

Executive Summary

In Defense of Clean Water: How Iowa and Its Neighbors Protect Watersheds

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The Iowa Policy Project

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By Peter Weyer

Introduction

Clean water is both a state and federal issue, with protection of watersheds falling largely to state government responsibility.

During the 1960s and early 1970s, the general deterioration of U.S. surface waters, mainly from industrial point sources, received heavy media coverage. The Cuyahoga River fire in 1969 and the “ecological death” of Lake Erie are two prominent examples. The heightened awareness combined with a new sense of environmental stewardship in the general public led to a grass roots movement calling for increased federal oversight of U.S. water resources. Congress established the Environmental Protection Agency (EPA), and new federal guidelines and regulations ensued, including passage in 1972 of the Water Pollution Control Act. This law made it illegal to discharge pollutants from point sources without permits; it also established the goals of making the nation’s waters fishable and swimmable by 1983 by eliminating discharges to waterways. As amended in 1977, this law became known as the *Clean Water Act* (CWA).

Congress reauthorized the CWA in 1987, establishing the Section 319 Nonpoint Source Management Program to support prevention of nonpoint source pollution to surface water supplies. This program includes technical and financial assistance, education, training, technology transfer, demonstration projects and monitoring.

States have an important role in identifying and preventing nonpoint source contamination of watersheds. This involves collecting data, identifying problem waters and setting priorities to repair them. Because federal funding levels do not meet the challenge that federal law poses, state-level efforts depend on cooperation among agencies, grassroots involvement, public-private partnerships and innovative funding.

Watershed Approaches

Watersheds *per se* became a focus of federal regulatory efforts with the passage of the 1997 *National Clean Water Action Plan*. This statute, under the jurisdiction of EPA and the Department of Agriculture (USDA) required states to “*focus on watersheds with the most critical water quality problems and take a cooperative approach in developing and implementing effective strategies to solve those problems.*” Underlying aims of the plan are to “*increase protection from public health threats posed by water pollution; more effective control of polluted runoff; and promotion of water quality protection on a watershed basis.*” The plan addressed budget concerns by calling for cooperation and collaboration between federal and state agency programs, development of private/public partnerships, inclusion of the general public in determining program direction and development of outreach for information dissemination to stakeholders and the public.

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A watershed-based approach to surface water quality continued to grow in the late 1990s. The Clean Water Initiative (1998) was a multi-agency approach to watershed protection and improvement, which aimed to build “watershed partnerships to speed protection and restoration of all watersheds....” In 2002, EPA established the Watershed Initiative, a competitive grants program to fund innovative strategies for watershed protection and restoration. In 2003, this program funded projects developed by 20 watershed organizations at a total cost of about \$15 million. In 2004, this program was renamed the Targeted Watershed Grant Program. Projects funded in 2003-2004 in Iowa and surrounding states are presented below.

Watershed Projects in Iowa, Surrounding States, 2003-04

Year	Name	Location	Award	Projects
2003	Greater Blue Earth Watershed	South-Central Minnesota; North-Central Iowa	\$1,800,000	Wetland restoration, install riparian buffers, educational awareness program, promote existing conservation programs
2003	Upper White River Basin	Northwest Arkansas, Southwest Missouri	300,000	Integrate separate watershed plans, innovative on-site wastewater system, monitor w/geographic information system – target critical areas
2003	Rathbun Lake Watershed	South-Central Iowa	600,000	Implement best management practices, promote farmer enrollment in watershed protection agreements, conduct monitoring
2004	Upper Sangamon River Watershed	Central Illinois	1,290,000	GIS software and precision ag technology, drainage water management, economic/env benefits from soil testing
2004	Mississippi River, Des Moines Lobe	North-Central Iowa	1,000,000	Design integrated wetlands and controlled drainage systems to optimize NO3 reduction at watershed scale

Iowa has a number of watershed protection, restoration and improvement programs. This study compared watershed programs in Iowa to those in five surrounding states – Missouri, Nebraska, Illinois, Minnesota and Wisconsin – to determine what programs and approaches have been successful regarding water quality improvement and other more subjective measures. This comparison was not designed to rank state programs, but rather to assess what types of programs have worked well. A secondary aim was to recommend improvements to Iowa watershed programs, using successful approaches from surrounding states as examples. The study looked at a number of areas including legislative basis for programs, funding mechanisms, research and education approaches, public/private partnerships, program evaluation techniques and planning activities.

Comparisons

All states participate in the nonpoint pollution programs and water monitoring activities mandated by the federal CWA and administered through EPA. Soil and water conservation programs under the USDA are also active within each state. All states established unique programs after passage of ground-breaking legislation on water protection; only Wisconsin has a constitutional basis for water protection. With the exception of Iowa and possibly Illinois, water protection programs have a strong basis in state tourism economies related to use of surface water resources. Iowa’s unique programs are economically driven by the agricultural industry, while Illinois lists water quality as the main driver for its programs.

All states use federal money (EPA and USDA) but distribute it differently. Those responding to questions in this study indicated federal funding is inadequate for watershed program needs.

Many states have innovative funding mechanisms for water quality programs that have either been mandated by legislation or are the result of regulatory activities, including dedicated funds from gaming receipts or legal settlements, respectively. Funding from private sources is very active in some states, including Iowa.

In Iowa, the Resource Enhancement and Protection fund, or REAP, is partially used for water quality projects. Currently, the annual amount distributed through REAP is half the amount originally intended by the Legislature. Private funding for watershed protection, conservation programs and public education has been very strong in Iowa (Iowa Natural Heritage Foundation, Iowa Ducks Unlimited, Iowa Pheasants Forever, Iowa Farm Bureau Federation).

For watershed projects and programs to succeed, adequate funding is necessary. When federal sources of support are inadequate, states have developed innovative funding sources and strategies. With private funding sources being very active on water protection and conservation, states should encourage and pursue partnering with these groups on watershed program efforts. To maximize private help, states should consider some match for private funds awarded.

Partnerships and Public Participation

Public/private partnerships exist in all states at various levels. These include urban and rural watershed protection groups comprised of a variety of interested parties, formal advisory groups appointed by state agencies, and independent interest groups. Survey respondents in this study indicated there is room for improvement in coordination between state agencies and private groups, particularly with respect to communicating issues and concerns and being involved in the development of responses and plans to address those concerns. Successful partnerships maximize stakeholder ownership of and participation in planning and developing watershed programs. State agencies in such partnerships facilitate program design and development and provide technical advice and expertise. Iowa examples of successful partnerships include the Agricultural Clean Water Alliance, and the Des Moines Urban Environmental Partnership.

One example of a successful partnership for watershed protection is in Winterset in Madison County. Cedar Lake (10,000 acres) provides drinking water for Winterset but is threatened by sedimentation and high nitrate and atrazine levels. The city of Winterset is working with local landowners to implement riparian buffers, nutrient and pest management programs, and erosion control basins and terraces. USDA and EPA are providing funds for these improvements, and Winterset Municipal Utilities is planning a bike and hiking trail as well as fishing and picnic areas around the lake. New housing developments around the lake are also in the planning stages.

All states have successful voluntary citizen water monitoring programs. Public participation also involves information dissemination and educational opportunities. While all state agencies have excellent web-based information, some states also support information clearinghouses for the public, such as the Missouri Watershed Information Network (MoWIN) and the CSREES Heartland Regional Water Quality Coordination Initiative.

All states have planning activities related to mandatory reporting requirements for federal CWA programs. While planning activities can result in well-thought-out approaches and recommendations for future work, they cannot be considered successful unless the recommendations are approved and acted upon by state government, working in partnership with stakeholders. In many

instances, plans have been shelved due to stalemates during discussions at various levels of government. The ability to compromise and develop creative solutions to apparent roadblocks is paramount to moving forward with water quality protection efforts and watershed programs. The Iowa Lakes Valuation Project is an example of a proactive effort to determine public support for economic investment in water quality programs that can be used for planning purposes. This project involved a survey of 4,400 Iowans (randomly selected from all 99 Iowa counties) on lake usage patterns, perceived economic benefits of lakes and willingness to pay for good water quality in lakes.

All states have monitoring systems that provide ongoing evaluation of surface water quality and all comply with federal reporting requirements. Survey respondents indicated that watershed program evaluation measures were, in many cases, more focused on what can easily be measured, such as dollars spent or employment, than improved water quality. Additionally, program evaluation was spotty in many instances, with only a sample of programs measured for progress annually. More global approaches to evaluation are being proposed or are under development in some states.

Respondents also indicated that collaboration between agencies and other entities conducting surveillance activities is lacking in many areas; they suggested that other sources of surface water quality data could be better utilized to evaluate watershed program progress. Drinking-water utility laboratories in particular may conduct regular sampling of raw source waters that could provide useful data.

Recommendations for Iowa

■ *Link water-quality programs to economic development*

Successful programs in many surrounding states have economic drivers, mostly related to tourism/recreation industries. Iowa's economic drivers are only agricultural; diversifying economic drivers would be potentially more effective. Iowa should approach water quality/watershed protection with a view to economic development, to attract industries with clean water needs (food processing, biotechnology, etc.) that would benefit from lower costs related to water treatment. In addition, this could attract white-collar industries whose workforces would benefit from clean water related to recreational use. The state should put seed money into clean water/watershed protection programs to attract new industry, perhaps working in concert with the Iowa Values Fund. The long-term result is a larger tax base; some of the new tax receipts could be used for these clean water programs. All Iowans would benefit from the efforts to clean up Iowa's surface water supplies.

■ *Fully fund REAP and fully distribute federal funds*

Funding levels from federal sources are inadequate and dispersal of those funds has not been complete or timely in some cases, such as the State Revolving Fund (SRF). Innovative funding mechanisms exist (such as REAP) but they have not been funded to the level originally intended by the Legislature. Iowa should follow through with legislative intent. Private funding sources are vital to the watershed protection and clean water programs in Iowa, and the state should develop more partnerships to increase support for water quality. A portion of new taxes from "clean water" industries could be dedicated to encourage these efforts; seed money could come from under-utilized sources of money noted in other studies, such as the SRF or the Underground Storage Tank fund. To maximize private help, Iowa should consider some match for private funds awarded.

■ *Better coordinate agencies in watershed partnership efforts*

While numerous urban and rural watershed program partnerships exist in Iowa, coordination is lacking between state agencies on partnership programs. A lead group should be identified to oversee local/regional programs, such as local soil and water conservation districts. Agency jurisdiction is not clear in some cases, as water quality improvement projects can overlap program criteria and boundaries. Public participation could be improved by better public communication. A central information/data clearinghouse would be beneficial, such as MoWIN in Missouri. ISU Extension would be one possibility, but an umbrella organization should serve as an information clearinghouse for watershed programs in Iowa.

■ *State leaders must follow through on planning efforts*

Regular watershed protection/water quality planning exercises have been conducted involving a wide variety of stakeholders from the public and private sectors. Despite a general consensus within planning groups regarding the need to implement recommendations on some level, the Legislature has been slow to address these issues. State government, including the Legislature, should proactively approach watershed planning recommendations, and find solutions to apparent roadblocks. An economic development approach to “clean water” is needed to initiate serious efforts to watershed protection and improvement that will include public and private sectors. Incentives for landowners must be included, and stakeholders must drive local efforts to identify and develop programs tailored for their specific watersheds.

■ *Develop a public-private partnership to coordinate water quality data*

Numerous planning activities in recent years have recommended a partnership to link water quality data from public and private agencies. This would be fairly inexpensive – a website could be used – and would address a general criticism from respondents in this study about deficiencies in ease of access to information that exists and could easily be made.

Conclusion

Active, well-funded watershed programs are essential for surface water quality protection and improvement efforts. In Iowa, there are several examples of watershed programs that can be considered successful based on various criteria. However, much more can and should be done. Iowa government must adopt the position that good water quality in our lakes, rivers and streams and the resulting benefits for recreation and business are vital to sustained population growth and a thriving and diverse economy. Inadequate funding at the state level for watershed protection programs is one major concern. A proactive, creative approach can result in solutions on funding and other issues. Iowans pride themselves on being good stewards of the environment. The state should provide the incentives and resources necessary to encourage Iowans to develop local watershed programs to protect and restore good water quality across Iowa.

The Iowa Policy Project

For the full report, see
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The Iowa Policy Project was founded in the summer of 2000 to produce and disseminate research on a broad set of issues of importance to the citizens of Iowa. We are a non-profit and non-partisan organization. We engage scholars to produce sound, independent research.