INTEGRATING WATER QUALITY AND WATER AND LAND RESOURCES PLANNING

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REPORT OF WORK GROUP ON INSTITUTIONAL ARRANGEMENTS[1/]

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SUMMARY

This work group explored the potential technical gains to be achieved by closer integration of water quality management with the management of the development of water and related land resources. The opportunities for achieving water quality goals (swimmable, fishable water) while carrying out water development (dams, channel changes, distribution works) are substantial. The opportunities for achieving water development goals (adequate supply, reduced risk, enhanced real national and regional incomes) while carrying out water quality management (treatment, collection, standard setting, enforcement) are substantial.

However, the gains from improved integration are often diffused, indirect, conjectural, and intangible. The costs of achieving integration are more concentrated, direct, specific and tangible. Overcoming tunnel vision takes resources of time, skill, patience and dedication -- always in short supply and always needed elsewhere. Present organizational arrangements, authorities, modes of consent building, and participant relationships are more separated and more specialized than such integration would require. Thus, while the social gains exist from which incentives to integrate could be fashioned, the prospect is for a difficult, torturous, evolutionary process of reform. There is no single, obvious gain to be realized for a small, well organized, well-placed group through political action. Rather the motivation for change must come because of modest efficiencies to be achieved here and there; because of the quiet rewards of proceeding in a more logical, professionally satisfying fashion; because we know we should respond to the environmentalists' lament that everything is related to everything else.

The system of government in the United States of America can be characterized in one way that is quite pertinent to this subject. It is a system where at least three levels of government are superimposed one over the other and each is given broad general responsibility for solving the nation's problems. Obviously constitutions and laws, the distribution of agency resources, the history of relationships and support, and the like, have given a pattern of varying involvement and capacity. The basis issue, then, is how should the capabilities at each of these governmental levels be improved in order to provide for the effective management of water resources and water quality problems. A key to improved capability is the relationship between and within levels of government in the exchanges of resources -- authority, expertise, funds, credit for success, etc.

At the federal level the many agencies involved need to improve communication and coordination. Some of the tasks for the future suggest that existing capacities of one agency will be needed to achieve new advances in the mission of the other. A shifting of missions and more carefully linked programs can be foreseen. For example, regulatory skills will play a larger role in flood plain management, and technical assistance and cost sharing will play a larger role in control of pollutants from both urban and rural land.

The task at the federal level is not unlike that which faced the Federal agencies active in water and related land development in the years that preceded the passage of the Water Resources Planning Act of 1965. Single purpose agencies and projects gave way to the multiple purpose planning approach. Agencies were criticized for uncoordinated, competitive development of projects with too little regard for complementarities and basin interrelationships. Policies were rarely developed in a deliberate, multi-agency context and too many unforeseen consequences were seen as the result. Overlapping responsibility and duplication of effort, fragmentation and poor communication are still problems, obviously. But at least there are now mechanisms for dealing with them in the executive structure. Policy area by policy area, some coordination is resulting. More to the point, there is an arena, the Water Resources Council, where interagency differences can be debated and resolved when the President and the Congress choose to make use of it. This arena has the advantage of providing access for the states as well as the basin commissions.

At the state level correcting the imbalance of a large federally funded water quality capability as against a usually very modest water and land development planning capability must be addressed. Constitutionally, local governments depend upon the state's for authority and guidance. Too often capacity for that guidance to deal with the complexities of "everything being related to everything else" is lacking, while the inherent veto power of state government is held. Too often the result is delay, fear and frustration -- wasting the expensive, well intended efforts of federal and local participants. More to the point, the politics of water resources -- both quality and quantity aspects -- are changing, creating a vacuum probably best filled by the states. Environmental concerns have reduced the rewards and raised the costs of Congressional participation. Multi-interest accommodation has become more complex than can be dealt with by the agencies working with local constituents.

If the states are to become more effective in inter-relating water quality and water development interests, basin agencies will need to be strengthened. At present river basin commissions provide an arena for limited federal-state and interstate bargaining and accommodation. Coverage over the nation is incomplete. Compact commissions are not well integrated into the Water Resources Council's arrangements. Neither planning commissions nor broad purpose compact commissions have been established for some major basins. A wider role for existing commissions in budget formation and in program and project formulation is required; but this is not likely to come about until these planning commissions develop stronger clientele relationships. The integration of water quality and water/land development offers an important opportunity for such strengthening. In part, the opportunity is for the several states in a basin to unite in influencing the development of federal responses better designed to meet their needs. The Appalachian Regional Commission has been most successful in this for economic development. In part the opportunity is to coordinate at the basin system level.

Water and land development problems have simply outgrown the territorial jurisdictions of local governments. Urban regions and river basins are two of the interaction systems within which the external effects of independent actions are felt. Local governments have long exercised the controls necessary to deal with neighborhood systems and viewed with the boundaries of the neighborhood system in mind, they have been successful. Public services are effective and efficient. Controls reflect the public values expressed through the local political system. It is when one shifts his view from the neighborhood to the larger system that failure is apparent, but to blame the local governments for not developing the institutional arrangements needed is to confuse the issue. We suspect that an important missing ingredient is that public understanding (perhaps even the understanding by the experts and professionals) of the workings of these larger systems is lacking. The result is often misguided attempts to wrestle too much authority and function away from local governments. Too often the proposal is to put broad authority in the hands of a state or federal bureaucracy that lacks responsiveness to political representation and that lacks even the rudimentary capacity to be as comprehensive as a local governing body.

Thus the key may be to utilize both the interest-representation capacity of local governments and the technical expertise of the agencies of state and federal government through regional arrangements such as those currently being reinforced by EPA's "208" program, the Urban Studies Program of the Corps, the Total Water Management Program of Interior, the Resources Conservation and Development Projects of SCS, or the Coastal Zone Management Program of the Department of Commerce. The opportunity for coordination is apparent simply from this partial list of water programs attempting to operate at this level. We propose improving the coordination of the many planning activities at the sub-state regional level through a consolidated grant approach. This is not a new conclusion, but is uniquely re-affirmed by this work group.

Likewise, it is not new to stress that public participation, and educational efforts to stimulate participation, are important. We believe that the critical authority to deal with urban system and basin system effects of independent action will never be effectively exercised at those levels until education through participation produces the required understanding of these effects.

In our consideration of the institutional aspects of the integration of water quality planning with the development of water resources and related land a particular current case, dealing with land runoff, stood out as a vehicle for achieving changes in inter-agency and inter-governmental relationships. In most basins, we suspect, as much as half of the pollutants in the water come from sources that are not amenable to end-of-the-pipe treatment. In some cases the proportion may be as high as 80 percent. If this is true, attempting to control the quality of our waters by higher and higher levels of treatment at the end of the pipe will be less and less

cost effective. But our cost sharing and regulatory arrangements are almost wholly concentrated on sewers and sewage treatment works, on municipal sanitation systems and industrial dischargers.

Dealing with land runoff from rural land suggests engaging the existing network of county level agencies serviced by the U.S. Department of Agriculture. Cost sharing and technical assistance programs already exist that, with modification, could add a pollution control objective to the existing land and water development objective. Tentative steps in this direction have been made but not within the context of the coordinating mechanisms at either the federal or basin (i.e., state) level. At the urban region level, e.g., through "208" planning, the opportunity is particularly promising to engage the U.S. Department of Agriculture (USDA) in the problems of construction sites as well as the remaining open country.

Runoff from the urbanized areas themselves has long been a recognized problem. Interestingly combined sewers were long the focus as a hold-over from the human health orientation of pollution control. Treating the runoff, if considered as domestic sewage, promises to be expensive. In many communities that same runoff is also a flooding problem from time to time. Is there opportunity for the Corps of Engineers here? If so, what is the extent of it? Existing needs' studies do not provide sufficient estimates of the opportunity for realistic approaches to this problem. The impression is clear that little consideration has been given to the joint solution of urban interior drainage and pollution from urban land runoff. Shouldn't our mechanisms for policy coordination explore such opportunities? If planning were more integrated, would such questions be resolved more effectively? We believe they would.

INTRODUCTION

Institutions can be defined in the context of water resource development and water quality improvement by putting emphasis on the organizations whose behavior relates to water. The structure of these organizations -- their leadership, resources, authority, image and relationships to other organizations -- is related to their behavior. Visualizing the cast of characters in the public decision-making process, identifying their stakes and resources available to influence the many veto points in consent building, helps to arrive at suggestions for change that will provide different outputs from the system. Looking ahead in water development and water quality, the need for different outputs is apparent. It is unlikely that change in the mix of water outputs can come about without organization restructuring. It is an article of faith that greater governmental effectiveness can be achieved if this restructuring comes about in response to systematic analysis rather than mindless evolution.

Yet it is clear that institutional reform rarely comes about through large changes. Rather change comes about in many small steps that respond to new needs and values, to new perceptions and understanding. The challenge to this work group was to visualize long range goals for overall water resource management and identify the next increments of institutional reform that can realistically be expected to be placed upon the agenda for consideration by those who must agree to any change. With the resources of time and expertise available, an in-depth analysis is not possible. Luckily it is not needed. If we can stimulate others to think in new directions, we will have achieved enough. Debate between the many participants in public policy development will sharpen and refine the analysis in ways that are probably not even predictable by the work group or the reader of this report.

Conventional wisdom in public administration goes back to the concepts of Woodrow Wilson, perhaps the only political scientist who "made it". The fragmentation and overlapping of responsibility and authority would, in the conventional model, be viewed with alarm. The prescription that follows would be to achieve consolidation and centralization. The reasoning would be that a well articulated, scientifically designed hierarchy, staffed with trained civil servants, separated sharply from the political policy-setting structure of government could more effectively respond to the public interest.

Of course, we now understand many of the limitations and difficulties in applying this model. Can we really expect to restructure American government in response to the logic of water resource management? The overlap between function and objectives of government, the diversity of needs, perception and priorities, the widely varying organizational circumstances of the parts of our water systems suggest that simply "neatening up" the organizational structure will not be sufficient. The advantages of multiple responsibility in entrepreneurship and innovation, legitimate interest representation, the limits of economies of scale from large organizations, the data and theoretical limits on truly being comprehensive, and similar problems suggest that we should proceed in a more eclectic and less-structured way. The logic of the tasks to be done is a place to start.

Water development and water quality management have a history of particular means employed to deal with limited aspects of selected problems. Water development has emphasized the construction of dams, channel improvements and other public works that manage the supply of water for irrigation, municipal and industrial use, flood control, power, recreation and the like. Water quality management has focused upon treatment of waste, collected together at one point. Public funds have been invested again in public works, recently at a massive scale. Regulatory arrangements have been developed to encourage private response to waste treatment, focusing on industrial activities that have end-of-the-pipe potential.

It is clear that the future of both water quantity and water quality will be somewhat different than the past. Both will have to seek more non-capital intensive non-structural solutions. Demand management strategies, land use measures and the like will become more demanding of institutional capacity. Instead of a federal dam to provide flood protection, that protection may be provided by incentives and regulations to clear the flood plain and provide flood proofing, early warnings, as well as structures, through a complex of interlocking federal, state and local actions. Added to federal and state cost sharing for treatment plants and a complex federal-state regulatory system we can expect incentives and regulations to manage the location of industry, to encourage silt control at construction sites, to require land treatment practices to halt the flow of nutrients and pesticides from the land. Again federal, state and local actions will be complex and intertwined. Indeed, it could be argued that decision-making capacity will be the limiting factor in responding to a public demand for greater effectiveness in government management of the water resource.

This work group suspects that the greatest achievement of increased integration and coordination of water quality and water development will come from expanded institutional capacity, and the capacity to make decisions that will result. Note, for example, that non-structural measures for water development will require application of enforcement and regulatory capacities that are currently more developed in the water quality area at every level of government. On the investment side, progress in water quality will require moving away from the current fixation with sewers. In most cases, less than half of the pollution problem can be dealt with by a treatment-plant-centered approach. And the costs of those last few increments of treatment are spectacularly high. Approaches that emphasize technical assistance and cost sharing for land use practices should come into their own in quality management rather than their present orientation to water development. Again, existing institutional capacity can be utilized through more effective integration. Similarly, stormwater runoff involves drainage and flood control problems that can be more effectively dealt with if water quality aspects are considered at the same time. Invoking the multiple purpose approach will tend to generate more support for all problems and to justify the considerable expense involved.

WATER QUALITY PLANNING

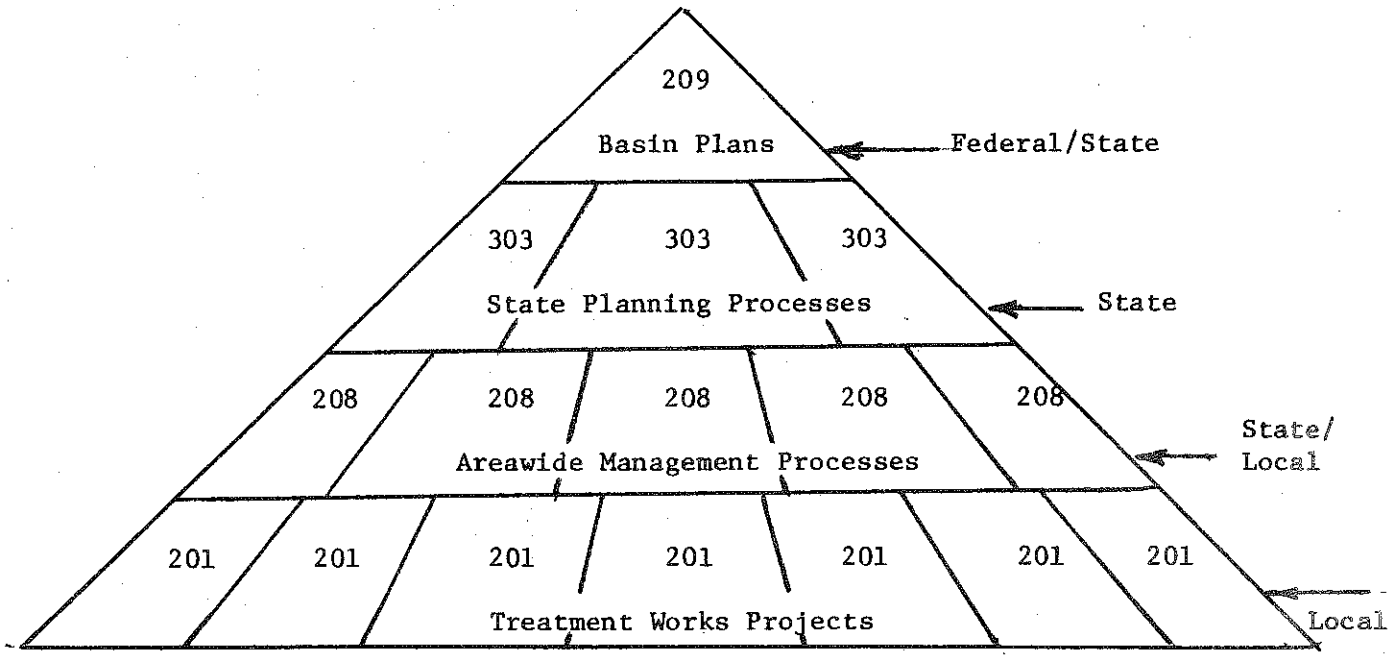
At the current time there are two major pieces of federal legislation which provide a structure and direction for the institutional arrangements for managing water quality and water resource issues: the Federal Water Pollution Control Act (P.L. 92-500), and the Water Resources Planning Act (P.L. 89-80).

WATER QUALITY

The Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500) has four key provisions which provide for the integrated management of water pollution control problems: Sections 201, 208, 303, and 209.

Section 209 is a vehicle for the integration of water resources and water quality issues at the river basin commission level. Section 303 provides for the development of statewide planning processes for the development and implementation of effluent limitations and water quality standard compliance schedules, and the development of priorities for the construction of waste treatment works. Section 208 provides for the development of continuous areawide waste treatment management processes at the local and regional levels. Section 201 provides for the development and implementation of specific treatment works projects. Therefore, 201 provides for the smallest level of detail, the actual project, while 209 plans represent the macro level of integrated water resources and water quality management. The conceptual relationship between these authorities is illustrated by the pyramid in Exhibit 1.

Exhibit 1. Conceptual Relationship Between Planning Authority Sections in Public Law 92-500



A summary of the specific responsibilities established by statute for the three levels of government (federal, state, local, regional) for water quality management is illustrated in the attached table. Generally, the major focus of implementation activity for each water quality management activity is as follows:

Section 209 Integrated water resources/water quality planning: Federal/State

Section 303 State water quality planning: State

Section 208 Areawide waste treatment management

Section 201 Waste treatment works implementation: Regional/Local

In actual fact this conceptual relationship has not as yet been fully implemented. Plans for actual treatment works were well underway and institutional arrangements fully operative when the legislation was passed. Likewise, state level planning capacity for water quality was in hand in many states. While some basin studies that took a stab at integrating water quality and water development are available, the degree of integration is still not extensive. Areawide planning in the "208" process is just getting started against a background of treatment plant plans usually completed and a system of standards and guidelines for long-term industrial water permits in hand.

WATER AND RELATED LAND DEVELOPMENT PLANNING

P.L. 89-80 established the Water Resources Council as the coordinator and managing entity for water resources planning at the Federal level. Through the mechanism of joint plans developed through basin commissions with agency and state participation the advantages of integration have been sought. Three planning levels are recognized from the broadest to the most detailed.

"Level A" framework studies and assessments are seen as evaluation of needs and desires for "the conservation, development and utilization of water and related land resources." Typically a region of several river basins is examined at a single time or a nationwide assessment by major region is accomplished. Subregions with more specific problems are identified to guide future study. Seven Level A studies have been completed on specific regions and five are ongoing. The first national assessment was produced in 1968 and a second is in process. Twenty-one regional reports are expected. Priorities will be developed for the various problems identified. Completion is expected in 1977.

"Level B" regional or river basin plans are to solve complex and long range problems. A broad range of alternative measures are considered and short and medium term action plans suggested. They are the current version of a mode of basin planning that extends back to the 1920's and earlier when the Bureau of Reclamation and the Corps of Engineers were charged by the Congress to develop broad developmental

WATER QUALITY MANAGEMENT
AS PROVIDED FOR BY THE FEDERAL WATER POLLUTION CONTROL ACT (P.L. 92-500)

Government Level	Section 209 Basin Plans	Section 303 State Plans	Section 208 Regional Management	Section 201 Project Supplementation
Federal	Federal grants for plans development Plans to be integrated analysis of water quality and water resources issues on a basin or sub-basin level Plans to focus on water quality and water resources matters in designated section 208 areas All plans to be completed by January 1980	Federal grants to States Approval of State planning process	Federal grants to States and designated local agencies Approve certified 208 plans	Federal grants for treatment works Approve local grant applications: - project included in applicable 208 plan - project in conformity with State 303 plan - project entitled to priority re: Section 303 plan - Federal requirements complied with re: project
State	Substantial State participation visa representation on River Basin Commissions	Develop and implement statewide planning process to result in plans for all navigable waters of State Plan to include: - effluent limitations, water quality limitations, and compliance schedules; total maximum daily load for pollutants; - inventory and ranking in order of priority of needs for construction of treatment works - incorporation of all elements of applicable 208 areawide waste treatment management plans	Designate 208 local/retional areas areas and organizations Certify each areawide plan as being consistent w/applicable 209 and 303 plans Areawide waste treatment management planning for balance-of-State non-designated area Implementation of 208 plans for non-designated areas Statewide regulatory program for non-point sewer controls	Certify project priority Approve local grant applications Contribute to local share of funds
Local/ Regional	Little or no local/ regional involvement in plan development	Limited local involvement in plan and process development	Areawide waste treatment management Planning for designated 208 areas Implementation of 208 plan for designated areas	Develop grant application Project level decisions Local share of funds

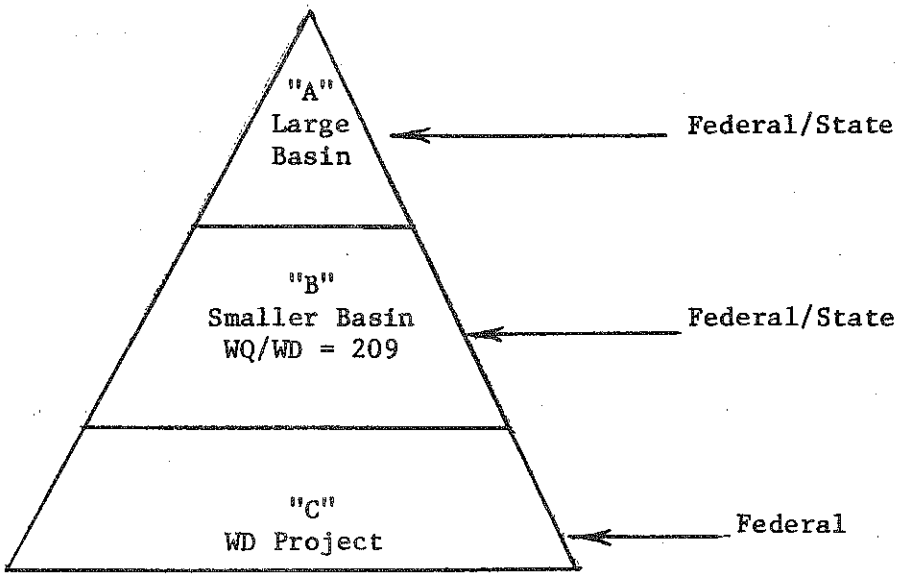
studies that reviewed project opportunities at the reconnaissance level. Various forms of inter-agency and more recently state cooperation have been tried out and are still in use where Title II river basin planning commissions or the equivalent are not yet organized. Particularly pertinent to this level of planning are the Council's "Principles and Standards" for planning and evaluation. These are an approach designed to stimulate the identification of alternative patterns of measures through the consideration of multiple objectives -- currently national economic development and environmental quality. Impacts on regional development and other social well-being factors are considered but do not serve as plan formulation objectives at this time. Twelve Level B studies are in various stages of completion, while 15 have been completed.

"Level C" studies -- project evaluations -- are visualized as flowing from the A and B analyses -- where the interactions in the region are accounted for and regional priorities expressed. In fact, much like the water quality planning experience, Level A and B planning is just beginning to have impact on project planning. Project politics, and the much longer history of project level activity, have prevented faster assimilation of comprehensive planning into the system. A full analysis of this phenomenon equally applicable to water quality or water development projects is beyond the scope of this discussion. Suffice it to say that elected officials and concerned citizens find it much easier to relate to tangible and immediate problems and their short range solutions than to long range, complex and conjectural planning studies dominated by professionals in the agencies. Thus, like comprehensive planners in virtually every area of public concern the water planners have a very modest record of impacting day-to-day decision-making.

Level C planning is managed directly by an action agency and is usually a routine part of its process of investment management. In the case of the Corps of Engineers and the Bureau of Reclamation, Level C planning leads to recommendations to the Congress for individual project authorization and funding. In the case of the Soil Conservation Service and TVA the planning leads to an internal authorization of projects under formal and informal Congressional guidance. The Water Resources Council "Principles and Standards" apply to Level C planning with substantial modification to conform to Congressional guidance to each agency. The conceptual relationship of Level A, B and C studies are illustrated in Exhibit 2.

This is not to suggest that all planning carried out by the federal agencies concerned with the development of water and related land neatly falls into the Water Resources Council's classification system. The Army Corps' of Engineers Northeast Water Supply Study, the Bureau of Reclamation, West Wide Study, the Soil Conservation Service (SCS), Great Plains Conservation Program, Tennessee Valley Authority general development studies, studies to implement the flood insurance program, state water planning studies, and the like, cross the boundaries. Of particular interest to this analysis are the Total Water Management Studies of the Department of the Interior, the Corps' Urban Studies Program, the SCS Resource Conservation and Development Projects, Economic Development Agency's (EDA) county and regional development

Exhibit 2. Conceptual Relationship of Levels of Planning for Water Resources and Related Land by the Federal Agencies Under Coordination by the Water Resources Council



efforts, the Department of Commerce "Title V(a)" regional commissions and Coastal Zone Management Studies. Each of these is focused on either an urban region, a grouping of counties or some other region at the sub-state level. Each has a significant relationship to the management of water and land resources and represents a level at which inter-agency and inter-interest coordination and accommodation is important, directly parallel to the "208" level in water quality planning. In each case there is an orientation to action programs and closer cooperation and greater dependence on implementation by local government than is typically the case with the usual Level C planning by federal agencies.

To sum up, the basic statutory thrusts of these two programs are different:

- a major goal of P.L. 92-500 is to eliminate discharge of pollutants into navigable waters and provide for the protection and propagation of fish and wildlife, and provide for recreation throughout the United States by 1983;
- a major goal of P.L. 89-80 is to enhance economic development and the quality of the environment through the optimization of water and land resources.

Each water resources project must pass muster as a vehicle for enhancing multiple economic and resources objectives before it is a likely candidate for construction, while there is the implicit assumption that developing treatment works projects will, by definition, be a contribution to the social good and hence needs no further justification in terms of economies or land and water resource usage.

FEDERAL VIEW

At the federal level there is well-developed expertise in planning and implementing water resource solutions, while the federal capability in water quality is well developed in terms of setting effluent regulations and serving as a source of funds and guidance for the development of planning, management, and implementation capabilities at the state and local levels. These strengths reflect the basic thrust of the enabling legislation.

The Water Resources Planning Act focuses on maximum economic development of water and land resources, while the Federal Water Pollution Control Act (FWPCA) is regulatory and focuses on the specific objective of water quality. In addition, the FWPCA goes beyond functional planning and provides a vehicle for the development of the institutional arrangements necessary to implement the plan once developed.

The complete integration of water quality planning into water and land resources planning would include applying the "Principles and Standards" to project formulation and evaluation. This action would subvert the regulatory intent of P.L. 92-500. However, integration of certain elements of water quality planning, e.g., non-point source pollution, may be a desirable objective. However, full coordination of water quality planning with water and land resource planning is a necessary prerequisite to optimizing the use of federal dollars and resources to effect a change locally. Specifically, coordination should be improved at the federal level between the Environmental Protection Agency, which has the primary responsibility for implementing the FWPCA, the Civil Works divisions of the U.S. Army Corps of Engineers, which has a primary responsibility for water resources development, and the Soil Conservation Service, which has a potential institutional capacity through its technical assistance and cost sharing to facilitate water quality management at a local level, particularly on rural land.

IMPROVING THE CAPACITY OF FEDERAL WATER DEVELOPMENT AGENCIES IN WATER QUALITY

Consider the position of the typical water development (WD) agency (Corps, Bureau of Reclamation, SCS or TVA) as it tries to relate its project plan to water quality (WQ) planning and management activities of the Federal, state, and local organizations involved. Typically, the main elements of the plan are limited to dams and channel work. These

can raise water quality problems such as temperature changes, nutrient traps, low flow changes and return flows from irrigation and other sources.

The Environmental Protection Agency comments on the Environmental Impact Statement (EIS) are a major point of contact. They have potential to hurt the process of building support for the WD project; and as presently carried out, there is not much hope in the WD agency that the review will actually help in the current process. The best that can be expected is a neutral result. Thus in the environmental quality (EQ) portion of the WD plan formulation as required by the Principles and Standards, the WD agency will try to anticipate the EPA concerns in the EIS process. EPA, and related WQ agencies, will probably not participate directly in the EQ plan formation and the WD agency will use its own sources or expertise, which are integrated by function but not by agency. Besides anticipation of EPA and other environmental reactions, the water development agency will also consider what would be accepted as adequate environmental accomodation by other participants in the decision process (e.g., governors, interest groups, Congressional staff, local officials). This may be quite different than the EPA view, but if accurately assessed by the water development agency the bargaining ability of the environmental quality interest is reduced. Combine a gross dissatisfaction by environmental quality interests with the degree of accommodation they have won and the late timing of the Environmental Impact Statement process in the planning process and the seeds of stalemate and wasted, scarce, decision capacity have been sown.

EPA and related groups gain considerable advantage from working through the Environmental Impact Statement process rather than the environmental quality planning process under the Water Resources Council "Principles and Standards." In either case they have resources that include a recognized expertise and a recognized watchdog role; but the Environmental Impact Statement process is recognized more broadly as a legitimate focus for them and, unlike other participants EPA has a statutory role of issuing guidelines (and, by implication, judging whether they have been met). EPA does not have that resource or anything like it in the environmental quality plan formulation process, and the Environmental Impact Statement process calls for less commitment of personnel.

A second interface is with the application of water quality standards to the results of a water development project. While this is a state prerogative, the state's role is reinforced by EPA and a joint position is worked out. The state water development agency is quite apt to have a different position on the project and, while more likely to be a natural ally to the federal water development agency, it still offers some capacity to mediate differences.

Finally there is little that the federal water development agencies have to trade to accommodate EPA and other environmental quality interests in an indirect or mitigation fashion. Low flow

augmentation cannot be used directly to gain water quality benefits under most circumstances. When achieved through other purposes (e.g., municipal and industrial or power), other problems complicate the trade-off. Yet often development will be violating the non-degradation principle in water quality, and accommodation is to be desired. Flexibility may be lacking to bargain for an accommodation where energy or development or poverty interests are overwhelming.

A question is how can water development agencies more effectively deal with water quality outputs through the planning process?

Strengthening of the river basin commission as a participant in water quality accomodation in project planning could come about from a more effective role in broader planning (209 and level B). The present commissions aren't providing the potential arena for effective bargaining because neither the WQ nor the WD agencies have incentive to take them that seriously. Almost any of the steps to strengthen these commissions, discussed elsewhere, would help; but in particular increasing their environmental evaluation role and a role in cost sharing for special environmental projects would be particularly desirable.

The construction agencies need more scope to achieve WQ outputs. This should improve the bargaining and might encourage EPA and other WQ agency participation (state and local) in EQ plan formation. It also would prepare for the eventual national shift in emphasis from the existing point-source fixation. Each WD agency has a substantial opportunity to provide important WQ outputs. The USDA has an organizational structure in the Soil Conservation Service (SCS), Agricultural Stabilization and Conservation Service (ASCS), Farmers Home Administration (FHA), and Cooperative Extension capabilities to deal with a large part of the land run off pollution problem. The Corps of Engineers could offer direct construction and operational services for acid mine drainage elimination in over 20 states. Engineering services are also a potential for irrigation return flows, natural salinity sources and other similar needs from the Bureau of Reclamation as well as SCS and the Corps.

THE INSTITUTIONAL OPPORTUNITY IN LAND RUNOFF MANAGEMENT

Will the nation develop a new set of institutional arrangements to control non-point sources of pollution? Or will we adopt an existing network of intergovernmental arrangements to the new task? Few seem to disagree that a major part of the existing pollution loading in the nation's waters comes from someplace other than an industrial or municipal discharge pipe. Since no agency systematically collects data that allows a firm estimate, expert opinion based upon fragmentary information must suffice. Presentations to the task group set the range as 50 to 80 percent of the nutrients, oxygen demanding substances, silt, other dissolved and undissolved solids, exotic chemicals, and the like were not amenable to environmental end-of-the-pipe treatment.

However, a glance at the federal and state water quality programs would not suggest that this was the case. Virtually all of the inplace regulatory activity and financial incentives are directed toward higher and higher rates of removal from a smaller and smaller proportion of the problem. Section 208 planning was intended by the Congress to address this problem of cost effectiveness. Some non-point sources have not been well identified and it was expected by some that the urban region studies would both identify the extent of the problem of unrecorded pollutants and devise regulatory approaches.

Several problems are suspected although only when the "208" plans are in will it be possible to speak with any authority. First, the short study period raises doubts about the ability to identify with any great precision previously unidentified sources of pollution. Second, it is not clear that the expertise needed to gauge the technical options for corrective measures has been adequately involved. Indeed, it is quite certain that knowledge is not sufficient to relate particular corrective measures to observable changes in pollutant loads. Third, the result may be that few creditable control programs, and the requisite institutional changes, will be forthcoming. Finally, the very low level of public understanding of the problem will limit the support for those institutional arrangements unless they are facilitated by a program of technical assistance, inter-governmental reinforcement of regulatory devices and cost-sharing comparable to that now available to communities and industrial point dischargers. If the "208" experiment is viewed as a chance to surface some suggestions for what to do, in the face of no clear-cut prescriptions elsewhere, and as an educational and limited information-building opportunity, its potential in non-point pollution control may be correctly indicated.

Building a non-point management program on existing institutional arrangements has appeal. Iowa has gone a long way towards this. New York and some other states have had legislation under consideration. Essentially the concept is to utilize the existing water quality stream classification approaches and agencies to set standards; and where the degradation has dropped below these points, to call upon the existing organization apparatus for erosion control to come into play to encourage practices which will reduce the runoff from the land. Essentially the same technology employed to hold soil (e.g., silt) on the land to maintain agricultural productivity is seen as having the potential to hold other pollutants back as well. How precisely it is possible to prescribe these practices and be assured that cost-effectiveness is achieved has been questioned. But remember many of these practices have been advocated well before the current concerns for quality.

Research is necessary on two counts. First, it is intrinsically important that prescriptions for measures not be wasteful. Second, it is not likely that we will make rapid progress in the institutional arrangements required until the measures they are to

implement are well understood. The regulatory compliance and the investment to go with it by millions of separate property owners -- which is what some envision as being required -- is just not going to happen unless there is a solid underpinning of understanding and support. The institutional challenge may exceed that posed by the end-of-the-pipe problem.

Luckily, it will be possible to experiment in a variety of ways and take advantage of those motivations in addition to water quality management. The Soil Conservation Service with its technical assistance capability at the county level through county Soil and Water Conservation Districts and the supportive USDA and state programs (funding through ASCS, research and education directly and through the Land Grant University systems) provide a potential delivery system. However, this system is too often seen as a farm income maintenance and/or food and fibre output stimulation system. Is the apparent conflict of interest between the environmental quality objective and the national economic development fatal? It need not be a detriment if the inter-agency and inter-governmental relationships are carefully worked out. It is this need which suggests that these arrangements would be best worked out as a feature of achieving closer integration of water quality and water development planning.

While this discussion has stressed the use of rural oriented water and related land development arrangements for the achievement of water quality management, a similar case can be made for utilizing the skills of the Corps of Engineers. Linking internal drainage of urban areas with the problem of pollution from stormwater runoff is a challenge which some of the Corps' urban studies have addressed. Over the years the Corps has not developed an extensive role in the localized aspects of urban drainage. These have been viewed as problems for municipal government. As long as the context was water development and flood control this was reasonable. Is it now? Again, inter-governmental and inter-agency arrangements need to be carefully worked out suggesting, again, an experimental approach in the context of greater integration of water quality and water development planning.

STATE VIEW

There is a wide variance in the type and extent of responsibilities exercised by state level water resources and water pollution control agencies. There is also wide variance in the relative capacities of the respective agencies. In water pollution control, state agencies are the primary planning and program administration components of the inter-governmental system. State level responsibilities in water pollution control are growing with the addition of state level 208 (see the Natural Resources Defense Council vs. Train decision) and overall planning oversight and coordination authority. The prospect of a primary state role in the administration of the

construction grants program (Certification program -- Section 8 of HR 9560) and the increased transition from federal to state authority over the permit program are likely to further strengthen the state position.

For substantial parts of the water resources area, planning and development are performed primarily by federal agencies. Municipal and industrial water supply and urban drainage are the major exceptions. In general, the picture is one of the state emphasis in water pollution control (despite increased federal involvement in terms of policy and guidance) and federal emphasis in water resources. Though state responsibility in the water resources area may increase, there is no current indication of a growth comparable to that being experienced by state water pollution control agencies. Though federal agency roles in water pollution control may expand, there is no current indication of a growth comparable to that of the federal agencies in water resources development.

There are a variety of mechanisms through which the states could be encouraged to better coordinate and integrate their water quality capabilities with their water resource development capabilities. For example:

> Encourage state water resource agencies to relate to their water pollution counterparts at the state level, rather than to EPA, in regard to information exchange, sharing perspectives on common problems, etc. EPA can assist in fostering improved relations.
>
> Develop mechanisms to facilitate closer relationships between state and federal water resource agencies, comparable to some extent to those obtaining in water pollution control (both cooperative and creatively antagonistic relationships would be in order).
>
> Develop mechanisms to build upon the coordinative and integrative intent expressed in EPA's new state planning regulations, with application to a wide range of resource and developmental planning and in particular to state-level relationships on Level B studies.
>
> Encourage, where appropriate, and fund, if possible, the growth of state comprehensive planning office responsibility for coordinating water quality and water resources planning. The development of standardized data collection, methodologies, and sections (land use, economic, demographic) could be a major component of such increased responsibility.

Begin to plan for a definition of roles, an allocation of responsibility and a synchronization of efforts in regard to non-point source control activities at the state level.

Assuming and, if possible, encouraging an increased local capability in exercising both water pollution control and water resources management responsibilities, develop an understanding of how the state role may be altered as a consequence and how state responsibilities may be exercised, for example, with respect to handling cross-jurisdictional disputes and interrelationships at local levels.

Develop an improved understanding of the attitudinal context in which increased state level coordination must be grounded. Available (and very modest) evidence indicates a strong view on the part of state water pollution control officials that water pollution control and water resources management should be integrated functional activities. A much more detailed and comprehensive understanding of the attitudinal dimension, on both sides, would be useful. Perhaps this is more appropriately regarded as a research question.

In addition, the existing institutional arrangements of river basin commissions should be buttressed

NEW ROLES FOR BASIN PLANNING AGENCIES

Environmental and other indirect impacts, however imperfect our methodology, are now an accepted part of formal project evaluation. Just to meet Environmental Impact Statement requirements, it is necessary to open the analysis of the project to critiques from those interested in such values. Formal multiple objective evaluation procedures proposed by the Water Resources Council may be modified as a result of current reviews. But it is unlikely that some of the elements that are new to the evaluation, such as in some elements of the social well-being account, will be lost.

Regional development is no longer the avoidable, simple issue it once was. At least since Pennsylvania objected to Ohio Congressman Mike Kerwin's proposal to link the Ohio River with Lake Erie, some interregional impacts have had political interest. As important is the ambivalence that now exists in many parts of the country about whether regional development is even desirable. Indeed, Oregon's experience seems to say a posture of avoiding development is a good way to attract it. And of course, there is still strong interest in dealing with disadvantaged groups who often have a particular geographic distribution. In addition, water projects now have many other Federal programs that compete for local activist support, and that frequently are seen as less conflict producing.

The point is that project benefit-cost analysis has major weaknesses from both a political and technical level that might be corrected somewhat through the participation of an analytical group at the regional level. When analysis is done project-by-project, there are many things that seem to suffer. The cumulative effects of a series of projects is harder to establish and usually ignored. Reaping the technical advantages of hydrologically linking projects becomes difficult -- especially between projects of different agencies. More difficult is the linking of water programs to other development actions. The show case character of the few projects where this was done in the Appalachian water plan make that point. Perhaps they would do better in a second plan. But even the evaluation of environmental, social and economic system effects is difficult. Also to be considered is the tendency for "ad hocery", i.e., consideration of cost and output effects, beyond the most basic, only when it is to the advantage of the moment.

But perhaps the greatest need that might be served by stronger regional arrangements is the interaction between the technical and political aspects of system evaluation. Individual water agencies are hard pressed to develop the expertise to perform creditable environmental and social analysis or even analysis of the indirect economic effects. Part of the problem is that they, as specialized organizations, find it difficult to see the interrelations among water projects and other public actions or even among water projects themselves if they cross agency lines. Part of the problem is that with the increased potential for conflict in water projects, it is rational to start more planning studies and put less into each; yet evaluation of environmental, social and regional systems is most demanding of analytical capacity, calling for more resources, not less. Part of the problem is that we have not yet developed highly accepted measurement and evaluation methodology to show good cause and effect between projects and all the called for aspects of environmental, social and regional development systems, at least not comparable to that which is used in the engineering and national economic evaluation. The result is that the agency -- seen as an advocate for its proposal -- suffers from general suspicion of its analytics.

A basin agency with capacity to evaluate projects at the system level could at least critique and finally bless the analytics of the agencies. But if the scale economies of system analysis in environmental, social and regional development are as great as they seem at this time, it may be advantageous for the basin agency to actually do some of the project analysis and provide formulation guidelines for project plans. It should be remembered, however, that what is needed is not just more analytical competence judged by the experts, but also linkage to political capacity as judged by those affected by the projects. It is here that the interaction of cost sharing and analytical role is important.

The existing Water Resources Council may need to be restructured somewhat to give a broader representation and to more effectively participate in the budget process. This might be recognized by placing more agencies under the effective coordination of the Water Resources Council. This extends beyond the need to integrate water quality programs more effectively. Coverage by the "Principles and Standards" for planning and evaluation is a case in point. To date only a small part of the Federal investment is covered. Coordination of agency basin planning budgets and schedules is another.

Perhaps the organization of the Title II basin planning commissions suggests several alternatives for the structure of the Council itself. Note that the federal chairman personally oversees much of the basin commission staff activity. His only duty is as commission chairman, and thus he avoids the existing suspicion at the federal level that the Council may favor the agency headed by the chairman.

Note also that the Title II Commission is made up of federal agencies as well as state representatives. In a planning context this should have advantages. But in other roles the general governmental representation of the typical compact commission may be preferable. Should overlapping arrangements be recognized now as worthwhile to meet different needs? For example, should existing Compact Commissions be authorized to form the nucleus of a Title II Commission? The same people could wear different hats, calling meetings of different representatives depending upon whether they were meeting as a Title II commission or a compact commission.

At the regional level, consideration also should be given to improving the access and participation of localities, citizen groups, metropolitan areas and other regional entities such as those for urban planning, regional development and coastal zone management.

Congressional committees prior to reviewing the authority, guidelines, and appropriation for individual water programs should direct the basin commissions to prepare reports and offer testimony on priorities from the basin point of view. An independent chairman of the Water Resources Council, more formal recognition of the coordinative role of the Assistant Secretaries in the several departments, and expanded emphasis on the participation of the governors of the states could go far towards identifying a commission as an independent viewpoint and a focus for coordination.

BUDGETING AT THE REGIONAL LEVEL

Perhaps the most important decision network is that associated with structuring and agreeing upon public budgets. Most general governments are under pressure to change the process by which priorities are set and needs evaluated. In most cases the pressure is to find

ways to make more meaningful comparisons, if not between every objective and means, at least within larger categories than is presently possible with the highly fragmented approach of most budgeting processes. (Wildavsky, 1974) In proposals for such reforms enhancing the role of the region could make procedural and political sense. On the one hand, the region may be a level where trade-offs can be more accurately identified and related to the problems of interdependency and jointness. On the other hand, it may also be easier to identify the balance and accommodation needed to assure support. The result could be much more effective use of public funds.

For example, most programs are now balanced by region within quite narrow agency lines. Each agency tries to have a program in every state about comparable to the political significance of that state. But some agency programs are more important to some regions than others. Allowing more imbalance by agency in exchange for more balance over the whole water program should allow for greater efficiency and perhaps easier agreement. But this suggests a mechanism for accomplishment that has the trust and confidence of the agencies and the Congress.

Also seeing a single program broken into regional components has some potential for increasing program effectiveness. It is commonplace to point out that broad national budget components are relatively fixed from year to year. Yet there is a tendency to treat individual projects as if they posed no opportunity cost in the budget. Perhaps regionalization of programs would suggest that sizing a project at $16 million, where an $8 million solution was almost as good a problem solution, was doing the region out of a second project.

The Corps now prepares a five-year budget by region. Should the other agencies do likewise? Shouldn't all planning budgets, as well as construction, be put on a regional basis? Isn't regional monitoring and assessement of environmental quality (EQ) regional development (RD) and social well-being (SWB) factors closely akin to the planning input? The Water Resources Council should continue to shift the concept for level B planning toward greater usefulness at the project level -- shorter time horizon, more issue and conflict orientation. Congress has heard from basin groups regularly -- but perhaps it should ask them to play a more obvious role in their budget process. Of course, giving basin commissions a chost-sharing role and providing for expanded input into the EQ, RD, and SWB aspects of project planning, as well as funding, would put them into the budget process. At very least, representatives of basin arrangements should comment on the size and shape of both the construction and planning budgets in their region. It would have to be established and recognized that they represented a point of view independent of the President's and thus not subject to clearance by the Office of Management and Budget. Emphasizing the state representation involved could do this.

COST-SHARING AT THE REGIONAL LEVEL

Alternative channels for federal aid, as complements to existing arrangements for direct project fiscal participation, should be considered. It is doubtful that direct shares can be reduced otherwise. But if more significant indirect cost sharing through clearer labeling of the funds could be used to more precisely key assistance to specific national objectives -- for example, the economic development of disadvantaged regions and minority groups, enhancement or mitigration of environmental values. Such keying could be viewed as a way to induce or make more effective participation in the decision process of particular groups or points of view, those that have access to the channels chosen. Revenue sharing as an alternative place for water funds, as usually proposed, suggests that local and state governments know what society needs and just lack fiscal resources. State capacity (and willingness) to deal with water problems is certainly a candidate for further enhancement through cost sharing. But a case can be made that even at state and national levels, much less local levels, incentives and interest representation are not identical with the public interest and that grants that provide for specific objectives can be a desirable tool in the hands of representatives of a federal point of view in water resources. Also for various reasons, some that will be explored shortly, the multi-state region is a channel for complementary federal aid that should be considered carefully.

The success of the Appalachia Regional Commission (ARC) suggests that in at least one case where governors succeeded in gaining access to complementary funding they provided a measure of political viability and vitality to the regional institution involved. An important part of the ARC program is cost sharing which is supplemental to that available from other federal sources, on a project by project basis. The ARC model cannot be pushed too far. For example, none of the similar so-called "V(a)" interstate commissions has shown the same program and budget strength. Nonetheless, it should suggest a closer look at basins as channels for water cost-sharing.

To sum up, the challenge is to provide principles that will lead to procedures for matching evaluation to the systems involved, reflecting and shoring-up the weakness of benefit-cost analysis at the project level. There probably are economies and program advantages in dealing with the extra local effects of projects in a unit separate from the several agencies; there may also be some advantages in achieving systematic evaluation. The monitoring and assessment function of some basin arrangements gives them a start on the process. "Independent" review groups need a political base somewhere and the governors are one place to turn -- the states should be pressed for more political accountability in the water field. Linking some cost sharing to the evaluation of extra local effects of the projects seems to make sense if localities are in fact to be well represented in project formulation. Stressing the implementability of non-traditional project means through cost-sharing reform may offer as much potential for improved performance as any other item discussed.

THE LOCAL VIEW

Land use, water and water quality management (including planning) can be perceived as integrated today in most meaningful terms, professionally (i.e., analytically) and politically (i.e., by interested publics) at the local level -- not at the state, federal-state river basin, nor federal levels.

Managed growth of localities is increasingly becoming a reality in the form of assistance to and constraint of private iniative in the local public interest. Public encouragement of local economic growth has long been a reality at the local level. Public constraint of local population and economic growth with the aim of realizing local social environmental values (i.e. in terms of industrial location, population density, open space, educational facilities, recreation opportunities, etc.) has been less pronounced, but is now being given increasingly strong public support (e.g., consider the court decisions with respect to Ramapo, New York, Petaluma, California, and Boulder, Colorado). Federal and state environmental support programs, including water quality, highway billboard controls, open space, wild and scenic river programs and others have encouraged this local public interest concern and helped to make it politically effective. Even the localities, strongly desiring local economic growth, do not want growth at any price today in terms of social and environmental values.

Local comprehensive land-use management is the primary instrument of managed local growth. The right of a locality to assist and constrain private initiative through appropriately formulated and adopted comprehensive land use plans is being increasingly recognized by the courts as Constitutionally valid (e.g., Petaluma case). Appropriate plans consist of a statement of public goals, objectives, policies (i.e., implementing criteria) and procedures (i.e., subdivision, zoning, permit controls). These are presented together with two dimensional maps generally indicating, if not always precisely defining, at any time, a visual representation of publicly desired goals and objectives. The opportunities and problems of water supply and quality management for domestic, industrial, recreational, and scenic use as well as safety from floods together with air quality, transportation and solid waste management, need to be considered in comprehensive land use management. But the mix and level of this management can best be determined in the context of local comprehensive land use planning and implementation.

However, land use planning can be effective only if the locality possesses, on a continuing basis, its appropriate "critical mass" of professional planners and managers. Planning at all levels on all subjects has progressed from the back of envelopes to increasingly professionalized forms. Within the United States there are few Federal or state grant programs which support development and continuance of local planning staff capability. All such aid is

now very short term. The funds for the multitudes of short-term "comprehensive" planning exercises (e.g. Sections 701 or 208, Law Enforcement Assistance Administration (LEAA), comprehensive health care) will be largely wasted if a local commitment to planning, or the professional capacity to perform it on a continuing basis, is not achieved. Federal and/or state categorical grants are needed to encourage and speed this type of necessary, local and professional performance.

Localities, of course, can be of many types: cities, townships, counties, councils of governments, special districts, and regional planning areas. Discussion of the institutional problems and opportunities presented by this multiplicity of institutions is being treated elsewhere. For purposes of this discussion, it needs to be said that the local institution performing comprehensive land use planning must be one that has general legal authority to manage private land use in the public interest. If it does not have this authority, then it must be in a position to influence strongly local management through Office of Management and Budget Circular "A-95" review and related procedures. Planning without a close relationship to public management decision-making is meaningless.

If land use, water and water quality management can be perceived as integrated most meaningfully today at the local level, what is the planning and management role at the state, federal-state and federal levels? Or, putting it another way, if the meaning of all decisions can be clearly perceived together at the local level, then which of those decisions should be state decisions or federal decisions? What should be the role of federal-state river basin commissions?

State decisions should be confined to specific matters of state interest. These matters will vary from state to state, but they could include final authority on location of general aviation airports, power plants and transmission lines, new cities, large industrial plants outside cities, state parks, greenbelt, or wildlife areas and state highways; or on water quality effluent permits, stream classification or ambient air standards, ground and surface water rights, or state water development facilities that benefit more than one locality.

Federal decisions should be specifically limited to matters of federal interest. Such decisions can be classed in at least two categories:

a. Decisions to approve or deny state or local grant requests on the basis of some general criteria applicable across the board.

b. Decisions where a federal descretionary judgment is being made that could impact significantly local land use plans. These latter decisions are very important with regard to intergovernmental relations and should be clearly defined so that the public is aware of the locus of responsibility.

Federal decisions reflecting federal interests could or do include such matters as location of major airports, major energy production and transmission facilities, water resource developments having widespread benefits (usually interstate), national water pollution control standards, national wild and scenic rivers, forests, parks, wildlife refuges, or lands to be held in agriculture by an appropriate incentive scheme.

Planning involving federal, states and localities together is for the purpose of settling conflicts involving the use of their respective authorities and for assuring appropriate complementarity of decisions by two or more levels were appropriate. Settling conflicts and assuring complementary decisions are usually made ad hoc from time to time. But often they could best be made after an extensive and intensive multi-level planning exercise has been undertaken following the lines of established local interest, state interest and federal interest. Federal-state river basin commission and federal-state economic development commissions could be used for this purpose more than they are today.

REINFORCEMENT OF LOCAL GOVERNMENT AT THE LOCAL REGIONAL LEVEL

The prospects of meeting societal needs for water and land resources quality and quantity can be better served if planning for these ends is more effectively integrated, particulary at the state and sub-state regional levels. One very direct way of achieving such integration would be to consolidate certain of the Federal grant assistance programs supporting quality, quantity and land use planning. The work group suggests that consolidation be explored.

A reasonable place to begin would be consolidation of certain grants specifically for water resource planning. Key programs here could include Title III of the Water Resources Planning Act (which assists the states for "comprehensive" water resources planning), Sec. 208, P.L. 92-500, for area-wide management plans and Sec. 303 (e) P.L. 92-500 for basin plans as part of a continuing planning process funded through Sec. 106 of the 1972 amendments.

There are problems in connection with each program in achieving the objective - a capability and continuing process for linking water resource quality and quantity needs, alternatives, impacts and programs at state and sub-state levels.

The Title III program is small -- very small. The current annual authorized level is only $25 million nationwide. Both legislative history and administrative practices have tended to confine use of the funds to the state level (little pass-through to sub-state planning entities). The Sec. 208 program is conceived as of limited dimension.

Certain elements of the 303 (e) process are tied specifically to certain regulatory features and may not be easily (or wisely) incorporated into a broader process looking at resource management needs (in both quality and quantity), alternatives, water-land relationships, etc.

Nonetheless, a single grant mechanism to state and sub-state planning which encourages the integration of quality and quantity considerations with each other and with land (and other) considerations, would, by definition, help to breakdown the quality/quantity barrier in planning at these levels which is fostered by fractioning grant assistance.

A consolidated grant incorporating appropriate elements of these three programs could be administered by the Water Resources Council as the point in the Executive branch in which comprehensive planning perspectives are sought.

An alternative would be to add the Title III objective (and appropriate funding) to the purposes founded by Sec. 106 P.L. 92-500 with appropriate language and legislative history assuring participation by Water Resource Council agencies in how the program is administered.

In either event, this proposal implies making the Sec. 208 process (that is, of water quality strongly related to land use and development problems) a continuous process whether funded under the present Sec. 208 through funds and appropriate language added to Sec. 106.

If this step toward water quality quantity-land relationships proves productive, it might possibly bring other land and natural resource grant assistance programs into a consolidated grant mechanism, while leaving the grant mechanism for implementing actions in the present administering agencies. For instance, the program development (planning and legal and institutional analysis) Phase E of the Coastal Zone Management Act is a prospect. Others include the planning ("Strategic Outdoor Recreation Plan") of the Land and Water Conservation Fund grant assistance program for outdoor recreation. The physical planning aspect of Sec. 701 (Housing Acts) grant program, currently requiring a land use element, is another.

Integration by EPA of air, solid waste and water supply planning assistance programs (whether or not they are specifically identified as such) would accomplish important integration objectives among these important programs and improve prospects of evaluation of total environmental protection programs in relation to other land and natural resource concerns, objective and programs.

Some further thought should also be given to Sec. 209 of P.L. 92-500, requiring to complete "Level B" comprehensive basic plans nationwide by 1980 with priority to 208 - related basins.

The "Level B" antecedents in basin planning have historically served as vehicles for inter-agency federal involvement in planning which concentrated on extolling the desirability of federal funding of resource development projects.

Under the Council and the river basin commissions which have done most recent Level B Planning, state and sub-state planning agency involvement has increased markedly and the studies have considered and recommended management actions by all levels of government (not just federal) for nearly the gamut of water and related land objectives and uses.

In short, the Level B study is designed to be an integrating vehicle. Unfortunately, as noted earlier, the principal vehicle for federal financial support for comprehensive water and related resource planning (Title III of the Water Resources Planning Act) is small and largely limited to support of capacity-building at the state level.

Sec. 209, too, might be made a vehicle for water quality-quantity and related land considerations at state, basin and 208 scale levels. A way of channeling funds to assure effective participation at both state and sub-state levels would have to be worked out to fully realize their potential. The consolidated water resource planning grant programs suggested earlier might also be so designed and funded as to accomplish this purpose.

Ultimately, more aggressive involvement by state and sub-state planning entities in water quantity problems, as part of an integrated quality-quantity planning process, will lead to a sharp increase in local and state initiatives in formulating solutions to water resource management issues. The work group deems this result desirable as contrasted to the present dependence on federal water resource development agencies, with their mission orientations and as planners, as well as potential implementors. We note with approval that each agency has a program for closer local cooperation in planning but urge more coordination through the proposed consolidated grant approach.

An integration and strengthening of water quality quantity-land use planning at state and sub-state levels may well lead to demands on the part of states and local governments for <u>management</u> grants for water resource (as distinct from water quality) management to implement solutions preferred by those levels to the solutions which can be executed through federal agency projects.

Given current public preferences, it seems like such state and locally initiated water resource solutions would tend to be less capital intensive, less structural and more environmentally sensitive than solutions produced through federal water resource development agency planning process and its traditional independent mode of project planning.

The work group considers those characteristics to be generally desirable as offering opportunity for optimizing selection of water resource management alternatives not meaningfully possible so long as federal financial support is confined to solutions which can be carried out by the federal agencies, with their current emphasis on sharing only capital costs of alternative solutions.

PUBLIC PARTICIPATION

The intent of the several statutory provisions and agency policies requiring public participation is to improve access by interested groups to public policy decision-making within the planning process, thereby improving the responsiveness of that process to the community.

Self-interest and established institutional arrangements are such that the beneficiaries of governmental resource developmental programs have greater assurance of such access. The recent emphasis in federal/state/and local legislation on public participation, thus, has the special purpose of improving the access of other interest groups, notably environmental-conservation interests (not in the sense of excluding other interests but, rather, to correct previous imbalances in that access). Accommodation of conflicting interests is important to the health of any program.

Variations in the constituency of the agencies concerned with water development and water quality are such that greater integration of these program areas should facilitate the resolution of conflict between competing interests.

All governmental agencies, in order to assure their continued existence, seek to develop a constituency supportive of that goal. Such constituencies are composed, in the main, of beneficiaries of each agency's activities. A major problem, therefore, is effecting conciliation/integration of the different publics or constituencies of the various agencies and other participatants who hold "veto roles" for these programs.

Local governments, and planning activities that relate to local governments, have a special opportunity to utilize public participation to facilitate interest accommodation and public understanding due to the nature of public participation in public affairs. Most people do not participate at all. Half of the adult population doesn't vote; and for about one quarter voting is their only political act. Most of the remainder content themselves with a few fairly positive activities beyond voting such as a letter to a Congressman, contribution to a party or organization, or attendance at a public meeting. A fraction of one percent surface the issues and alternatives, seek consent for a course of action, and do all the other things that lead to public

decisions. Most of this participation is at and through local governmental activities.

Thus, the recruitment of only a few more activists can add substantially to the effective public understanding of a problem area. Public participation activities should be directed to that end.