



208 Bulletin

Irrigation Efficiency Task Force

An interagency task force, composed of members from each of three government agencies (The Environmental Protection Agency, the Department of the Interior, and the Department of Agriculture Soil Conservation Service) has been convened to study irrigation efficiency. The EPA member is Joe Krivak, Chief, Nonpoint Source Branch and the alternate member is Darwin Wright, Office of Research and Development.

The Interagency Task Force on Irrigation Efficiencies was established to examine the problem of inefficient irrigation in the United States and develop recommendations regarding appropriate Federal objectives, policies, agency roles, and action programs. The Interagency Task Force has established a Technical Work Group, with headquarters in Denver, to accomplish the required assembly, review and analysis of data and to prepare a report. EPA members of

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Alternatives to Centralized Sewer Systems

Methods of on lot disposal, which include traditional septic tanks as well as new technological innovations, have precipitated new management techniques for local sewer authorities to ensure proper disposal of on lot waste. On lot disposal is particularly desirable when centralized systems are technically impossible to build or too costly from a cost-benefit standpoint.

New Methods

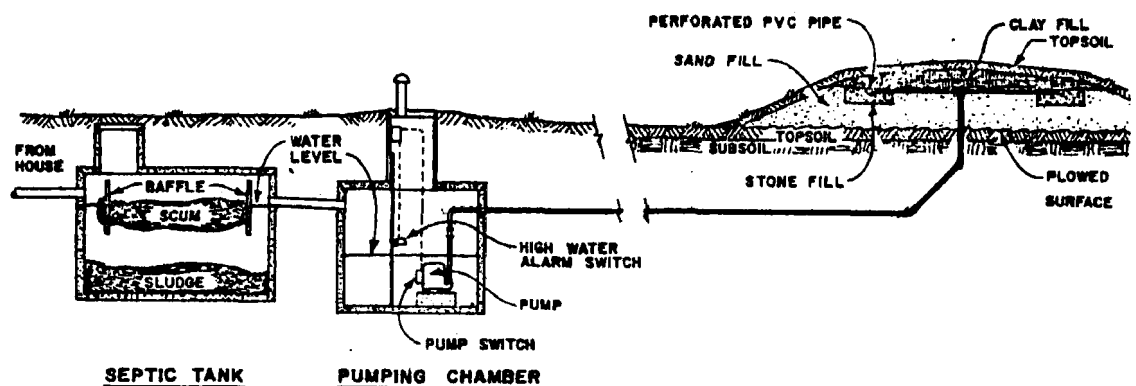
The "Mound System" is one new method now being used in areas where a high water table or shallow soil condition make traditional septic tanks unsafe. This system is costlier than traditional septic tanks because a pump may be required. Here the mound consists of permeable soil, imported to the site to act as an additional layer of filtration capacity before effluent reaches the original soil. The aim of the mound system is to prevent dangerous contamination of ground water from on lot waste. The system provides for additional levels of filtration through imported soil before the waste soaks into the shallow topsoil.

New England is an area

especially adapted to this method, and Monroe County, New York, has already established design standards for the mound system.

Another method for on lot disposal is an aerobic, or oxygen-consuming system. Costlier, but more effective than the mound system, the aerobic system filters oxygen through waste, allowing aerobic microbes to treat the waste water. When a disinfection unit is added to the system, the unit acts like a miniature treatment plant, producing a higher quality effluent than a septic tank. Disposal on surface can then be made. However, regular maintenance is required. This system has been successfully used in demonstrations in Boyd County, Kentucky.

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In a mound system, effluent from a septic tank is pumped into a mound of sand which serves as an additional filter when existing soil is inadequate or when there is a high water table. Diagram from: Dr. Stephen C. Smith, testimony before the House Committee on Science and Technology.

GPCOG Promotes Septic System Legislation

How do you hold down the cost for private homeowners of correcting septic system failures? Two legislative bills proposed by the Greater Portland (Maine) Council of Governments were recently passed by the Maine legislature to mitigate the high economic and social consequences of correcting pollution from septic system failure.

More than one-half of the population of Maine relies on septic systems of some sort. Health hazards and water pollution from failing septic systems are problems of statewide concern, but the costs for correcting failures may be a heavy burden on the homeowner.

To assess public attitudes regarding septic system use and wastewater treatment alternatives, GPCOG's Public Participation Coordinator, Barbara Horton, distributed a questionnaire. With encouragement from television, radio and community business, the questionnaire was returned by over 350 citizens in the planning area.

GPCOG found many citizens in the planning area did not favor expanding existing sewer systems, since construction, operation and maintenance costs are high and expansion could lead to greater development. Also, they found that many people were converting their

seasonal shore-side homes into full-year residences, greatly increasing the potential for septic system failures by inadequate septic systems. Since septic systems in seasonal homes are often small and home-made, using them year-round increases the potential for septic system failure. Many citizens in the area felt this could be a significant problem.

Recognizing the impact of septic system use in the state, the Maine legislature passed legislation proposed by GPCOG which (1) allows municipalities to enact measures giving septic system users a ten-year period in which to pay back the costs of correcting malfunctioning systems, and (2) requires a permit from a local plumbing inspector before conversion of seasonal systems for year-round use.

Environmentally-sound and economically-feasible solutions were implemented by the State of Maine in response to the efforts of GPCOG 208.

WQM Accomplishments Clearinghouse

The first compendium of Water Quality Management accomplishments from the new WQM Accomplishments Clearinghouse will be published in December, comprising 58 case studies from 40 WQM agencies.

The coordinator of the clearinghouse is Terry Peters, at EPA headquarters in Washington, D.C., who publishes biweekly case studies that are later compiled into the quarterly compendium.

The goal of the WQM Accomplishments Clearinghouse is to demonstrate through case studies what the Water Quality Management Program has done to make our waters fishable and swimmable by control of point and nonpoint sources of pollution, and to provide guidance for other agencies.

The question then becomes: what is an "accomplishment"? The WQM Accomplishments Clearinghouse carefully gathers information from the Regional Offices and local agencies, and then

subjectively determines whether an accomplishment is evident. The clearinghouse looks to whether the outcome of the agency's work has been made to promote water quality, whether the agency has been directly involved in the outcome, and whether the agency has developed an implementable solution. If, given these criteria, an "accomplishment" is evident, the experiences of the agency are disclosed in a case study which becomes a part of the compendium.

Agencies can review these case studies to see whether prior experiences of other agencies can provide guidance toward solutions for their local problems.

When one reads through the compendium, one identifies steps common to all successful programs. A step-by-step approach seems most effective: (1) identify the problem, (2) develop technical alternatives, (3) propose management arrangements, (4) build public support, and (5) implement the preferred solution.

Reminder:

WE WOULD LIKE TO HAVE YOUR IDEAS REGARDING THE WORK BEING DONE TO MAKE OUR NATION'S WATERS FISHABLE AND SWIMMABLE BY 1983. IF YOU HAVE A NEWSLETTER OR BULLETIN, WOULD YOU PLEASE CHECK TO SEE THAT WE ARE ON YOUR MAILING LIST? PLEASE SEND YOUR PUBLICATIONS TO: 208 BULLETIN EDITOR, (WH-554), ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. 20460.

Will Geer Aids 208 Program

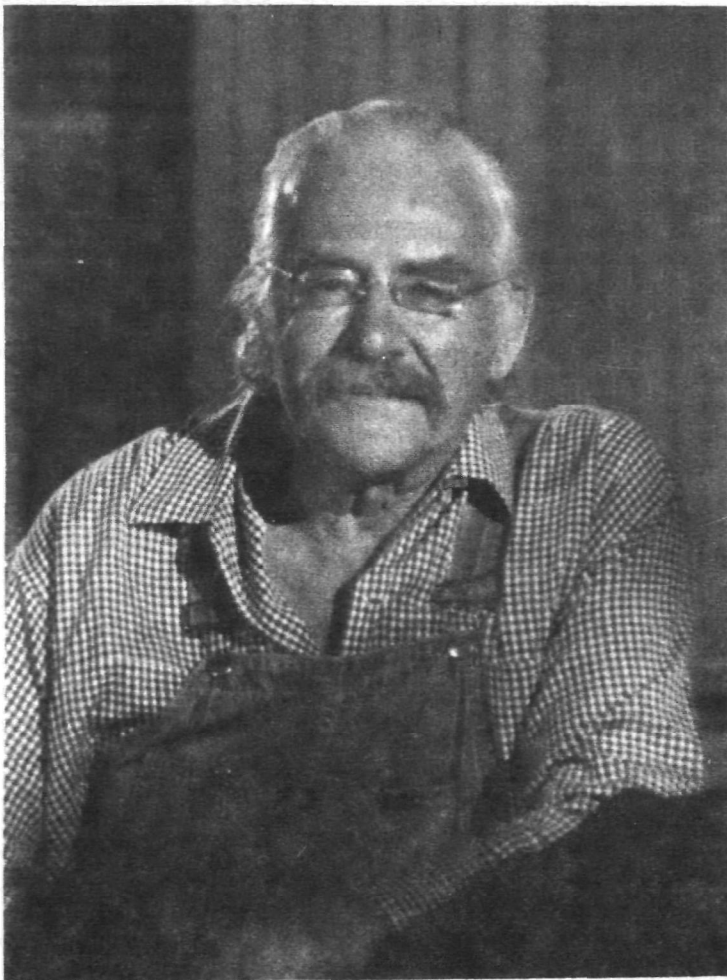
"There was a time when we took a drink of water for granted. That time has slowly faded. Today, our rapidly growing population areas are facing problems that require a lot of future planning. The experts are asking for your help. You can be an important part of this planning . . ."

The speaker isn't Doug Costle or Barbara Blum, but Will Geer of the popular "Waltons"

television program. The face is smiling and familiar to millions; the message is pollution control planning; and the spots will be heard around the country on television as public service announcements.

The office of Public Awareness and 208 Public Participation Coordinators will be distributing these 30-second spot announcements to local agencies .

Following Will Geer's introduction, the listener is encouraged to contact the local areawide agency to determine how he or she can become involved in areawide planning.



TV announcements have been produced featuring Will Geer

208 Agency Improves Utah's Waters

The Weber River Water Quality Planning Council played an integral role in the implementation of a locally-funded stormwater regulatory program to control runoff in Davis County, Utah.

Urban development in Davis County over the past ten years has climbed the foothills of the Wasatch Mountain Range from its earlier containment in the flatlands of the Great Salt Lake. This development on the former shorelines of ancient Lake Bonneville created pressure on existing storm sewers.

Stormwater runoff was identified early as the major source of nonpoint pollution in the area. The WRWQPC collected data on water quality and performed wasteload allocations and segment classifications. From this data base, a stormwater master plan was developed for Davis County, which includes Utah's second largest city, Ogden.

The masterplan included storm sewer flows based on known snowfall and rainfall levels over the past ten years. It covers both existing and projected development in the County.

Local authorities shared responsibilities for construction of the stormwater facilities. City officials in the County approved priorities for projects, and found those

deficiencies requiring immediate attention. The Davis County Commissioners endorsed the plan developed by the 208 Agency. When the plan was finalized, all sixteen cities in the County approved the stormwater management plan.

Davis County agreed to make the major improvements to the system, and the cities agreed to build the smaller facilities. Developers were required under ordinance to conform with the master plan by constructing their projects such that stormwater runoff is the same before and after construction.

Davis County agreed to establish a stormwater management department in May, 1977. The County borrowed money on its tax assessment for the department to start construction of the facilities as soon as possible.

The WRWQPC was instrumental in improving waters of the fast-growing Salt Lake Valley by developing a strategy with the backing of the Davis County Commissioners, and then choosing that management technique most likely to expedite implementation of the plan.

The Nation's Capital Looks at 208 Planning

208 Planning in the Nation's Capital encompasses careful consideration of all elements of a community's needs, a situation similar to plans for other metropolitan areas. The Interstate Commission on the Potomac River Basin recently reviewed issues important to Washington, D.C., area planning in its publication, *Potomac Issues*.

The Commission asked various outspoken citizens to outline their major considerations for metropolitan area planning. The result was a plethora of interwoven considerations: needs for developing the inner city; needs for considering the economic impact; needs for considering the impact of urban activity on downstream growth and ecology; and needs for improvement of nonpoint source technology.

Walter Scheiber (Executive Director of the Washington Council of Governments) stressed a rational "balanced" approach, giving proper local consideration to water supply, an acute problem in the Washington area; downstream effects; and sludge disposal. Implementation

provisions are the key, he claims, in making the 208 plan in Washington more than a great expectation, but a reasonable course of action.

Foster Shannon (President of the Metropolitan Washington Board of Trade) stressed the economic impact of planning on residential, commercial and institutional growth. He was concerned with water supply, as well as with water quality.

The Rev. Jerry A. Moore (Chairman of the 208 Water Resources Planning Board) is concerned about paying for the plan, questioning whether the District of Columbia can meet additional burdens of separate facilities for urban run-off and point sources, badly needed by the area.

Insensitivity to downstream damage was criticized by Elgin Dunnington (Research associate with the University of Maryland Center for Environmental and Estuarine Studies) who noted that the greatest harm from Washington's urban activities is felt downstream in the lower Potomac River estuaries.

Thornton Secor (Resource Conservationist) questioned whether we have the technology available to make nonpoint source control effective. He believes that farmers in the Washington area are especially affected by the 208 plan and that all social and economic needs must be assessed in the 208 plan.

Harry Murray (member of the Citizen Advisory Committee, an arm of the District of Columbia government) believes the planning process for water resources will affect housing rehabilitation and inner city growth. He warns against piecemeal planning that will not address all social and cultural realities of planning.

Joseph Rodgers (President of an engineering consulting firm in Rockville, Maryland) urged the public sector to make responsible contributions to planning, since the private sector cannot meet the financial resources necessary for such a plan. He wants a federal and regional impetus that will contribute toward clean water goals without stagnating development.

The Metropolitan Washington Council of Governments approach to 208 planning is purposive, but thoughtful—attributes necessary to a totally-integrated 208 plan. The many dynamic, and often-conflicting factors in planning will be used by WASHCOG to fashion a plan responsive to the greater good of the community.

How Others See Us

The United States Department of Agriculture is informing units of its Agricultural Stabilization and Conservation Service (ASCS) about EPA's efforts to make American waters fishable and swimmable by 1983. Weldon B. Denny, USDA Deputy Administrator for Programs, has announced a USDA slide show about Section 208 of the FWPCA.

The 13-minute slide show with cassette sound tract has been developed by ASCS to provide greater understanding between EPA and USDA about how the ASCS can assist the planning and implementation of Section 208, and how ASCS and USDA can have input into the 208 effort.

Copies will be distributed to EPA headquarters and to Regional Offices of EPA, as well as to ASCS staff on the national, state and county levels.

USDA has encouraged its personnel to review the slide show with its regional and state staffs, to consider the status of 208 in their areas and to work cooperatively with Section 208.

Can Diapers Abate PCB Contamination?

The East Central Michigan Planning and Development Region (ECMPDR) successfully delayed the dredging of sediments in the Saginaw River and Bay until potential harmful affects from PCB contamination and possible solutions to the problem could be determined.

Recent studies by the ECMPDR had found high levels of polychlorinated biphenyls (PCB) in the Saginaw River and Bay. Even though point sources of PCB were abated, sediment in the river and bay was contaminated, and any unsettling or agitation of the river or bay would result in resuspension of the contaminated sediment.

Understanding these facts, ECMPDR was alarmed when it learned of a proposed Corps of Engineers dredging and disposal project for the river and bay.

Working with the Corps of Engineers, the United States Congressman from the local Michigan District, and the Michigan Department of Natural Resources, ECMPDR argued successfully for additional sampling and analysis before the dredging began.

A mathematical model was developed to determine wasteload allocations for the dredging project. Because of the program, wasteload allocations were developed for the first

time for the Saginaw River and Bay, based on computer models.

The sampling found incredible concentrations of PCB, ranging from negligible amounts to 22 parts per million (current standards call for only one part per trillion). Given the propensity for the river to resuspend the contaminants, the resulting concentration of PCB could have been 20,000 times greater than that allowed under water quality standards!

The project was held in abeyance despite strong demands from commercial shipping concerns. Alternatives are being investigated, including turbidity barriers, or "diapers" to allow the necessary dredging without unsettling the river bed. The agency is investigating funding under Section 115 for removal and disposal of the toxic pollutants.

Check Out CETA!

Local 208 Agencies should assess whether the Comprehensive Employment and Training Act (CETA) may provide a cooperative source of assistance for implementing nonpoint source pollution control programs.

CETA is Title 8 of United States Code, and provides employment opportunities for young people in areas of high unemployment. Selected youth assist federal, state, county and city governments with various projects, ranging from landscaping for public buildings to research projects for extension services.

The Department of Labor, through the Departments of Agriculture and Interior, administers the law. Approximately \$223 Million will go to CETA in 1978.

The Forest Service and the Soil Conservation Service plan projects for CETA that will effect nonpoint source

WQM

Clearinghouse for Reports

A system, enabling a 208 agency, or any other interested entity, to be aware of what has been done by other 208 agencies within a given subject-area, has been initiated by 208.

The Water Planning Division's Information Distribution Center will publish a compilation of abstracts of 208-related publications submitted to them. WQM reports, speeches and working papers are especially wanted.

Authors should submit their own abstracts along with each document. The compilation will be published quarterly starting in February. Entries should be addressed to:

208 Abstracts, WH-554
c/o Dan Burrows, EPA
401 M St. SW
Washington, D.C. 20460

1978 Calendar of National Meetings

Jan 22-25

National Association of Home Builders
Conference, featuring
"Alert on 208"

Dallas, TX

Jan 31 - Feb 2

National Association of Regional Councils
Federal Briefing

Washington, DC

Feb 1-3

Second Annual State Conference on Water Quality Management

Denver, CO

Oct 1-6

Water Pollution Control Federation Annual Conference

Anaheim, CA

Local Sewer Authorities Change their Management Techniques

Because on lot disposal, including traditional septic tank use, has become a more viable alternative for many areas than centralized sewer systems, the resulting increased use of on lot disposal has created new problems for sewer authorities. In response to problems of ground water contamination resulting from faulty operation of on lot disposal systems, local sewer authorities are using new techniques to cope with the peculiar local and isolated problems of on lot disposal.

Various levels of oversight and involvement by sewer authorities have been developed to solve these concentrated local problems.

For example, Ventura (California) County, monitors groundwater for its users and responds to requests for assistance in testing and repairing on lot disposal systems. The system is financed through a special tax assessment, most of which goes for record-keeping.

El Dorado (California) County has created a special management district to handle on lot disposal. As a condition for receiving a permit for on lot disposal, property owners are required to follow the district's regulations: granting a permanent easement to inspect the system, and maintaining on lot systems

safely. Without gaining a permit, it is impossible to construct a building utilizing on lot disposal.

Santa Cruz (California) County requires easements, but also provides for private companies to maintain and pump the on lot systems regularly.

EPA Announces Handbook for Silvicultural BMP

A Procedure Handbook for Silvicultural Best Management Practices is expected this spring. According to Lee Mulkey, project officer at the EPA Athens Laboratories, the handbook is the product of an interagency agreement between EPA and the U.S. Forest Service. A draft of the document has been distributed for review to over 150 different personnel.

The draft gives a method and framework to analyze specific forest settings to prevent nonpoint sources of water pollution from silvicultural activities.

Some of the issues discussed by the draft handbook include surface erosion, chemicals, dissolved oxygen and nutrients.

The last third of the handbook presents procedural, reduction and preventative Best Management Practices for cutting and transporting timber. Fuel treatment methods, site presentation, and stocking control are also addressed.

A Grass Roots Approach to Erosion Control

Unique arrangements to combat the perennial problems of erosion and sedimentation have been adopted by the Association of Monterey Bay Area Governments.

AMBAG, the designated 208 agency for the Central California Coast, has joined forces with the U.S. Soil Conservation Service and a local resource conservation district to fight erosion and sediment in the Salinas Valley, the "salad bowl of the world," where agriculture depends on the continuing stability of fertile soils and a good supply of clean water.

Identified as one of the six priority water quality problems in the AMBAG region, erosion and sediment is one of the "dirtiest" problems to deal with because it is so widespread and because it results from a variety of activities in the public and private sector.

A part of the unique arrangements is the Intergovernmental Personnel Act agreement between AMBAG and the SCS. Through this agreement, a resource conservationist has joined the AMBAG planning staff for the duration of the two-year 208 planning program.

The resource conservationist first identified specific problems and the applicable best management practices

(BMP). He is now focusing his attention on methods of implementing BMP's, determining which governmental agency (or group of agencies) is best suited to implement an erosion and sediment control program, and assessing how to best finance the program.

Another approach, the most innovative of the agreements, is through a contract between AMBAG and the Gloria Resource Conservation District. The District, funded by AMBAG and EPA money, has hired a soil conservation technician to work directly with landowners in the agricultural area to implement some BMP's for erosion and sediment problems. A limited amount of funds received by the District has been set aside to be used on a cost-share basis for more serious problems. Through an agreement between the District and SCS, the technician works out of the SCS office, and is provided supervision by the SCS. The AMBAG contract has accelerated the Districts program and is developing information for the 208 planning study.

Dividends are already being realized. Technical assistance, like that of the Soil Conservation Service, which has been underfunded for years, is being made available on a direct basis without much red tape. The technician is being favorably received

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the Technical Work Group include Pat Godsil, Gene Viers, and Bill Galegar.

The objective of the Technical Work Group is to identify irrigation water use and management problems in the United States and to recommend objectives, policies, roles and action programs for Federal, state, and private interests to address such problems. The study will address the current status of irrigated agriculture and the resulting social, economic, and environmental settings; summarize state water laws and institutions; determine problems in irrigation water use; determine special problems in humid areas; summarize ongoing programs assisting irrigation; develop alternate opportunities for improving irrigation water use and management; and determine the costs, impacts, and effectiveness of alternative measures considered.

The Interagency Task Force report will consider irrigation water use and management both on farm and in water delivery systems. Federal and non-Federal irrigation developments will be included. The report will stress developments in the western United States, but a separate section will deal with irrigation development in humid, eastern areas.

In addition to representatives of the Department of Agriculture (Soil Conservation Service, Agricultural Research Service, Economic and Statistics

Service, Extension Service); the Department of the Interior (Bureau of Reclamation, Bureau of Indian Affairs, Fish and Wildlife Service); and the Environmental Protection Agency, non-Federal agencies have been invited to participate in the study. The work plan for the study was developed with the help of representatives from the State of Utah representing the Interstate Conference on Water Problems (ICWP). Assistance with the study will be forthcoming from the states through the ICWP and other organizations of representatives from the western states.

The Technical Work Group will collect and evaluate the accuracy and usefulness of available data on irrigation efficiencies and environmental, social, and economic conditions as affected by irrigation development. Physical, legal, and institutional restraints in efficient irrigation water use and management will be identified through review of existing documents and through knowledge of technical people working with irrigators, conservation districts, and water user organizations.

A public involvement program will be carried out by the Technical Work Group throughout the study as information becomes available and as study decisions need to be made. Public input will be supplied through State representatives, interest groups, and organizations in the fields of agriculture

and natural resources. The general public may respond to information presented at public meetings or through press releases.

Mobile's 208 Agency Coordinates Diverse Interests in Managing Industrial Wastes

The South Alabama Regional Planning Commission (SARPC), the areawide WQM agency for Mobile, was instrumental in achieving State adoption of anti-degradation policies for the Theodore Ship Channel and local commitment to performing industrial waste management functions.

The Theodore Ship Channel is a major project of the U.S. Army Corps of Engineers in Mobile Bay. The Corps of Engineers had recommended building a dead-end barge canal extension to serve the 4,000 acre Industrial Park, which is partially developed. This canal extension would lack any capacity to assimilate wastes. Construction of the canal and industrial facilities had caused nonpoint source pollution, and their operation would further degrade water

quality without adequate control measures.

Faced with these concerns, the 208 agency monitored current pollution problems and applied mathematical and physical modeling, with the help of the Corps of Engineers, to forecast future problems. In addition, the local 201 agency studied the compatibility of industrial and municipal wastes from the industrial park and determined that a separate industrial facility would be required. Based on these findings, SARPC recommended control measures for point and nonpoint pollution in the area.

The Alabama Water Improvement Commission then adopted policies, proposed by SARPC, to maintain and improve water quality in the ship channel. These policies address both point and nonpoint sources and require best management practices for construction activities and urban runoff. EPA Region IV reinforced these policies by stating that future NPDES permits would have to conform with them.

The Mobile City Water and Sewer Board, following recommendations of SARPC, became the Waste Water Treatment-Discharge Management Authority for the channel and industrial park. To exercise its new responsibilities, the authority will construct a 30-inch industrial waste discharge line and outfall.

Industrial Wastes
Continued from page 7

DeGussa Alabama, Inc., a major industry in the industrial park, had planned to build an 18-inch discharge line to handle its waste water. This firm has pledged the projected cost of its pipeline to help finance the facility for the entire park. The remainder of the construction funds will come from revenue bonds and user fees.

Pollution control in the

Theodore Ship Channel required an integrated solution, involving diverse private and public interests. SARPC played a primary role in establishing the technical basis for the industrial waste management program. The WQM agency also coordinated decision-making by industries and governmental agencies, which cooperated to promote both economic development and environmental protection.

CETA
Continued from page 5

pollution control. The Training Division of the Forest Service, whose Director is Leon Anderson, is the leading agency for the Department of Agriculture.

Potential projects include roadside erosion control, streambank stabilization, and conservation activities on publicly-owned land. Regional, state, county and city parks, playgrounds and schools will benefit from these projects.

208 Agencies, especially those with public lands in need of nonpoint source pollution control, should investigate interfacing their activities with those of CETA.

Grass Roots
Continued from page 6

by landowners, and many BMP's are being voluntarily implemented. In fact, this approach appears so successful that other conservation districts in the region are considering similar programs.

This approach appears to be the sort of "grass roots" solution to water quality problems which Congress had in mind when it funded the 208 program.

(Submitted for publication by the 'Association of Monterey Bay Area Governments.')

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Agency

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Washington DC 20460

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