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Water Quality

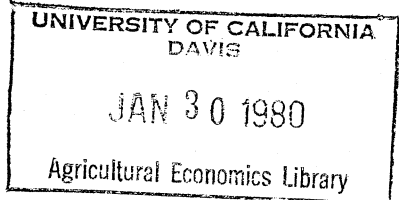
Some Thoughts on the Political Economics of
Water Quality Improvement

by

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My purpose here is to focus on the policy structure for implementing water quality programs affecting agriculture. My contention is that institutional structure does make a difference both in terms of policy output and distribution of implementation cost. While I can't be precise as to what difference it makes, I can suggest important structural issues. I will mention institutional techniques for water quality improvement, but will concentrate on organization.

First, let me offer a few observations on the role of the applied economist in the implementation of water quality policy, expanding on what has been said by other panelists. A fundamental role for economics as a discipline, and those who practice it, is the organization and measurement of the implications of alternative institutional arrangements for getting the job done. Allocation of discretion among the key actors -- landowners and managers, levels of government, and even agencies within a level of government -- can affect performance and overall cost. In reducing non-point pollution, we are basically talking about changing the behavior of the land user. We have several ways to do that, a whole list of ingenious bribes, threats and appeals for enlightened self-interest. Each set of instruments implies a certain transaction cost -- the cost of doing business. That category of cost can vary with who is directing the policy instrument, as well as choice of the instrument itself. For example, assume we decide that limited water

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quality regulations are appropriate. Regulations must be enforced. Costs will vary depending on who calls the polluter to account for his poor citizenship. It may be done by a sort of enforcement conference, where the offender is called before a selected group of local peers, confronted with evidence of his misdeed, and asked if maybe he couldn't do better in the interest of community solidarity or something. Alternatively, States could enforce directly. Several have enacted rigorous sediment controls. There is even precedent for enforcement at the Federal level. My point is not that we should or will have regulations, but that economics of water quality improvement includes measurement of cost differences among alternative institutional structures. We have a role to help produce implementation decisions based on improved knowledge of consequences.

I will turn now to discussion of several issues pertaining to institutional structure:

Levels of Government. All levels of government, Federal, State and local, must recognize their strengths and limitations in dealing with water pollution. Some interests seem to wish the Federal level away, while others see no hope for local implementation. The fact is that neither can do it alone. Clearly the Federal Government has a role in improving water quality. Direction comes from legislation and other indicators of popular support for nationwide improvement. The public sees significant off-site benefit from clean water. But the Feds can't do everything, despite what some may think. States have taken significant leadership in both sediment control and water quality regulation. They have the geographic scope and experience in selected regulation. Local governments retain authority for traditional land use

regulation. These roles are not inviolate, but there is momentum of support built on years of practice. And political support is the crucial variable holding the line on the cost of conducting water quality programs. Adjustments in allocation of discretion among levels of government must acknowledge significant strengths of these levels established overtime. To assume that only through drastic reordering of roles can water quality improvement be accomplished would be a costly mistake.

National Level. At the national level, both the Environmental Protection Agency (EPA) and the U.S. Department of Agriculture (USDA) have important responsibilities for implementing water quality policy. Each has its constituency. USDA obviously has a history of contact with agriculturists, whose behaviour is so crucial to any reduction in non-point pollution. To hazard a few generalizations, the tendency in USDA is to prefer policy instruments that provide economic incentives for the farm manager to nudge his behavior in socially desirable directions. This tendency is based on first-hand knowledge of what it takes to run a farm business, and how individual enterprises relate to overall national production. Various agricultural interest groups are prepared to remind the agency of these facts if they should forget. The tradition in EPA, on the other hand, is more regulatory. Their tendency is impatience, based on pressure from various environmental groups. EPA has had primary responsibility for implementing environmental legislation, including 208 planning which presumably provides the basis for water quality improvement. The USDA role was fairly peripheral at this planning stage, with exceptions in some States. Agriculture has a more direct role in implementation through the Rural Clean

WaterProgram. Despite their historic differences, both agencies need each other in this effort. EPA must succeed in measurably improving water quality, aiming at the somewhat dubious target of fishable and swimmable water by 1985. USDA must succeed also in this effort, but not at the expense of major loss of agricultural support. It is an uneasy marriage that must work.

Agencies in USDA. As an economist, I am a firm believer in the virtue of competition. It sharpens efficiency, removes excess profit. That holds for government as well. Competition among agencies is basically healthy, and we in USDA are in robust health. Total consensus on things would be a real bore. Bureaucratic competition is somewhat different from its parent in the market place, however. Some of the corrective devices don't seem operable. Firms that are either less efficient or producing the wrong product seldom go out of business. Perhaps reorganization is the public equivalent. What we usually see is bureaucratic oligopoly.

The Agricultural Stabilization and Conservation Service (ASCS) and the Soil Conservation Service (SCS) are the primary competitors in the water quality area. The former has been the source of various commodity and conservation payments over the years, operating through farmer committees at the county level. The latter provides technical assistance for installation of those conservation practices, and operates through the semi-autonomous county conservation districts. Putting aside all the historical complexities of this case, we have something of a leadership crisis for the effort to reduce agricultural pollution. Representative Tom Foley of Washington put it succinctly at the last annual meeting of the National Association of Conservation Districts, "Internal dispute at the Department over the administration

of key soil programs must be resolved, or they will spill over into the Congressional arena and weaken conservation programs now under review."

While made several months ago, the remark is still valid. Secretary Bergland assigned leadership to SCS, but ASCS has its own support base on Capitol Hill. A recent article in a Des Moines, Iowa, paper indicated that Congressman Jamie Whitten, Chairman of the House Agricultural Appropriations Subcommittee, steadfastly intends to give the money and control to ASCS. Both SCS and ASCS have leadership for largely separate water quality implementation experiments. The Model Implementation Program led by SCS for the Department, has seven implementation experiments underway throughout the country. There is monitoring and evaluation over the three years of the experiment. ASCS is supplying special cost-sharing assistance for the MIPS and participates in the overall effort. But ASCS has 21 special water quality projects of its own, created through its normal authority and responsibility to target cost sharing funds on problems deemed to have social import. Water pollution is one of those. There is no evaluation or monitoring with this latter effort, however. It is more clearly an action program. Some have claimed that the ASCS selection process skimmed off the most promising rural clean water projects, thus taking a larger share of the spotlight on water quality improvement. ASCS allocates about \$1.4 million per year to cost-sharing for MIPS, and \$4.3 million for the 21 special projects. What we really have, then, is 28 areas where Federal agencies will be focusing programs to reduce non-point pollution by reducing sediment loss and other farm related problems. These really afford an opportunity to test various implementation strategies. They could be a real laboratory for economic and physical research. But that will take some oversight.

Overlap of National Legislation. The Rural Clean Water Program, a 1977 amendment to Section 208 of P.L. 92-500, is the basic law bringing water quality efforts to bear on rural areas. In this as in other cases, agencies mobilize to implement legislation, focusing on specific programs, assigning responsibility, etc. But RCWP is not the only kid on the block, maybe not even the biggest or the toughest. The Soil and Water Resource Conservation Act of 1977 (RCA) is also in the picture. Water quality has been defined as one important policy output of RCA. The same techniques and practices are being considered to reduce sediment run-off and other forms of non-point agricultural pollution. But largely a separate effort was mobilized under RCA, with somewhat different actors. For example, EPA is not an active participant in RCA. Another relevant law is the Resources Planning Act (RPA) involving appraisal and management of forests to accomplish certain policy objectives, including improved water quality. The Forest Service has been about the only actor in this effort.

The point here is that people have problems, of which water pollution is one, and governments have laws and agencies. The two don't necessarily coincide. Each law is well intentioned on its own, seeking comprehensiveness and completeness. Agencies have the obligation, it seems to me, to treat problems as problems with a coordinated effort, and not get pushed into separate boxes by the provisions of a particular law.

Voluntary Action. The RCWP emphasizes voluntary compliance as the approach to reducing water pollution problems caused by agriculture. We can not assume, in my opinion, that voluntary action by farmers responding to

cost-sharing incentives is the only way to solve the problem. Some of the State 208 planning efforts have identified other measures, including tax incentives, regulation, and enforcement conferences to encourage behavior change by farmers. The RCA process will also evaluate a range of policy options designed to reduce soil erosion on farms. These must be taken seriously, their costs and benefits compared to voluntary compliance. There is a clear national stake in clean water and certainly in a viable agriculture. We don't want to destroy agriculture in search of clean water. We must be sensitive to management incentives faced by farmer-businessmen. But there are ways other than through strictly voluntary programs that any unreasonable impacts on agriculture may be accounted for. It seems to me that the policy mood of the country is one of awareness of resource limits, caution on further exploitation of natural resources or environmental despoliation, and particularly demand for some return for public dollars spent. That is the clear message in soil and water conservation, and will be further articulated in water quality. The right to own real property is also valued, of course. We know, however, that rights are redefined every day in court actions, legislation and other expressions of trade-off between private right and public responsibility. Further, an increasing proportion of the public gains access to land through public action, rather than through fee simple ownership.

My plea is that policy options other than voluntarism be carefully analyzed, including administrative cost, in accomplishing improved water quality in rural areas. Full information is needed for wise choices. I suspect that the American people may be out ahead of government agencies on this point.

A special Harris poll, commissioned by the RCA Coordinating Committee in Washington, will shed additional light on public preference as to how and by whom soil and water objectives may be accomplished.

More on Human Behavior. Our ultimate goal in RCWP, RCA and all those other legislative initials, is to improve water quality by changing the ways in which people use resources. Since in the non-point area we don't know who really causes the problem, we can't go after just a few individuals. The important variable, then, is human action in the presence of various positive and negative incentives. We are trying to anticipate how people will react to threats and bribes. Education and persuasion are obviously key components. Education can be extremely valuable to help the key land users accurately understand the current policy environment, of which water quality is just a part. People need the confidence and information to make choices. People will resist being pushed into doing things for which they see no valid reason or which they perceive as contrary to their best interest. But the real choices facing land managers differ from year to year. Farmers simply can't do everything with their land that they could a decade ago. Educators must help them keep pace. In my judgement, Extension has been an under-utilized resource in the whole water quality exercise thus far.

Persuasion is different from policy education, but no less important. Perhaps land managers can be persuaded to use their land in socially desirable ways by granting special recognition to those who do so.

Conclusions. We are moving into the implementation phase of efforts to improve water quality. We are clearly operating with far less data than

we need -- others have pointed that out. In addition to data on water quality performance of various practices, we need information on overall economic performance of institutional approaches to solving the problems. It does little good to map out a detailed research agenda and agree that we know too little now to do anything. The policy process won't wait for that. Decisions will be made, programs established. People will react, additional data collected, studies done for the next iteration. We are forever stuck with a "muddling through" policy model, characterized by limited comparison of options in terms of who is affected how. I happen to think that resource economists are better equipped than most other people to participate in that process.