

Local Control Of The Environment: Is This What They Asked For?

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Abstract

The National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Program, being implemented by many small to medium sized communities across the nation, provides a unique opportunity to investigate the role that federal, state and local communities assume to protect the environment. Local, state, and some federal officials, as well as political pundits and activists from both the right and the left, are increasingly questioning the judgment and value of relying on a central authority to protect the environment. These proponents of environmental devolution argue that locals have a better understanding of the problems and constraints to institute lasting and effective environmental protection to best meet the needs and interests of local residents. This presentation will discuss preliminary results of a research project that looks at local officials' perception of their ability to implement federally mandated environmental regulations based on knowledge; willingness to participate in multi-jurisdictional collaboration; the role of local watershed groups in protecting the environment; the balance between economic and environmental concerns; their ability to implement environmental regulations; their perspective on local control versus federal or state control; and their view of regulatory control mechanisms. The study utilized a mix methodological approach using both qualitative and quantitative data analysis. This includes interviews with key informants, document review, a census survey of local officials, and in-depth interviews with local officials. The results of this research will provide a better understanding of how environmental educators can meet needs of local public officials in addressing federal and state environmental regulations.

Introduction

A major component of the current environmental regulatory philosophy in the United States is the involvement of the federal government in setting standards for environmental protection to avoid competition between states in the classic "race to the bottom scenario." In the environmental context the race to the bottom argument suggests

that local political jurisdictions will fail to enact environmental regulations that provide adequate protection of our natural resources in an effort to attract economic interests away from other locations (Butler & Macey, 1996; Revesz, 2001). The resulting federal answer in some environmental arenas has been the enactment of an approach often referred to as command and control, top down strategies, to environmental protection. This approach has led to substantial reduction or limitation of air, water, and toxic waste problems in the United States, but it is often viewed by state and local officials as an intrusion on what they deem the legitimate function of subnational governments, with the federal government attempting to micromanage their affairs (Scheberle, 1997).

The proponents of environmental devolution (vesting authority in lower levels of government) contend the centralized command and control system, which relies on deterrence as a means of compliance, is far less effective than would be an incentives-based system overseen by state or local officials (Markell, 2000). This centralized “one size fits all” approach fails to recognize not only the critical aspects of the local environment, but also other variables such as the local economy, jobs, and local custom or tradition. Even the success of the current regulatory system to reduce pollution problems, does not mean they are well suited to address environmental problems generated by small sources of pollution or non point sources of pollution (Stewart, 2001). Moreover, various economic models have pointed to the benefits of devolution and dispel the notion that communities ostensibly practice “race to the bottom” in regard to environmental regulations (Oates & Schwab, 1988, 1996a, 1996b). Thus it is not surprising to find many local communities upset by recent efforts by the federal government to impose new efforts to control “urban” non-point source pollution controls through the National Pollution Discharge Elimination System (NPDES) Phase II Storm Water Program. Like many states, Ohio has shifted much of the initial criteria establishment for this program to the local level. Ohio intends to rely, to a large degree, on local watershed groups and communities to establish TMDL levels and NPDES Phase II permit criteria (ISUI/TMDL, 2000).

Depending on local officials for environmental protection will require local jurisdictions to consider and give weight to environmental quality in their land use decision-making process. Related local regulations such as zoning, subdivision requirements, or laws specifically intended to control runoff from urban development must include environmental considerations. However, other constraints may limit officials’ ability to meet anything other than basic minimum requirements. Ohio EPA, Ohio Department of Natural Resources and Ohio State University Extension believe that local watershed groups can play an important role in helping communities achieve these objectives. The Ohio initiatives seem to emulate common themes found in ecosystem-based management and collaborative decision-making processes. These include: integrated or systems approaches to problem solving; improving institutional performance; improving the integration of government policies; enhancing cooperation between governmental and nongovernmental organizations; broad participation; key stakeholder involvement; and a strong scientific basis to governmental policies (Imperial, 1999). In a state like Ohio, with sub-governmental jurisdictions down to the township level having land use decision making authority, these initiatives will require a high level of collaboration between

governmental jurisdictions if they are to be effective. Under such a local system problems such as fragmentation and duplication of authority, poor use of information and resources and inconsistency of policies across and between levels of government may arise (Imperial, 1999). These problems can be overcome if there is political support for environmental concepts as demonstrated by the extent of public concern, stakeholder involvement, and the willingness of states to commit funds for implementation (Ringquist, 1995; Scheberle, 1997). To determine the prospects for locally-based environmental regulations in Ohio, this study investigates implementation of the NPDES Phase II storm water program in rapidly developing watersheds. The study is expected to help local watershed groups working with local officials, and help environmental educators meet the needs of both watershed groups and local jurisdictional officials.

Methodology

Target Population

A major educational effort for local officials on NPDES Phase II Storm Water Program was conducted by various entities throughout the state. This effort began in 1999, shortly after the announcement of the NPDES program and culminating with a flurry of activity in the months leading up to the March 10, 2003 deadline. The Ohio Storm Water Task Force¹ conducted many of the educational programs, with assistance from the Ohio Department of Natural Resources and the Ohio State University Extension's NEMO program and the Ohio Watershed Academy. Local watershed groups, conservancy districts, regional planning organizations also conducted NPDES related training programs for local officials. The Ohio EPA was typically an active participant in these efforts and posted fact-sheets on their website². With such an extensive educational effort, it is reasonable to assume that most local officials in Ohio were at least aware of the NPDES Phase II storm water program.

There are 423 communities listed by the Ohio EPA as meeting the criteria of having a population in excess of 50,000 or having a population density in excess of 1000 per square mile (additional circumstances may also apply). All of these communities were required to submit their storm water management plan (SWMP) by March 10, 2003. Most of these communities have until 2008 to implement their plan. Ohio EPA has designated 72 communities in 11 watersheds as "rapidly developing" and must meet the compliance criteria by 2006. The concern was that these communities were developing so rapidly that they should be made to comply as soon as possible to minimize the potential impact on water quality. The Ohio EPA indicated these communities would have their plans reviewed first, providing an independent measure of the submitted plan. It was reasonable to expect that local officials from these areas should have a better understanding of the impact and implications of these new regulations in advance of

¹ The Ohio Storm Water Task Force is a grassroots organization made up of a wide variety of stakeholders throughout the state. Membership includes township, municipal and county officials, representatives from development organizations, state government, environmental groups, consultants and other interested persons.

² http://www.epa.state.oh.us/dsw/storm/construction_index.html

other Phase II communities. A purposeful sample of all these Ohio EPA designated rapidly developing watersheds (RDW) would provided a basis to conduct an exploratory investigation related to second-order (state to local jurisdiction) devolution, implementation of the Phase II program, and identification of educational needs of local officials. Additionally, this study could identify needs and concerns of other jurisdictions related to land use, water quality, and storm water management.

It was decided that with such a relatively small pool of potential participants, a census of relevant local officials from all of the RDWs would be the sample population. All local officials directly related to approval or implementation of the SWMP was included in the list of participants. These officials included township trustees, county commissioners, county and municipal engineers, mayors, city council members, law directors or county prosecutors, city managers, and county administrators.

Interviews

To determine the current state of the NPDES Phase II communities, and to identify issues related to the development, submission, and implementation of the Storm Water Management Plan (SWMP) submitted to the Ohio EPA, key informants having direct knowledge of the NPDES program in the rapidly developing watersheds, were selected for in-depth interviews. In all, a total of 21 key informants were interviewed, 19 of which provided useful information. Initial interviews were conducted with agency personnel from the Ohio Department of Natural Resources (ODNR) and Ohio EPA.

Recommendations for other key informants from these initial interviews led to additional interviews being conducted with personnel from county Soil and Water Conservation Districts, regional planning organizations, private consultants working within the RDWs, and individuals working for state level local jurisdictional associations.

The interviews ranged in length from 20 minutes to one hour and consisted of a series of open-ended questions and the use of probes and follow up questions to explore in greater detail additional issues brought up by the interviewee. The original plan was to interview at least 15 key informants and to continue interviewing until all relevant issues related to the NPDES Phase II program had emerged (“saturation”). It was clear by the completion of the last two or three interviews that most of the key issues related to local development and implementation of the program had surfaced during the interview process. The two interviewees who did not yield useful information lacked sufficient knowledge related to the implementation of the NPDES program.

All of the interviews were digitally recorded and transcribed into a word processing document. The transcribed documents were then coded using QSR N6 software³. The results of the analysis yielded seven key areas of concern: collaboration with other jurisdictions in the development; implementation of the SWMP; the overall importance of the environment to the local community; the level of knowledge that local officials had

³ N6 is the latest version of the coding software program NUD*IST. In this research project the program allowed the researchers to code and search data looking for patterns and key points.

about the NPDES program and its implications for their community; the ability and willingness of local versus state or federal control over the environment; the Ohio EPA and their role in assisting local jurisdictions with the Phase II program; and the means, willingness and authority of local jurisdictions to regulate the Phase II program.

Questionnaire

Statements that represented the general theme of each of the seven subcategories were selected and reworded to provide a balance of positive and negative emphasis. A total of 42 statements from the initial interviews were selected for inclusion in the survey questionnaire. The researchers added additional questions related to the details of the collaboration with other jurisdictions. Three of the questions related to the existence or need for a storm water utility, and the ability of such a mechanism to cover the financial obligations of a storm water management program. Five additional questions related to the economic, technical, political, and financial ability of the Phase II program were also included in this first section of the questionnaire. With the exception of one question the participants were asked to rate the statement from 1 to 10 related to whether they agreed or disagreed. A scale was provided at the top of each page with 1 being strongly disagree and 10 being strongly agree. The participants were instructed to write the number corresponding to their reaction in a box to the left of each statement. Some of the statements were somewhat technical in nature, and some local officials may not be familiar with specific details about the SWMP, therefore a no opinion option for each of these statements was provided.

The second part of the questionnaire asked specific questions about the participant relating to the position they held, how long they had been in that position, and total years of local community service. Part three asked for specifics about their plan relating to collaboration, costs, Ohio EPA approval, and their opinion of the plan. The fourth section asked specific questions related to the involvement of local watershed groups in storm water management. On the last page of the questionnaire the participants were given an opportunity to add any additional comments.

Experts in storm water management, the Phase II regulatory program, Extension education, and survey instrument development reviewed the questionnaire. Modifications were made to the instrument to reflect the suggestions and concerns of the reviewers. The draft questionnaire was then distributed to local officials through two local watershed groups and three local jurisdictional associations to Phase II communities outside of the RDWs. This pilot group was asked to complete the draft survey questionnaire, to comment on any potential conflicts of confidentiality, and to indicate approximately how long it took them to complete the questionnaire. A total of 43 pilot questionnaires were returned. No significant concerns with conflicts to confidentiality of the participants were identified. The average length of time to complete the questionnaire was just over 20 minutes with a range from 5 minutes to one hour. The responses were tested for internal consistency of the instrument using Cronbach's Alpha with $\alpha = .776$. The range for Cronbach's Alpha if items were deleted ran from .754 to .782.

Initially 428 local elected officials from 72 communities were identified for participation in the study through official jurisdictional and county board of elections web sites. Using a variant of the Tailored Design Method (Dillman, 2000) participants were sent an initial letter informing them of the study and told to expect a questionnaire soon. Five days after the introductory letter, all participants received a letter cosigned by the principal investigator, the director of Ohio State University Extension, and the executive directors of the County Commissioners Association of Ohio, the County Engineers Association of Ohio, the Ohio Township Trustees Association, and the Ohio Municipal League urging their participation and insuring their confidentiality, along with a numbered copy of the questionnaire. The questionnaires were numbered to identify returns and avoid unnecessary additional contacts. Five days after the questionnaires were sent, a reminder postcard was mailed to the participants thanking them if they had already completed the questionnaire and encouraging them to do so if they had not. Ten days following the mailing to the questionnaire e-mails were sent to all non-responding participants with identified addresses (approximately 60%) once again encouraging them to complete the questionnaire. A week later a letter and second questionnaire were sent to all of the remaining non-responding participants, again encouraging their participation in the study.

Multi-variant correlation with the responses to this questionnaire, EPA water quality data, political demographic information, median income, and the regulatory stringency of the plans originally submitted by the jurisdictions to the Ohio EPA will be conducted in the final analysis of these data. However, an initial look at the descriptive statistics provides some interesting perspectives about tendencies of local officials' perception about the environment, local control versus federal and state control, and the role that local watershed groups should take in an environmental program like a storm water management plan. These perspectives provide interesting and useful information for environmental educators related to the educational needs of local elected officials and how local watershed groups can meet those needs.

Results

The results presented here are based on a current response rate of 53.8%, of which 48% yielded useful information for this analysis. A final request for participation still needs to be sent, which may boost these numbers to a small degree, and a non-responder follow-up will need to be completed. Even with these limitations there are some interesting trends emerging from the data. It is not surprising that local officials for the most part, are not supportive of a system where the federal government dictates the rules, the state government enforces those rules and the locals are required to implement them. However, it is interesting that for the most part, local officials feel that the Clean Water Act (CWA) has had a positive impact on their community and it appears that local storm water management would not have been a high priority without federal intervention. Local officials are very supportive of greater local input in deciding how to protect the environment. Protection of natural resources being a high priority for a storm water management plan was also strongly supported by the survey participants. There was equally strong support for the concept that protecting the environment added to the quality of life in their community.

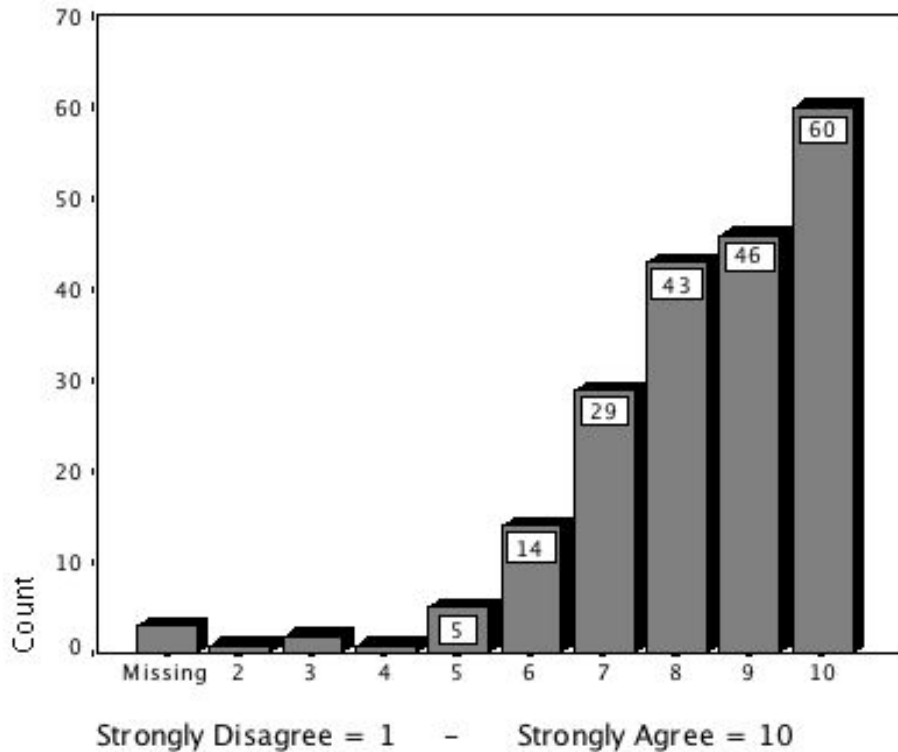


Figure 1: Response of local officials to the statement “Protection of the environment adds to the quality of life in my community”

The majority of the respondents reported they had a good understanding of the storm water management plan their community submitted to the Ohio EPA, and they felt they had sufficient information available to them to make informed decisions in this regard. For the most part they felt they had a good understanding of the benefits that storm water management, however, their response to the overall costs associated with the plan as it was submitted to the Ohio EPA was rather ambivalent with nearly equal numbers across the scale in regard to their understanding of this issue. During the interview phase of the study, many of the key informants suggested they were not confident that local officials were cognizant of the real long-term costs of the program. When asked if they felt that too much emphasis was being placed on urban non-point source pollution without a clearly demonstrating the overall impact, many respondents had no opinion and there was no clear trend one way or the other from those who did respond to this statement. In regard to Ohio EPA explanation of the minimum requirements for the Phase II program and the need for the program the results were bimodal with a near equal distribution between those that agreed and disagreed with those statements.

One clear area of concern was the overall cost of the program. Many of the respondents indicated they did not have the financial resources necessary to implement the plan. Cost and adequate resources was the most common comment added by the participants. This was also the most common reason given for communities collaborating with other local

jurisdictions on their SWMP. With this group of communities, it appears that when communities did collaborate the lead was often taken by the county, with the townships and municipalities acting as cooperators. Sixty-two percent of the respondents reported that their community did not have a storm water utility, and despite their concerns about financial resources nearly 50% of the respondents had no opinion whether they would need to establish one.

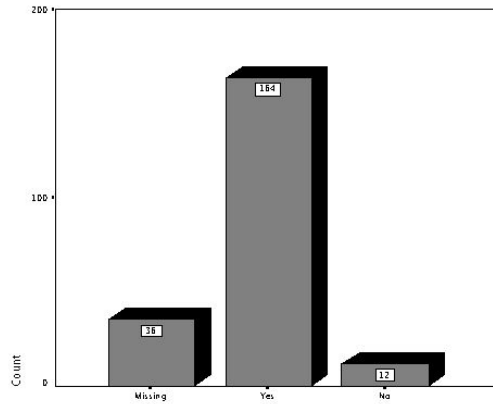


Figure 2: Local officials who feel watershed groups should be included in

It was interesting to see the role that local officials see for local watershed groups with Ohio’s EPA and DNR emphasis on their involvement in watershed planning. Seventy-one percentage of the respondents thought watershed groups should be involved in storm water management, and less than 6% felt they should not be involved. The vast majority, 71.4%, felt that watershed groups should play a role in environmental education, 61.9% in environmental awareness, 36.2% in water quality monitoring, 38.1% in SWMP development, 26.7% in plan implementation, 38.1% in environmental stewardship, 56.2% in environmental activities, and just 19.5% in compliance monitoring.

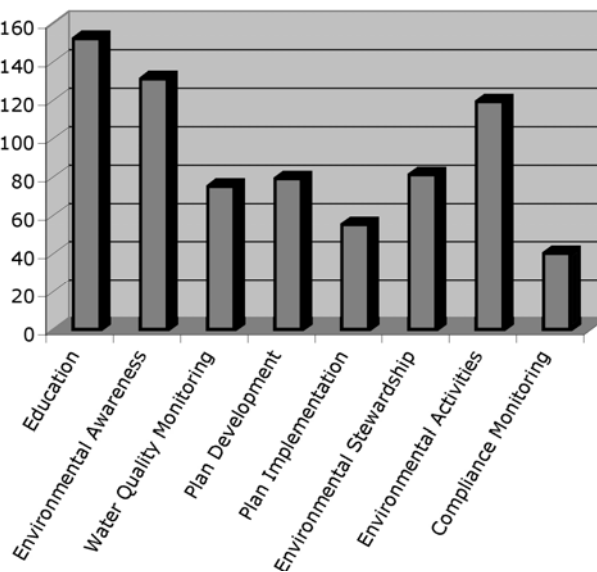


Figure 3: Roles local officials feel are appropriate for watershed groups

Conclusions

At this point is too early to draw any definitive conclusions from this study, however, it appears the local officials who returned their questionnaire were confident in their understanding of storm water management issues. There does appear to be a need to focus more attention on the overall costs of the program and the implications they will have on local communities. There also appears to be a need for educational programming for implementation mechanisms like storm water utilities and long term cost/benefit programs. Involvement of watershed groups in storm water management plans that are consistent with watershed planning activities outside of education, awareness, and activities appears to be somewhat problematic with the majority of the survey respondents. With the strong emphasis that Ohio EPA and DNR have placed on watershed groups' involvement in watershed planning, and the large number of cross-jurisdictional collaborations with storm water management plans, greater integration between watershed groups and local officials will need to occur. Watershed groups need to do better job of understanding local political situations, increasing their sensitivity to jurisdiction authority and autonomy. They also need to improve their message regarding the benefits that local communities can realize by working with them and how they can help to foster collaborative efforts.

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