

Review of Eleven U.S. Voluntary State Agricultural Stewardship Programs

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Executive Summary

U.S. inland and coastal waters are invaluable natural resources providing drinking water, food, natural habitat and recreational opportunity. In the last century, U.S. water basins have been under the pressure of intensified population growth and industrial and agricultural development which has resulted in the oversight of environmental stewardship in numerous watersheds across the country. Nonpoint source nitrogen and phosphorus pollution from agricultural lands has been identified as a main contributor to water quality degradation, especially toxic Harmful Algal Blooms (HABs). The Gulf of Mexico, Great Lakes, Chesapeake Bay, and Puget Sound are all major water basins that have suffered from harmful nutrient pollution, HABs and associated environmental, health and economic consequences because of agricultural runoff. Voluntary state agricultural stewardship programs are one strategy aimed at addressing nonpoint source agricultural pollution. These programs provide agricultural operators incentives in exchange for installing best management practices (BMPs) that improve local water quality and meet or surpass state water quality goals. Agricultural stewardship programs rely on scientifically sound practices to achieve demonstrable water quality improvements and work closely with state, federal, and cooperative extensions to implement and monitor best practices. While there are various voluntary state agricultural stewardship programs in the U.S., attempts to compare their structure, participation and efficacy have been limited. This report aims to add to the collective knowledge about voluntary state agricultural stewardship programs by examining the structure and impact of 11 existing programs in the U.S. and synthesizing program materials, interviews with program staff, and peer-reviewed literature on voluntary state agricultural initiatives.

The voluntary state agricultural stewardship programs included in this report varied in program structure, program length and inspections, which parties were eligible for enrollment, available incentives, and cost share opportunities. Operational program costs were derived from a variety of sources such as general fund allocations, RCPP awards, sales tax dollars, and state environment and water quality funds. Financial incentives like program-specific cost share were cited as a significant plus, and programs felt long-term financial support from the state legislature was important in reducing the economic burdens of BMP implementation on farmers and the programs themselves. Program partnerships typically included state and federal departments as well as university cooperative extensions. Partnerships, whether they were with governmental, non-governmental, private or academic partners, were considered valuable by most programs. All programs cite farmer-to-farmer peer networks and communication as a key factor in encouraging participation. In addition to farmer-to-farmer networks, Soil and Water Conservation Districts and private advisors were cited as successful conduits for generating interest in voluntary state agricultural stewardship programs. All programs viewed incorporating farmers and other players in the agricultural community as critical to program success. Future considerations of programs included--but were not limited to--how to

effectively evaluate farmer participation and environmental outcomes of program implementation and how to navigate emergent issues in agriculture like economic decline and climate change.

The literature demonstrates that there is no silver bullet or consistent predictive model of farmer participation in voluntary state agricultural stewardship programs. Though they are important, economic incentives are accompanied by many other factors that influence farmer participation in voluntary state agricultural stewardship programs. Age, education, income, gender socio-cultural norms, worldviews, personal goals, commodity prices, environmental policies and social networks have all been shown to influence farmer participation. The literature also highlights that while BMPs for water quality are at the center of various voluntary state agricultural stewardship programs, the efficacy of these practices has been mixed with variable adoption rates among farmers and little improvement—and even declines—in water quality in some critical watersheds. Though there is robust evidence for the efficacy of individual BMPs in protecting and improving water quality from excess discharges, there is a need to determine the efficacy of many, simultaneously implemented BMPs at the watershed scale.

These findings reinforce the notion that working towards successful balance of agricultural livelihoods and water quality protection is largely “a quest for meaningful and effective institutional integration and actor interaction across various ecological, social and political levels and scales.” These results influence a series of recommendations for state programs and environmental philanthropy. State programs should consider a) improving communication among existing programs, b) acknowledge heterogeneous farmer motivations, c) developing clear and consistent messaging, d) prioritizing water quality monitoring, e) adopting consistent standards for reporting results and f) increasing program flexibility—among other recommendations. The philanthropic sector should consider a) supporting improved communication of agriculture and water quality issues, b) assisting farmer-led or farmer-serving organizations in environmental stewardship efforts, c) supporting water quality monitoring efforts, d) supporting relevant social and ecological research, e) supporting relevant and effective policy and f) increasing the accessibility of relevant resources—among other recommendations.

	California (Central Valley)	Florida	Iowa	Maryland	Michigan	Minnesota	Missouri	New York	Vermont	Virginia	Washington
Name	Irrigated Lands Regulatory Program (ILRP)	Best Management Practices Program	Soil and Water Conservation Program (SWCCP) / Water Quality Initiative (WQI)	Maryland Agricultural Certainty Program	Michigan Agriculture Environmental Assurance Program (MAEAP)	Minnesota Agricultural Water Quality Certification Program (MAWQCP)	Missouri Agricultural Stewardship Assurance Program (ASAP)	Agricultural Environmental Management (AEM)	Vermont Environmental Stewardship Program (VESP)	Resource Management Planning Program (RMP)	Voluntary Stewardship Program (VSP)
Year	2003	2000	1973, 2013	2013	1997	2013	2015	1993	2016 (Pilot Phase)	2014	2011
Funding	Annual Fees to Farmers	Excise Tax on Documentary Stamps	Gaming Taxes, Specialty License Plates	USDA Conservation Innovation Grant	Fertilizer and Pesticide Fees	State Sales Tax	Missouri Department of Agriculture	Real estate transfer taxes	USDA Conservation Innovation Grant	Federal Grants, State General Funds	-
Regulatory Certainty	No	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Structure	Regional Level, Coalition Based	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	Statewide	County Level
Enrollment Period	Indefinite, annual check-ups	Indefinite, annual check-ups	Varied by BMP	10 years, check-ups every 3 years	5 years, check-ups every 3 years	10 years, 1 check-up after certification	Indefinite, 1 check-up after certification	Indefinite, check-ups every 3 years	5 years, annual check-ups	9 years, check-ups every 3 years	Indefinite, check-ups every 2 and 5 years
Financial Assistance	No	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes	No
Technical Assistance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other Incentives	Monitoring Waiver	Monitoring Waiver	N/A	Field Signage, Nutrient Trading	Field Signage, RUP Credits	Field Signage, Market Access	Farm Signage, Market Access	Protection from Unexpected Discharges, Market Access	Field Signage, Free Soil Health Tests	Field Signage, Award Eligibility	Monitoring Waiver
Participation	≈ 90% of acres, % of operations unknown	≈ 42% of acres, % of operations unknown	% of operations unknown	< 1% of operations	4,673 verifications % of operations unknown	2% of operations	< 1% of operations	≈ 25 % of operations	< 1 % of operations	< 1% of operations	27 counties enrolled, % of operations unknown