



The Iowa Policy Project

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EXECUTIVE SUMMARY

Water Quality Trading and Wetland Banking: Lessons for Iowa

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Iowa's water quality is poor, primarily due to intensive agriculture. The Iowa Department of Natural Resources classifies each of Iowa's water body segments for the specific types of use it should support. In 2006, pollution made 34 percent of Iowa water body segments — where sufficient information was available — unfit to support one or more of their designated uses: swimming, fishing, drinking, or maintaining a healthy population of fish and other aquatic life.

Nutrient runoff and erosion from agricultural land are the largest sources of water pollution, prompting a variety of programs to reduce these sources of water pollution. Our full report describes two Midwestern programs with the potential to improve water quality: water quality trading and wetland banking.

Water Quality Trading

Trading water pollution credits provides incentives to reduce pollution. A water quality pollution trading scheme allows polluters who want to increase the volume of pollution they discharge to buy credits from other polluters, who are expected to reduce their pollution by a comparable amount or more in the same watershed. Our study of trading programs in Minnesota, Illinois and Wisconsin offers these "lessons."

- Voluntary initiatives to address water quality problems need the backing of enforceable and sufficiently strong limits on pollution. Even well-designed programs need stringent standards. While Wisconsin has one of the most robust structures to enable water quality trading, only one of its three pilot projects generated any trades because weak pollution standards left little incentive to trade credits.
- Policies that dictate emissions technology can significantly hinder trades. If policymakers aim to ensure that targets for nutrient and sediment control are achieved with the lowest possible cost, then policies should allow polluters to choose an effective method of mitigation with the lowest cost.
- Cost-benefit analyses that occur before water quality projects begin usually do not take into account other associated environmental effects. For instance, the Rahr trading project in Minnesota resulted in several benefits that were beyond the initial goals of the project. Associated environmental outcomes, if taken into account in the planning stages, would provide a more accurate evaluation of the potential costs and benefits of a proposed project.

As there have not been many Midwestern trading programs and not all were unsuccessful, it is difficult to make conclusive recommendations. Without more information on the costs and benefits that water quality trading may offer Iowa, we cannot recommend statewide adoption. There is enough evidence to

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recommend that Iowa establish a few test programs to learn more about the costs and benefits of water quality trading.

Wetland Banking

Wetland mitigation requires the construction of new wetlands to compensate for wetlands lost to agricultural or urban development. We examined programs in Missouri, Minnesota and Iowa and have summarized the benefits and drawbacks of existing wetland banking programs.

■ The Board of the Missouri Levee and Drainage District Association notes two advantages of wetland banks, (1) farmers get to move wetlands off their farms so more acres can be graded, drained and farmed to provide increased net returns; and, (2) a levee/drainage district, when economically advantageous, can move wetland places away from levees, drainage ditches and facilities thereby realizing an initial savings for construction and avoiding future low return maintenance costs.

■ Wetland banks are meant to compensate for wetlands lost to farming or development activity, not primarily to improve water quality. Water quality benefits could come if a wetland mitigation bank were located between a stream or a lake and agricultural land. In such cases, the wetland might act as a buffer between the farmland and the water body and reduce the amount of nutrient runoffs into the water body. The gains in water quality from a wetland located between a water body and farmland must be weighed against the loss in water quality that could occur from the destruction of the original wetland.

■ A comprehensive approach to wetland banking must take into account not just the size, but the quality of the wetland, to ensure that credits are not used to compensate for the destruction of a beneficial wetland with the construction of a poor or mediocre functioning wetland. In general, distinguishing between different qualities of wetlands, as was done in Minnesota, could ensure that the overall quality of wetlands within a state does not go down on account of development.

■ A system needs to be put in place that requires the maintenance of wetland banks after the initial years of building and monitoring are over. After the first 10 to 15 years, there is a possibility that the bank may be sold or transferred to a new owner. It is necessary to ensure that responsibilities to maintain the wetland are transferred with the ownership when this happens.

Wetland banking is generally not a device for improving water quality, although under some circumstances it might do so. These circumstances will depend on the particular wetland trade, location and hydrology. With Iowa's current system, it is not clear that either wetland quality or maintenance can be assured or that any water quality improvements will occur.

Conclusion

There have been instances in the Midwest of successful water permit trading and wetland banking programs. However, the evidence is limited and the programs have not always succeeded.

One clear recommendation coming out of our research is that initiatives to address water quality problems need to be backed by enforceable and sufficiently strong requirements that limit pollution. In the absence of stringent standards, even well-designed programs cannot work.

Without more evidence on both the costs and benefits of that might bring to Iowa, we cannot recommend statewide adoption of either program. Iowa should establish pilot programs in individual watersheds, using the lessons from other Midwest states as a starting point, to study the costs and benefits of permit trading and wetland banking and then expand successful programs to larger areas.