



# The Iowa Policy Project

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## **EXECUTIVE SUMMARY**

# Agricultural Drainage and Wetlands: Can They Co-exist?

**By Will Hoyer**

Reducing the environmental impact of agriculture is a goal of states across the Mississippi River Basin, as nutrients leaving farm fields have negative effects on communities locally and downstream, most notably contributing to the so-called “Dead Zone” in the Gulf of Mexico. To reduce nitrate pollution by 45 percent, as the EPA has called for, states across the region are looking at potential solutions.

As the Iowa Department of Agriculture and Land Stewardship (IDALS) develops a comprehensive plan, one tool it is evaluating is building nutrient-removal wetlands at the outlets of subsurface drainage mains, or tile, in its “Drainage and Wetland Landscape Systems Initiative.” Over time, Iowa farmers are likely to make large investments in replacing aging drainage infrastructure with larger tiles. Unfortunately this, by itself, would actually increase nitrate delivery to rivers and streams. The use of wetlands in conjunction with tile systems, however, could provide both economic benefits for farmers by virtue of increased yields, and environmental benefits of reduced surface runoff and nutrient losses.

That’s the theory, however, and it is largely untested. Several pilot studies are under way to determine whether farmers and the environment really will benefit or whether there will be unforeseen consequences of the marriage of increased drainage capacity and constructed wetlands. Given the significance of this study, it needs to be done right. Monitoring needs to be comprehensive and transparent, as there have been concerns expressed about the transparency of the project to date. Given the floods of recent years, there are concerns amongst some about the impacts on Iowa’s hydrology from re-plumbing the landscape. Others have concerns about whether the wetlands really will remove the nitrates as touted. Some worry about the potential broader implementation beyond the pilot projects and the public costs of doing so.

Still other people are confident that combining drainage and wetlands is the key to economic and environmental concerns, but there is no proof either way yet. The many unanswered questions cannot be answered without on-the-ground trials, such as those that IDALS has proposed. With these pilots, enough time, and adequate monitoring, scientists may start to understand the costs and benefits of such an approach. Iowa must not develop any programs linking enhanced drainage and wetlands until there are credible answers to the many questions.

The amount of infrastructure under Iowa’s cropland is enormous and growers will not take lightly the decision to invest in expensive upgrades. IDALS, the Legislature and others must not take lightly the decision to support or oppose these investments without carefully considering the environmental consequences. If these pilot studies achieve the results that many proponents expect, there will be a tremendous opportunity to use private dollars for economic and environmentally beneficial steps that would bolster farmers’ bottom lines and significantly advance toward the goal of reducing nutrients

headed down the Mississippi. To know if those economic and environmental benefits materialize, the pilot projects should be constructed and given enough time to determine what the results, expected or unexpected, are and what impact broader implementation across much of Iowa would have on farmers, fish, fields and flows. In the meantime, existing programs that are already working should receive full funding, and comprehensive, holistic nutrient reduction strategies need to be developed and implemented in the state.

***Will Hoyer** is a research associate for the Iowa Policy Project, joining IPP in August 2010. He spent five years in Madison, Wisconsin, working on local, state and regional water policies for Clean Wisconsin, and later as a grant writer for the City of Dubuque. He received his master's degree in Water Resources Management from the University of Wisconsin-Madison and has undergraduate degrees in Biology and Environmental Studies from Luther College in Decorah, Iowa.*

The full report is available on the Iowa Policy Project website, [www.IowaPolicyProject.org](http://www.IowaPolicyProject.org).

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## **The Iowa Policy Project**

Formed in 2001, the Iowa Policy Project is a nonpartisan, nonprofit organization. Its principal office is at 20 E. Market Street, Iowa City, IA 52245.

The Iowa Policy Project promotes public policy that fosters economic opportunity while safeguarding the health and well-being of Iowa's people and the environment. By providing a foundation of fact-based, objective research and engaging the public in an informed discussion of policy alternatives, IPP advances effective, accountable and fair government.

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