liquid waste annually, with high growth rates in rural areas and on the urban fringe. When septic systems are properly engineered and maintained, they are a safe, economical, energy-efficient alternative to central sewage treatment. But when they are not properly engineered or maintained, they may contaminate surface and groundwaters with nitrates and pathogens. Also, replacing septic systems with new interceptor and collector sewers can result in unplanned urban sprawl, loss of prime farm land, and extreme economic impacts on homeowners. Sewage user charges in some of these cases have reached \$500 per year.

Section 201(h) of the Act makes construction of alternative or unconventional treatment works for individual residences or clusters of residences eligible for construction grants. Alternatives include, but are not limited to, septic tanks and subsurface disposal systems, other on-site systems, cluster systems, and pressure and vacuum sewers. Both private and public small alternative wastewater systems are eligible under specific restrictions and conditions in the Act, the construction grant regulations [16], and the construction grant program guidance [17].

Given that the correction of failing septic systems is eligible (under certain conditions) for construction grant funding, the role of the WQM program is to work with the States on overall State management programs, to assist with the development of State or local regulatory programs, and to help local communities avoid both the water quality problems associated with failing systems and the financial burdens which frequently accompany "sewer-and-treat" solutions. As with the other priority problem areas, the Financial Management Assistance Project (FMAP) will provide financial management technical assistance to certain communities interested in mitigating the financial impacts of controlling septic system problems.

III. FUNDING

A. Description of Sources

Through the process of work plan development and State/EPA Agreement negotiations, the States, areawide agencies, and EPA will develop and implement a problem-solving process which utilizes all available sources of funding. This approach will bring about significant program integration by matching the complementary aspects of various EPA programs, State and local programs, and programs of other Federal agencies such as USDA. Integrated programs will solve difficult environmental problems at a lower overall cost to the public. (See the State/EPA Agreement guidance [8]).

The WQM regulations [1] describe the major work elements States are eligible to address in their work programs, and identifies the CWA funding sources States may use to pay for these elements. (See Table I.) Grants to areawide agencies are only for WQM planning under section 208 of the Act. However, areawide agencies and local management agencies may receive pass-through funds from the States to perform specific duties under sections 106, 205(g), 208, or 314 of the Act.

The following is a synopsis of each of the major funding sources for the WQM process. Table II shows historic funding for FY 72-79 for 106 and 208 funds.

1. section 106

Section 106 provides for annual grants to State and interstate agencies to assist them in administering programs for the prevention, reduction, and elimination of pollution. 106 funds are used for operations and implementation activities, such as monitoring, evaluation, enforcement and administration.

2. section 208

Section 208 provides grants to encourage and facilitate the "development and implementation of areawide waste treatment management plans." The section sets forth requirements for the designation of planning and management agencies, for the contents of plans prepared under the program, and for certification of completed plans. In accordance with the NRDC v. Train [9] decision, EPA awards grants to States for planning in non-designated areas of the State. WQM planning under section 208 is primarily to solve priority problems through certified and approved WQM plans.

The role of WQM planning is to provide a technical base for controls, investigate cause-effect relations, evaluate cost-effective solutions to problems, and through the political process select the implementable solutions.

TABLE I
WQM WORK PROGRAM ELEMENTS*

With approval of the Regional Administrator after negotiation with the State, the State may receive funding under this subpart for the following elements (potential funding sources shown in brackets):

- (1) Construction grants management (to the extent not funded under subpart F), development of the fundable and extended portions of the project priority list for construction grants under §35.915 of subpart E, and management of pretreatment programs [106, 208 as appropriate].
- (2) Administration of permits programs, including programs under sections 402 and 404 of the Act [106, 205(g)].
- (3) WQM planning and certification [primarily 208; 106 where the Regional Administrator determines appropriate; 205(g) for development of the 208(b)(4) program].
- (4) Water quality standards development, review, and revision [106].
- (5) Waste load allocation development, review, and revision [106].
- (6) Nonpoint source management activities [106].
- (7) Monitoring and assessment [106, 208, 314].
- (8) Enforcement (including compliance assurance and litigation support activities) [106].
- (9) Training and facilities operation and maintenance [106].
- (10) Emergency response programs [106].
- (11) Program Evaluation [106, 208].
- (12) Administration of regulatory and other water quality control programs [106].
- (13) Planning for and coordination with section 208(j) programs [106, 208].
- (14) Program Administration [106, 205(g), 208].
- (15) Public participation [106, 205(g), 208].
- (16) Phase 1 and 2 activities for clean lakes [314].

* 40 CFR, Subpart G Part 35

TABLE II
WQM FUNDING--FY 72-79
(\$ millions)

FY	-----106-----		-----208-----	
	<u>appropriated</u>	<u>obligated</u>	<u>appropriated</u>	<u>obligated</u>
72	15.0	15.0	----	----
73	20.0	20.0	50.0	----
74	40.0	40.0	100.0	13.6
75	48.5	48.5	150.0	150.0
76	50.0	50.0	53.0	53.0
77	50.0	50.0	15.0	15.0
78	52.4	52.4	69.0	69.0
79	52.4	52.4	32.0*	16.0**

* \$2 million was taken for an Agency pay raise and is not available for obligation

** as of July 9, 1979

3. section 201

Section 201 establishes a grant program for construction of publicly-owned treatment works (POTW's). EPA awards grants to owner/operators of POTW's in accordance with a five-year State Construction Grant priority list.

The Construction Grant process consists of three steps. Step 1 grants are for facility planning, Step 2 grants are for detailed plans and specifications, and Step 3 grants are for actual construction. The Step 1 facility plans are closely related to State and areawide WQM plans, especially since the Act requires consistency between the two types of plans. Facility planning may include pretreatment planning and water quality analysis/waste load allocation work in some cases.

4. section 205(g)

Under section 205(g), States are delegated responsibility and awarded funds to manage construction grants. The Administrator is authorized to reserve each fiscal year two percent of a State's construction grant allotment, or \$400,000, whichever amount is greater. Once construction management needs are satisfied, these funds may also be used to support administration of NPDES permits (section 402), dredge/fill permits (section 404), and dredge/fill regulatory programs under 208(b)(4).

5. section 314

Section 314 of the Act provides matching grants to States for the operation of the Clean Lakes program. The objective of the Clean Lakes program is to restore and protect water quality in publicly-owned freshwater lakes. A majority of the efforts are for restoring lake quality, with added provisions for management practices to prevent problems from recurring.

States apply for two types of grants under section 314. Phase I grants support diagnostic feasibility studies to evaluate lake characteristics and develop plans for restoration and preservation. Phase I grants are 70 percent Federal-share matching grants, with a limit of \$100,000. Phase II grants fund implementation of pollution control or restoration. They are 50 percent-Federal-share grants.

All applications for Clean Lakes grants must be consistent with State/EPA Agreements and applicable WQM plans.

6. section 208(j)

Section 208(j) authorizes the Secretary of Agriculture, with the concurrence of the EPA Administrator, to establish and administer a program to enter into 5-to-10 year contracts with owners or operators of rural lands. The purpose of the program is to install and maintain best management practices (BMP's) from certified/approved WQM plans.

7. State and local

State and local governments both support and initiate environmental programs. One aim of the WQM program is for State and local governmental bodies to develop self-sustaining funding sources to help achieve water quality goals.

Implementation and continuing planning responsibilities lie largely with the States and localities. To alleviate financial barriers, WPD has initiated the Financial Management Assistance Project to help agencies develop management tools which will allow States, areawides, and the public to assume responsibility for financial aspects of water quality projects.

8. other Federal sources

Many Federal agencies are involved in programs that impact WQM either by providing grants or loans or by conducting related planning or data collection. Some of the agencies involved in awarding grants and loans are USDA (through ASCS, FHA, USFS, and SCS), EDA, HEW, DOI (through HCRS, BOR, and F&WS), and DOE. Examples of agencies that conduct planning or collect data are NOAA (CZM), USGS, DOT, and HUD. A good source of information on programs of other Federal agencies is the Catalog of Federal Domestic Assistance. [10] EPA, States, and local agencies should work with these Federal agencies at all levels to coordinate programs so that their complementary features strengthen the WQM program.

B. Funding Policies--106 and 208 Grants

The funding policies of the WQM program are based on several overall objectives. First, all program participants must be responsible for stewardship of grant funds. Second, they should fund problem-solving projects for priority problems that will be implemented. Third, they should integrate and coordinate the WQM program to the extent feasible with related EPA programs, other Federal programs, and State and local programs.

The following paragraphs present an overview of WQM funding policy. For details, see the supplemental WQM Guidance [3].

1. general policy--106 and 208

Beginning with FY 80, EPA will allocate section 106 and 208 funds, to the extent feasible, on the basis of program needs and national priorities. As soon as EPA, with State and areawide input, can conduct appropriate analyses, it will develop needs-based procedures for allocating 106 and 208 funds.

2. 208 policy--State and areawides

EPA will award section 208 grants to both State and areawide agencies. In FY 80 and beyond, these agencies may use 208 funds only for nonpoint source problem-solving activities. Planning for point sources and general planning activities (e.g., population projections, A-95 review) are not eligible for 208 funds after FY 79. Grants to States and areawides are subject to the following policies:

- o Implementation of plans is a prerequisite for receiving further planning funds. Beginning in FY 80, EPA will not provide States or areawides with additional funding if designated management agencies are not implementing significant portions of the WQM plans the State or areawide agencies developed.
- o In accordance with the WQM regulations [1], EPA will not make a 208 grant to any designated agency which does not have a certified and approved WQM plan.
- o As it has in the past, EPA will award funds to State and areawide agencies based on priority needs. Regional Administrators should determine if anticipated water quality benefits justify Federal funding.
- o The size of each grant and the activities the grant will support will be determined through negotiations among EPA Headquarters and Regions, States and designated areawide agencies.
- o EPA may award grants for multi-year periods of performance, but every grant agreement will include specific annual outputs. EPA will use the outputs to evaluate grantee performance.
- o EPA will not award grants to grantees without approved work programs.

3. 208 policy--States only

In addition to the policies immediately above, State 208 grants are subject to the following policies:

- o Each State must be a party to a current State/EPA Agreement.
- o Each State must have a five-year WQM strategy in accordance with the WQM regulations [1].

4. 106 policy--States and Interstate Basin Commissions

- o Although EPA will allocate 106 funds to Regions with the existing formula until EPA revises it or develops other allocation procedures, Regional Administrators will base actual grant awards on needs identified in the process of developing State/EPA Agreements.
- o Awards of 106 funds to interstate commissions must be consistent with the detailed provisions of the supplemental WQM guidance [3].
- o Section 106 funds which become available as a result of 205(g) delegations should be directed to priority activities identified in the EPA Guidance or the State/EPA Agreement process. The EPA Guidance to the States (April 1979) [11] directs States to use 106 funds for hazardous and toxic materials monitoring, spill prevention, implementation of WQM plans, and State compliance and enforcement activities.

C. Projected Funding

One purpose of the five-year strategy is to provide information on future funding to assist EPA Regional, State, and areawide planning. Future funding data is sketchy and subject to change. Nevertheless, it is necessary to attempt to project funding levels to assist long-term planning.

1. FY 80

Table III shows individual State and interstate commission 106 targets for FY 80. The projected total, \$48.7 million, comes from the President's FY 80 budget. The targets are not commitments or entitlements, but simply guidelines. In the State/EPA Agreement process, States and EPA will negotiate exact funding levels and outputs.

The projected 208 appropriation for FY 80 is \$37.5 million, based on the outcome of the House-Senate conference on the 208 appropriation. Of the \$37.5 million, \$12 million will be allocated to urban storm runoff projects. For planning purposes only, Table IV presents Regional 208 targets for FY 80. EPA will base actual allocations to the Regions on funding needs for nonpoint source control priority programs.

The national priorities for 208 funding are urban storm runoff, nonpoint sources, and groundwater as discussed previously under Funding Policy. Each State should document its FY 80 208 funding priorities in its State/EPA Agreement. WPD will review the priorities for FY 81 based on the findings of the WQM Needs Assessment.

TABLE III
STATE 106 TARGETS FOR FY 80
BASED ON TOTAL APPROPRIATION OF \$48.73 MILLION
(\$ MILLIONS)

<u>Region I</u>	CT	0.75	<u>Region VI</u>	AR	0.72
	ME	0.54		LA	0.82
	MA	1.16		NM	0.28
	NH	0.33		OK	0.54
	RI	0.51		TX	1.80
	VT	0.24		TOTAL	4.16
	NEIWPCC	0.22			
	TOTAL	3.74	<u>Region VII</u>	IA	0.71
<u>Region II</u>	NJ	1.33		KS	0.51
	NY	2.68		MO	0.86
	PR	0.79		NE	0.56
	VI	0.36		TOTAL	2.64
	ISC	0.26	<u>Region VIII</u>	CO	0.46
	TOTAL	5.43		MT	0.33
<u>Region III</u>	DE	0.41		ID	0.21
	DC	0.41		SD	0.22
	MD	0.32		UT	0.30
	PA	2.18		WY	0.16
	VA	1.23		TOTAL	1.68
	WV	0.62	<u>Region IX</u>	AZ	0.40
	DRBC	0.22		CA	2.37
	INCOPT	0.14		HI	0.34
	SRBC	0.03		NV	0.17
	TOTAL	6.10		AS	0.08
<u>Region IV</u>	AL	1.30		GU	0.36
	FL	1.26		TT	0.16
	GA	1.52		TOTAL	4.38
	KY	0.72	<u>Region X</u>	AK	0.15
	MS	0.73		ID	0.38
	NC	1.80		CR	0.80
	SC	0.97		WA	1.04
	TN	0.88		TOTAL	2.37
	ORSANCO	0.33			
	TOTAL	9.48			
<u>Region V</u>	IL	1.82			
	IN	1.02	<u>TOTAL</u>	-----	48.73
	MI	1.74			
	MN	0.91			
	OH	1.86			
	WI	1.33			
	TOTAL	8.74			

NOTE: columns may not sum
exactly due to rounding error

TABLE IV
REGIONAL 208 TARGETS FOR FY 80
BASED ON TOTAL APPROPRIATION OF \$37.5 MILLION*
(\$ MILLIONS)

Region I	1.139
Region II	2.422
Region III	2.221
Region IV	3.744
Region V	4.361
Region VI	3.018
Region VII	1.543
Region VIII	1.756
Region IX	2.960
Region X	2.336

* \$12 million to be held at
Headquarters for NURP
funding during FY 80

2. FY 81-84

Funding projections for FY 81-84 are based on projections in the President's FY 80 budget. Projections for 106 remain at about \$50 million. Although EPA will be reviewing WQM needs, hopefully to arrive at a needs-based method for adjusting the 106 allocation formula, EPA does not anticipate that changes for individual States would be substantial. The needs-based approach should not affect gross funding levels as much as priorities within existing levels.

As discussed under Management Priorities, completion of the 208 grant portion of the WQM program is scheduled for FY 83. Headquarters will provide guidance regarding the phase-out of 208 grants well in advance of FY 83. Funding projections for 208 over the remaining years are \$50 million annually. EPA will spend a percentage of this total directly for urban runoff projects through FY 81.

IV. STRATEGIC DIRECTIONS

This section of the strategy presents five discussions of strategic directions for the WQM program. These are new and cross-cutting policies which relate to all the management priorities and problem priorities, above. Several of the following discussions (e.g., water quality/quantity relationships) are open-ended, indicating that WQM policy in these areas is still in the formative stage.

A. Toxics

The WQM program role in controlling toxics is to help control toxic substances before they enter the environment. The program's involvement in toxic controls has increased because of EPA actions underway in accordance with the NRDC consent decree [12]--establishment of toxic effluent guidelines, pre-treatment standards, and water quality criteria. These actions related to the consent decree place an increasing burden on 106 grants as EPA, the States, and others gear up to attack the complex problem of toxic controls.

In FY 80 and beyond, EPA will devote much effort to laying the groundwork for toxic controls. The agency will promulgate toxic water quality criteria and begin to make adjustments in its water quality standards, monitoring, permits, and enforcement programs to better control toxic wastes.

Two of the most critical pathways by which toxics enter the environment are WQM priority problems: urban storm runoff and nonpoint sources. For this reason, the urban runoff and agricultural nonpoint source prototype projects will assess toxic contributions to pollution and attempt to determine feasible controls (BMP's). Also, the groundwater prototype projects will address toxic pollutants and their controls. These efforts will be coordinated with other toxic control programs through the process of negotiating State work programs and State/EPA Agreements.

B. Water Conservation

Both municipal and agricultural water conservation practices can have a large impact on water quality, since for both surface and groundwaters, sufficient quantity is a major consideration in preserving quality.

The WQM regulations [1] require State and areawide WQM agencies to consider water conservation needs related to water quality in their problem assessment processes, for the purposes of increasing treatment plant efficiency and/or reducing raw water withdrawals.

Where problem assessments identify overuse of water as the cause of major water quality problems, water conservation may well be the most cost-effective solution. Water conservation, therefore, is a tool for solving water quality problems. Indeed, many best management practices (BMP's) for irrigated agricultural have essential water conservation components.

Thus, WQM agencies may promote the use of water conservation practices through application of BMP's and also through their key role of educating and informing the public on water quality issues.

C. Nonpoint Source Control on Federal Lands

A vast amount of acreage in the West is Federally-owned. Much mining, silviculture, and agriculture takes place on Federal lands, with associated water quality impacts. Section 304(k) of the Act authorizes \$100 million per year for the Departments of Interior, Agriculture, Army and others to control nonpoint source pollution on Federally-owned land, but to date, the Congress has appropriated no funds.

Section 313 of the Act and paragraph 35.1531-3 of the WQM regulations [1] state that Federal responsibilities in the control and abatement of water pollution are the same as for any non-governmental body. The WQM program will rely on the EPA Regions and the States to ensure that Federal agencies implement nonpoint source controls on their lands. The State/EPA Agreement will provide the States, Regions, and other Federal agencies with the opportunity to identify problems and assign responsibilities for controlling such pollution.

D. Urban Strategy

EPA's Administrator, in recent policy guidance, urged EPA programs to continue to implement urban initiatives and develop new and innovative solutions for urban problems. The WQM program is contributing to the urban strategy through its national priority efforts to control urban storm and construction runoff and to solve difficult municipal treatment system problems. The WQM regulations [1] state that WQM plans shall assess the impact of plan provisions on urban development and contain measures for mitigation of adverse impacts.

Water Planning Division's Financial Management Assistance Project (FMAP) will also contribute to solutions for urban problems, since it will assist municipal sewage agencies in identifying and implementing cost-effective approaches which minimize the fiscal impacts on local economies. By carefully reviewing system capacities, designs, and costs, State and local planning agencies will, in many instances, save money for urban taxpayers.

E. Water Quality/Quantity Relationships

The use and allocation of water can directly impact water quality. Surface and groundwater interact hydrologically both in terms of quality and quantity. Effective water quality management requires conjunctive management of both surface and groundwaters.

State and areawide WQM agencies and State and local water resources agencies should coordinate their programs to promote management of the total water resource. EPA is preparing two reports to the Congress containing policy options and Agency recommendations on quality/quantity coordination: the 102(d) report [13] and the 1442(c)/516(e) study [14].

Where water allocation or quantity considerations directly affect water quality, WQM agencies should address them. Such efforts are a legitimate use of funds (sections 106 and 208). Further efforts to coordinate quality and quantity considerations will be recommended in the final 102(d) and 1442(c)/516(e) reports.

V. OBJECTIVES

The purpose of this section of the WQM Strategy is to give the major participants in the WQM process--Headquarters, Regions, States, and areawide agencies--a firm idea of EPA's expectations for FY 80-84 for solving the priority problems. As the strategy states elsewhere, the emphasis of the program over the next five years is on problem solving. The program will solve problems by building the technological base for control and, through the political process, selecting and implementing cost-effective solutions.

The major underlying assumption within the objectives is that the use of section 208 grants will be completed in FY 83, implying sunset for 208 grants in FY 84. This assumption, in turn, depends on two assumptions: (1) section 208 will receive full funding in FY 80-83, (2) States and areawides will assume more responsibility for planning and decision-making. After FY 83, EPA will make recommendations for restructuring the WQM program. Nonpoint sources will be the major focus of the restructured program, since there will still be many nonpoint sources needing controls at that time.

The objectives related to solving the priority problems appear on the following pages. For each problem area, there is a statement of an overall objective, a set of related "givens," and examples of how the objectives will be met. Detailed objectives follow for each problem in a matrix format. The matrices do not show all activities that will be occurring in FY 80-84. Instead, they show specific concrete targets or sub-objectives which will contribute to the attainment of the overall objectives.

The problem areas are the same as the priorities in Section II, except that construction runoff and septic systems appear separately. In Section II, they appear in the discussions of nonpoint sources and waste treatment facilities, respectively.

Urban Storm Runoff

Overall Objective

The overall objectives for urban storm runoff in FY 80-84 are (1) to develop a technological base for control by the end of FY 82, (2) to make a report to Congress on effects, causes and controls in FY 83, and (3) to make the transition from prototype planning projects to widespread implementation in FY 81-83, assuming that the prototype projects identify a set of feasible and cost-effective BMP's that can be transferred to other areas.

Given

1. In FY 79-80, EPA through the National Urban Runoff Program will fund with 208 grants about 30 carefully-selected prototype projects to test USR BMP's.
2. The projects will generally last three years, but EPA will usually fund them on a year-to-year basis.
3. Funds for urban storm runoff programs will come directly from the national 208 appropriation.
4. EPA will provide expert technical and financial management assistance to agencies exploring solutions to urban storm runoff problems through FY 82. Existing contracts run through FY 82.

Examples

Altogether, EPA will fund 30 urban storm runoff prototype projects under the NURP. All of the projects focus on testing various BMP's (detention basin storage, street sweeping, catch basin cleaning, sewer flushing) and determining their impacts on water quality. These projects will enhance the possibilities of urban storm runoff control nationwide by filling in the data gaps in WQM plans and developing transferrable controls.

In Washington State, three communities are already implementing urban runoff BMP's. Snohomish County is initiating adoption of storm drainage/erosion control ordinances and initiating an inspector training program. Clark County is purchasing property for retention basins and will implement BMP's recommended in the 208 plans. Seattle Metro is adopting ordinances leading to the establishment of stormwater drainage districts and starting a salmon enhancement program as part of a broad water quality project to rehabilitate urban streams.

EPA and the State will monitor the effectiveness of these various urban storm runoff controls and, to the extent they prove effective, see that other State and local governments put their findings to use.

OBJECTIVES MATRIX--URBAN STORM RUNOFF

OVERALL OBJECTIVE: (1) TO DEVELOP A TECHNOLOGICAL BASE FOR CONTROL BY THE END OF FY 82, (2) TO MAKE A REPORT TO CONGRESS ON EFFECTS, CAUSES, AND CONTROLS IN FY 83, (3) TO MAKE THE TRANSITION FROM PROTOTYPE PLANNING PROJECTS TO WIDESPREAD IMPLEMENTATION IN FY 81-83

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	select prototype projects with Regions, States; assist with work programs	preliminary evaluation of data; develop information transfer program evaluate usefulness of and requirements for general permits for urban runoff manage/coordinate NURP*; help select additional work projects, develop work plans, provide tech assistance, make preliminary report	report to Congress on effects, causes, and controls for urban runoff begin to transfer info to other Federal, State, areawide, local agencies manage, coordinate NURP*	complete program assessment, evaluation develop recommended national urban runoff control program document urban runoff controls, costs	present findings to Congress, mid-83, with recommendations
EPA Regions	select prototype projects with HQ, States; assist with work programs; award grants	manage prototype projects; provide assistance, evaluation, funding begin to identify additional WQM agencies that need to apply BMP's use FMAP# to provide necessary financial mgmt technical assistance for prototypes	identify additional WQM agencies that need to apply USB BMP's (thru 82) write general permits and enforce as appropriate for separate sewers (non-NPDES states only) (thru 84)	assist program assessment and evaluation	identify high-priority urban runoff control needs and available sources of funding for implementation
States and areawide agencies	prototype agencies begin to test BMP's notify and inform public about prototypes; consult with advisory committees, develop progress reports (thru 84)	prototype agencies test BMP's; apply financial mgmt tools from FMAP# to solutions of urban runoff problems (thru 81) involve public in decision-making; evaluate public response; prepare responsiveness summaries (thru 84)	other agencies with urban runoff problems begin to apply tested BMP's if prototypes are successful	close out prototype projects agencies with urban runoff problems apply BMP's, implement regulatory programs and structural controls as appropriate (thru 84)	
*NURP--Nationwide Urban Runoff Program			#FMAP--Financial Management Assistance Project		

Agriculture NPS

Overall Objective

The overall objectives for controlling agriculture nonpoint sources are (1) to immediately implement BMP's contained in certified/approved WQM plans with State and local initiatives and with the assistance of Agriculture Conservation Program (ACP) and Rural Clean Water Program (208(j)) funds and (2) to continue to develop the technological and institutional bases for controls through pilot and prototype projects throughout the five-year period of this strategy.

Given

1. The RCWP program, which USDA has responsibility for administering, will receive funding from the Congress in FY 80 and beyond.
2. At the State level, the State Conservationist, SCS, will set up a State Rural Clean Water Coordinating Committee.
3. RCWP cost-sharing contracts will have a five-to-ten year life and will be for implementing BMP's identified in certified/approved WQM plans.
4. EPA will cooperate with USDA on funding and management of several types of pilot/prototype projects on agricultural nonpoint source control:
 - MIP's (Model Implementation Projects)
 - ACP (Agriculture Conservation Program) special water quality projects
 - other types of USDA projects

The projects are 3-5 year projects to test the cost-effectiveness of BMP's. EPA will transfer results to all States and areawide agencies as they come in.

5. EPA will provide expert technical and financial management assistance for agencies addressing agricultural nonpoint source problems.
6. EPA Regions, the States, and areawide agencies may use the State/EPA Agreement process to agree upon where agriculture nonpoint source problems exist, where to implement pilot projects, and what assistance is needed from EPA, USDA, and others.

Example

One of the first MIP projects which EPA and USDA initiated is located on a 287,000 acre area in Delaware County, New York. The area has a large concentration of dairy farms, and large amounts of sloping cropland and forest with erosion problems, both contributing to water quality degradation in the Cannonsville Reservoir, one of the major dams supplying water to New York City.

Although the reservoir has been in use only since 1964, the water quality is deteriorating and the City does not use all the water it could from Cannonsville. The water has taste and odor problems from severe summer and fall algae blooms.

BMP installation in the 450 square mile watershed started in the spring of 1978, and is proceeding well. Participation of local farmers has been excellent. In one part of the watershed, 37 of 43 farmers agreed to participate in the evaluation of BMP's. Most of the BMP's are animal waste facilities, with an average cost per farm of about \$3,500.

Since the watershed is representative of much of the Northeast's dairy country, EPA will monitor and evaluate the BMP's and determine their effects on water quality so that the results of the project can be transferred to other similar watersheds. Both EPA and USDA are contributing about a million dollars each over the next three-to-five years to support the project. Both the Soil Conservation Service (SCS) and the Agricultural Stabilization and Conservation Service (ASCS) are providing support.

WQM PROGRAM

OBJECTIVES MATRIX--AGRICULTURE NPS

OVERALL OBJECTIVE: (1) TO IMMEDIATELY IMPLEMENT BMP'S CONTAINED IN CERTIFIED/APPROVED WQM PLANS WITH STATE AND LOCAL INITIATIVES AND WITH THE ASSISTANCE OF AGRICULTURAL CONSERVATION PROGRAM (ACP) AND RURAL CLEAN WATER PROGRAM (208(j)) FUNDS AND (2) TO CONTINUE TO DEVELOP THE TECHNOLOGICAL AND INSTITUTIONAL BASES FOR CONTROLS THROUGH PILOT AND PROTOTYPE PROJECTS.

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	develop RCWP/208(j) program select ACP* special projects identify target groups and develop system for info transfer	participate with other Fed agencies on national RCWP# Coordinating Committee; manage joint research work with Regions, States to develop agriculture NPS controls, including financial aspects thru FMAP+ (thru 81) transfer info to other Fed, State, areawide agencies (thru 84)	prepare national MIP** summary report provide national mgmt overview of RCWP#, MIP**, ACP* special projects (thru 84) document cause-effect relationships; national summary level	prepare national MIP** summary report	
EPA Regions	approve approximately 30 additional agricultural components of WQM plans approve approximately 20 RCWP# projects approve approximately 8 additional ACP* water quality projects	approve all WQM plans and help establish RCWP Coordinating Committees in all States manage MIP's**, initiate 12-15 new ACP* special projects (thru 81) use FMAP+ to provide financial mgmt assistance for agricultural NPS controls (thru 81)	manage MIP's**, ACP* projects; monitor RCWP# projects (thru 84) assist program assessment, evaluation document cause-effect relationships; Regional summary level	identify high-priority agricultural NPS needs and available sources of funds for planning and implementation (thru 84)	
State and areawide agencies	establish 40 RCWP# Coordinating Committees approve 20 RCWP# projects notify and inform public about prototypes; consult with advisory committees, develop progress reports, prepare responsiveness summaries (thru 84)	certify agricultural portions of WQM plans thru RCWP Coordinating Committees, manage implementation of agricultural NPS BMP's (thru 84) conduct MIP's**, initiate 12-15 new ACP* special projects use FMAP+ to obtain technical assistance on financial mgmt aspects of controls (thru 81)	certify updated agricultural elements of WQM plans (thru 84) document cause-effect relationships at project level	monitor implementation of agricultural BMP's (thru 84)	*ACP--Agricultural Conservation Program **MIP--Model Implementation Program +FMAP--Financial Management Assistance Project #RCWP--Rural Clean Water Program (208(j))

Silviculture NPS

Overall Objective

The overall objectives for controlling silviculture nonpoint source pollution are (1) to implement the EPA/FS Agreement [15], (2) to implement, starting in FY 80, BMP's contained in certified and approved plans, with the assistance of the RCWP (208(j)) and other forestry assistance programs, and (3) to continue developing technological and institutional bases for controls through pilot and prototype projects.

Given

1. The RCWP program, which USDA has responsibility for administering, will receive funding from the Congress in FY 80 and beyond.
2. RCWP cost-sharing contracts will have a five-to-ten year life and will be for implementing BMP's identified in certified/approved WQM plans.
3. EPA will cooperate with the USDA on funding and management of several types of pilot/prototype projects on silviculture nonpoint source control:
 - ACP (Agriculture Conservation Program)
 - FIP (Forest Incentive Program)
 - State WQM plan/State Forest Resource Program

The projects are long-term projects to test the cost-effectiveness of BMP's. EPA will transfer the results to all States and areawide agencies as they come in.

4. The EPA/FS Agreement [15] provides the mechanism for the two agencies to work together to achieve common goals.
5. EPA will provide expert technical and financial management assistance for agencies addressing silviculture nonpoint source problems.
6. EPA Regions, the States, and areawide agencies may use the State/EPA Agreement process to agree upon where silviculture pollution problems exist, where to implement pilot projects, and what assistance is needed from EPA, USDA, FS and others.

Examples

As a result of initial WQM planning, silvicultural BMP's are being established in most States where the plans have identified silvicultural problems. In South Carolina, for example, the State assigned a full-time forester to initiate BMP implementation in the Broadway Lake Model Implementation Project (MIP). Through the forester's actions, the State has made 39 landowner contracts, produced 10

land management plans for 850 acres, installed 40 miles of firebreaks, and prepared and planted 1,200 acres of land under cooperative forestry programs.

In Oregon, the State passed a State Forest Practices Act in 1972 which was the first of its kind in the country. The law established a mechanism for implementing the approved silvicultural aspects of 208 plans. The Governor designated the Oregon State Forestry Department as the management agency and designated the Forest Service (USDA) and the Bureau of Land Management (Interior) as the implementation agencies for Federal lands in their jurisdiction. EPA will monitor the success of different State programs, and encourage other States to adopt similar programs based on proven approaches.

OBJECTIVES MATRIX--SILVICULTURE NPS

OVERALL OBJECTIVE: (1) TO IMPLEMENT THE EPA/FS AGREEMENT, (2) TO IMPLEMENT, STARTING IN FY 80, BMP'S CONTAINED IN CERTIFIED AND APPROVED PLANS, WITH THE ASSISTANCE OF THE RCWP (208(J)) AND OTHER FORESTRY ASSISTANCE PROGRAMS, AND (3) TO CONTINUE DEVELOPING TECHNOLOGICAL AND INSTITUTIONAL BASES FOR CONTROLS

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	begin implementation of EPA/FS Agreement identify target groups and develop system for information transfer	help select ACP* and FIP** special projects participate on national RCWP coordinating committee (thru 84) transfer information to other Federal, State, and areawide agencies (thru 84)	provide national mgmt overview on RCWP#, ACP*, FIP** special projects (thru 84) document cause-effect relationships--national summary		
EPA Regions	approve silvicultural elements of WQM plans (thru 80)	ensure State RCWP# coordinating committees are overseeing implementation of BMP's (thru 84) assist development of regulatory programs in approximately 4 States manage ACP*, FIP**, RCWP# silviculture elements use FMAP+ to provide financial mgmt tech assistance for developing silviculture controls (thru 81)	document cause-effect relationships for Region		
States and areawide agencies	certify silvicultural portions of WQM plans (thru 80)	through RCWP coordinating committees, manage implementation of silviculture NPS BMP's (thru 84) conduct ACP*, FIP** special projects (thru 84) inform public and involve them in implementation of silviculture NPS BMP's (thru 84)	document cause-effect relationships at project level		

*ACP--Agricultural Conservation Program (USDA) **FIP--Forest Incentive Program (USDA) #RCWP--Rural Clean Water Program (208(j))
+FMAP--Financial Management Assistance Project

Construction Runoff

Overall Objective

The overall objective for construction runoff is for all States with construction runoff problems to have regulatory programs in place by the end of FY 83. Needs for 208 grants for construction runoff planning should, however, be minimal in FY 80 through 83.

Given

1. Many States already have adequate controls for construction runoff.
2. Feasible BMP's exist.
3. Obstacles to implementation of construction runoff controls tend to be fiscal, political and institutional in nature.
4. EPA will provide expert financial management technical assistance to agencies developing regulatory programs for construction runoff. EPA will also conduct technical symposia in States requesting or needing them.
5. EPA Regions, the States, and areawide agencies may use the State/EPA Agreement process to document where construction runoff problems exist and what actions each party will take.

Examples

In North Carolina, the State passed a tough erosion and sediment and control law in 1973. For any public or private project in the State involving the disturbance of an acre or more of land, the developer must first prepare an acceptable erosion and sediment control plan.

The law allows cities and counties to develop their own erosion control programs. Presently, 19 municipalities and 16 counties have such programs, and in those jurisdictions the State does not review erosion control plans unless State or Federal funds finance the project. In jurisdictions having no erosion control programs, the State reviews plans for all projects. North Carolina's erosion control program is flexible and performance-oriented. The State encourages developers to use their imagination to install any erosion control measures that will do the job.

EPA will attempt to transfer the knowledge gained in North Carolina to other States with similar circumstances, to help meet the overall objective of having regulatory programs in place by the end of FY 83 wherever construction runoff problems exist.

WQM PROGRAM

OBJECTIVES MATRIX--CONSTRUCTION RUNOFF

OVERALL OBJECTIVE: THE OVERALL OBJECTIVE FOR CONSTRUCTION RUNOFF IS FOR ALL STATES WITH CONSTRUCTION RUNOFF PROBLEMS TO HAVE REGULATORY PROGRAMS IN PLACE BY THE END OF FY 83

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	focus initial efforts of FMAP* on construction runoff controls develop public information on construction runoff BMP's	conduct symposia on construction runoff in about 8 States (thru 81) transfer knowledge gained from FMAP* to Regions, States, area-wides (thru 81)			
EPA Regions	review State construction runoff problem assessments	with HQ, States, select agencies to develop construction runoff regulatory programs (thru 82) use FMAP* to provide financial mgmt tech assistance on development of construction runoff regulatory programs (thru 81)			
State and areawide agencies	identify areas where construction runoff controls are needed to protect WQ	with HQ, Regions, develop and implement construction runoff controls; especially financial aspects additional States develop regulatory programs inform public and involve in planning process	implementation of runoff controls in additional States (thru 82)		implementation of runoff controls in all States by 1983

*FMAP--Financial Management Assistance Project

Groundwater

Overall Objective

The overall objectives for groundwater protection are (1) to develop an EPA and WQM groundwater policy and strategy and (2) to continue to develop technological and financial bases for controls through pilot and prototype projects.

Given

1. WPD has contracted with a national team of groundwater technical experts to assist in the development of agency and WQM groundwater strategies, to assist in the development and implementation of prototype projects at Regional Office request, and to provide technical assistance as necessary.
2. WPD will coordinate with the Offices of Drinking Water and Solid Waste to produce a comprehensive integrated policy.
3. EPA HQ, the Regions, and the States will select approximately 10 prototype projects for more detailed assistance to develop BMP's which can be transferred nationally.
4. The FMAP will provide financial management technical assistance to prototype projects in developing an implementable national policy.
5. EPA Regions, the States, and areawide agencies may use the State/EPA Agreement process to document where groundwater quality problems exist and what actions each party will take.

Examples

EPA, the State of New York, and the Nassau-Suffolk Regional Planning Board have developed, through the 208 program, a management program to protect groundwater on Long Island, N.Y. Groundwater beneath Nassau and Suffolk Counties is the only source of fresh water for three million people. (It was designated a sole source aquifer in 1978 pursuant to SDWA, section 1424(e).) Water quality, not quantity, is the major limiting factor.

The Nassau-Suffolk County 208 program recommended over 100 actions to address identified ground and surface water quality problems. Some of the recommendations have already been implemented and the thrust of the continuing 208 program is to seek implementation for the remainder. Some examples of implementation actions the local governments are taking are banning septic tank cleaners, preparing new regulations governing underground chemical storage, and revising regulations to control pollution from animal wastes, as follows:

To protect groundwater from certain carcinogens, the Nassau-Suffolk 208 program recommended the elimination of the sale and use of household drain and septic tank cleaners. As a result, septic cleaners are banned for sale on Long Island.

The initial 208 effort called for tougher standards to regulate leaking storage tanks. As a result, several local governments, including Suffolk County and the towns of Hempstead and Islip have changed their regulations and toughened standards for in-ground storage tanks.

For animal wastes, municipalities on Long Island are reviewing and revising regulations to obtain better control of nitrate loads. Most municipalities have eliminated laws which force pet owners to curb their dogs, a practice which in turn forces animal wastes into storm sewers.

Through projects like this one on Long Island, EPA will gain enough experience with solutions to groundwater quality problems to develop a national groundwater policy and strategy which will be a part of the restructured WQM program after FY 83.

WQM PROGRAM

OBJECTIVES MATRIX--GROUNDWATER

OVERALL OBJECTIVE: (1) TO DEVELOP AN EPA AND WQM GROUNDWATER POLICY AND STRATEGY AND (2) TO CONTINUE TO DEVELOP TECHNOLOGICAL AND FINANCIAL BASES FOR CONTROLS THROUGH PILOT AND PROTOTYPE PROJECTS

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	by contract, analyze groundwater issues across the country with Regions, States, areawides, select sites for major groundwater policy studies	develop national policy on groundwater utilization/ protection for guidance to States provide tech/financial mgmt assistance on groundwater management; use FMAP* (thru 81) with other HQ offices, Regions, and contractor, manage studies on aquifer designation, protection (thru 81) identify target groups and develop system for info transfer; develop public information materials	manage hands-on technical/ financial management assistance projects with the Regions develop framework for State groundwater programs with OSM, ODM transfer info to other Federal, State, areawide agencies (thru 83)	develop and implement EPA groundwater policy tie groundwater policy to sole source aquifer program	
EPA Regions	help select sites for groundwater policy case studies	provide technical assistance, evaluation, funding for intensive groundwater studies (thru 81) use FMAP* to provide financial management assistance to intensive groundwater studies (thru 81)			
State and areawide agencies	help select sites for groundwater policy case studies	selected State or areawide agencies receive funds to initiate intensive groundwater studies inform and involve public in implementation of groundwater pollution controls (thru 84)			

* FMAP--Financial Management Assistance Project

Municipal Point Source

Overall Objective

The overall objectives for municipal point source pollution controls are (1) to establish an improved methodology for performing waste load allocations and making decisions on appropriate levels of treatment, (2) to evaluate what controls are necessary on specific stream segments to meet effluent and water quality standards, and (3) to participate in the resolution of the issue of how and when section 201 funds may be used to perform waste load allocations and water quality analyses.

Given

1. Water Planning Division will participate on the Headquarters AST/AWT review task force.
2. WQM agencies, primarily at the State level, will carry out prototype projects on AWT planning and review with section 208 grants awarded in FY 79.
3. Starting in FY 80, no section 208 funds will be used for municipal point source planning projects. However, the WQM program will still use section 106 or other funds for this purpose, and manage the prototype projects started in FY 79 with 208 funds.
4. The FMAP will provide financial management technical assistance on selected municipal projects.
5. EPA Regions, States, and areawide agencies may use the State/EPA Agreement process to document where municipal problems exist, what actions each party will take, and what sources of funds they will employ other than 208 funds.

Examples

EPA and the State of Vermont have selected a 208-funded AWT review project on the Lower Winooski River. A large percentage of the State's population, including the cities of Montpelier and Burlington, discharge into the Lower Winooski. If the seven sewage treatment plants existing or proposed on the river were operating at their design capacity, the ultimate oxygen demand would be about four times the low flow assimilative capacity.

Water quality standards violations occur in the Lower Winooski every summer. To prevent future violations, the State is planning AWT for the treatment plants. The 208-funded analysis will determine what specific levels of treatment will meet WQS at low flow.

In addition to the existing water quality problems, the Winooski is an example of a conflict between differing goals--achieving clean water and generating hydroelectric power. Green Mountain Power has two generating stations on the river and is planning a third. The levels of treatment needed to meet WQS depend on the river's assimilative capacity which, in turn, depends on the regulated low flow.

EPA, through a contractor, is providing technical assistance to Vermont by analyzing the existing data on the watershed and recommending approaches for the Lower Winooski work plan. The Vermont Agency of Environmental Conservation has selected a computer model and is presently collecting critical low flow water quality data for calibration and verification. The overall study will take one-to-two years, and should result in an improved general methodology for making waste load allocations and selecting necessary levels of treatment.

WQM PROGRAM

OBJECTIVES MATRIX--MUNICIPAL POINT SOURCE

OVERALL OBJECTIVE: (1) TO ESTABLISH AN IMPROVED METHODOLOGY FOR PERFORMING WASTE LOAD ALLOCATIONS AND MAKING DECISIONS ON APPROPRIATE LEVELS OF TREATMENT, (2) TO EVALUATE WHAT CONTROLS ARE NECESSARY ON SPECIFIC STREAM SEGMENTS TO MEET EFFLUENT AND WATER QUALITY STANDARDS, AND (3) TO PARTICIPATE IN THE RESOLUTION OF THE ISSUE OF HOW AND WHEN SECTION 201 FUNDS MAY BE USED TO PERFORM WASTE LOAD ALLOCATIONS AND WATER QUALITY ANALYSES.

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	develop national policy statement on 208-AWT	manage national technical assistance contract (thru 81)			
	participate on HQ AWT review task force (thru 80)	provide technical assistance for AWT planning and review for specific AWT decisions (thru 81)			
	establish national technical assistance contract	provide financial mgmt assistance thru FMAP* for specific municipal problems (thru 81)			
	work with OMPD on policy for use of construction grant funds for WLA's	involve public in development of prototype project work plans			
	develop system for info transfer and identify target groups				
EPA Regions	with 208 funds, fund selected areawide agencies or State agencies to review AWT needs (FY 79 only)	establish EPA/State/local plan update process			
	provide Regional management for prototype projects	provide Regional mgmt to prototype projects; assistance, evaluation, funding			
	review construction grant applications for consistency with cert/appr WQM plans (thru 84)	use FMAP* to provide financial mgmt assistance on prototype projects (thru 81)			
State and areawide agencies	areawide agencies carry out prototype projects on AWT planning and review	develop process for WQM plan updates regarding population/economic projections, service areas, capacity, etc.			
	States/areawides address difficult waste treatment issues per SEA** and State work plan	implement certified/approved WQM plans thru construction grants program (thru 84)			

* FMAP--Financial Management Assistance Project **SEA--State/EPA Agreement

Septic Systems

Overall Objective

The overall objectives for the control of pollution from septic systems are that (1) either the States, or the States working with sub-State agencies, implement regulatory programs governing septic systems by FY 83, and (2) EPA develop recommended criteria for inclusion in State regulatory programs on when and how septic systems should be installed or maintained on the basis of ground and surface water quality and financial feasibility.

Given

1. Feasible controls (BMP's) exist. EPA's effort on septic systems will focus on overall State management and regulatory programs.
2. Obstacles to implementation of septic system controls tend to be financial and institutional in nature.
3. The initial efforts of the FMAP will focus on the financial aspects of septic system control.
4. EPA Regions, the States, and areawide agencies may use the State/EPA Agreement process to document where septic system problems exist and what actions each party will take.
5. EPA's Office of Research and Development, as part of their overall groundwater research strategy, will conduct septic tank investigations in cooperation with MERL-Cincinnati which will lead to guidance on construction, operation, and maintenance of systems to protect groundwater. ORD will complete these studies by July 1981.
6. WPD will maintain a groundwater technical assistance program which will select at least one prototype project to develop BMP's for septic systems to protect groundwater quality.
7. Section 201(h) of the Act makes funding of private and public small alternative wastewater systems eligible for construction grant funding. During facility planning, local governments will explore all alternatives to determine the most cost-effective method of treatment.
8. EPA's Office of Water Program Operations, Facility Requirements Division, is developing a new design manual for on-site treatment systems. It is scheduled for publication early in 1980.

Example

EPA and the Panhandle Health District in Northern Idaho have developed a management strategy for a five country area to protect the quality of surface water supplies and, especially, the Rathdrum Prairie sole-source aquifer. The management of septic systems is critical to the protection of groundwater quality. The Panhandle Region of Idaho is rapidly developing with over 2,000 septic tank permits issued in FY 78.

The Panhandle WQM plan resulted in the initiation of rules and regulations for the Rathdrum Prairie aquifer and completion of a sewage management plan. The Panhandle Health District operates a regulatory program for septic systems including a stringent permit system. The density limit for septs is one per five-acre parcel, except in areas to be sewerred within five years. All new development must have dry sewers even if the area is currently on septic systems.

Regulatory programs such as this one in Idaho are needed to protect surface and groundwater quality in many States, especially where use of septic tanks is increasing. EPA and the State of Idaho will monitor the success of the Panhandle program and, if it is working well, transfer the knowledge gained to other areas with similar problems.

WQM PROGRAM

OBJECTIVES MATRIX--SEPTIC SYSTEMS

OVERALL OBJECTIVE: (1) THE STATES, OR THE STATES WORKING WITH SUB-STATE AGENCIES, SHOULD IMPLEMENT REGULATORY PROGRAMS BY FY 83; (2) EPA SHOULD DEVELOP RECOMMENDED CRITERIA FOR INCLUSION IN STATE REGULATORY PROGRAMS

unit	FY 79	FY 80	FY 81	FY 82	FY 83-84
Headquarters	focus initial efforts of FMAP* on septic system controls, financial management aspects	work with Regions, States, to develop, implement controls on septic systems, especially financial mgmt aspects (thru 81)	monitor and evaluate progress of WQM plan implementation regarding septic systems (thru 84)		
		with Regions, States, select agencies to develop septic system regulatory programs			
		transfer knowledge gained from FMAP* to Regions States, others thru training, guidance (thru 81)			
EPA Regions	fund selected areawide agencies to fill gaps in WQM plans related to septic systems (208 grants)	use FMAP* to provide financial mgmt assistance on selected septic system projects (thru 81)	monitor State/areawide implementation of regulatory programs and other control programs (thru 84)		
	identify situations where construction grants can provide solutions; provide input to State priority lists				
State and areawide agencies	identify situations where construction grants can be used; input to State priority list	additional States develop regulatory programs for septic systems (thru 82)			all States implement regulatory programs to control septic systems in 1983
	implement certified/approved WQM plans for septic systems controls (thru 84)	use FMAP* to obtain financial management assistance on selected septic system projects (thru 81)			
	inform and involve public in implementation of septic system regulatory programs				

* FMAP--Financial Management Assistance Project

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