



Title: A Farmer's Guide to Agriculture and Water Quality Issues

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Organization: North Carolina State University

State: NC **Region:** Southern

Year of Funding: 2000

Theme: Nutrient and Pesticide Management

Situation: The 1998 national water quality inventory indicates the leading causes of impairment to surface waters are nutrients, siltation, metals, and pathogens. Agriculture, including crop production, animal operations, pastures, and rangeland, is listed as a source of pollution for 59% of the impaired river miles reported in the U.S. Many agricultural producers are not fully aware of how their actions impact water quality and what environmental requirements pertain to them. The target audience for this project includes agricultural producers and their information providers.

Objectives: The project objective is to develop materials for agricultural producers and their information providers to help farmers: understand which environmental requirements and incentive programs affect them; assess their potential contribution to pollutant sources and transport to surface and ground waters; assess their potential violations of environmental standards; and help them comply with environmental requirements in a cost-effective way.

Methods: Educational materials have been developed in the form of a web site with printable fact sheets. The web site is titled "A Farmer's Guide to Agriculture and Water Quality Issues." Material is developed for five water quality focus areas: Erosion and Sediment Control; Nutrient Management; Pesticides; Wetlands and Riparian Area Protection; and Pathogens. A segment is also added for low literacy viewers.

Partnerships: A multi-university team from NC State, Cal Poly, UNC at Chapel Hill, Cornell, and NC A&T Universities created the material. An oversight committee was headed by the USEPA Agricultural Compliance Center and USDA-CSREES. Numerous individuals from various agencies participated in a pilot test of the web site.

Research: The material on the website was developed from the research efforts of various institutions and agencies. This is particularly true for the sections on how agricultural producers can meet environmental requirements, including discussions of best management practices for controlling nutrients, erosion, pathogens, pesticides, and protection of wetlands and riparian areas. Information providers, such as Cooperative Extension Agents and NRCS District personnel, will find the site useful for conducting outreach. The site will be linked to EPA's Agricultural Compliance Assistance Center's web site.

Resources: Numerous individuals from various agencies participated in a pilot test of the web site, including EPA Regional Agricultural Sector Contacts; EPA Regional Nonpoint Source Coordinators; EPA Headquarters Nonpoint Source Branch; USDA State Extension Water Quality Coordinators; Regional Interagency Liaison Contacts between USDA-CSREES, Land Grant Universities, EPA and other agencies; National Facilitation Project Coordinators; Farm Bureau, USDA-NRCS; USGS; and USDA Cooperative Extension Agents.

Results: A web-based educational tool for the agricultural community and its information providers was developed. Material can be used for either one-on-one learning, or for workshops and training sessions for larger audiences. Short-term outcome for farmers should include increased awareness and knowledge of agriculture's impact on water quality and ways to reduce that impact. Medium term outcome should include modified behavior of farming practices to reduce impact on water quality. Long-term outcome should be improvements in water quality and economically viable farm operations.



The mission of CSREES is to advance knowledge for agriculture, the Environment, human health and well being, and communities.

