



FY 2008 319 NPS Grants for Nonpoint Source Water Pollution Control Projects

Connecticut Department of Environmental Protection,

79 Elm Street, Hartford, CT 06106-5127

Gina McCarthy, Commissioner

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The Connecticut Department of Environmental Protection has awarded \$1,074,503 to help fund 18 projects designed to reduce NPS pollution in lakes and streams. Nonpoint Source Pollution (NPS) grants will be funded with federal fiscal year 2008 monies provided to Connecticut by the EPA under Section 319 of the Federal Clean Water Act.

Nonpoint Source Pollution:

Nonpoint source (NPS) pollution is diffused in nature, both in terms of its origin and in the manner in which it enters surface and ground waters. It results from a variety of human activities that takes place over a wide geographic area. Pollutants usually find their way into water in sudden surges, often in large quantities, and are associated with rainfall, thunderstorms, or snowmelt. NPS pollution generally results from land runoff, precipitation, atmospheric dry deposition, drainage, or seepage. Hydromodification is also considered a nonpoint source problem. Hydromodification is a physical disturbance to a water resource caused by filling, draining, ditching, damming, or otherwise altering wetlands and stream courses.

In May 2008, the DEP issued a request for proposals. The DEP received 26 proposals requesting over 1.6 million dollars in October. This strong response to the Request for Proposals (RFP) demonstrated local community-based partnerships value clean water and are recognizing and finding solutions to NPS problems. The DEP will be working with grantees to adjust work plans as needed to secure final approval. Grant awards are subject to receipt of federal FY 2008 319 funds. Grants are planned to enable the startup of projects in August 2008. For more information about the DEP's Nonpoint Source Grants go to DEP's NPS Grants webpage: <http://www.ct.gov/dep/nps> or contact Stan Zaremba, CT DEP at (860) 424-3730 or stanley.zaremba@ct.gov.

Summaries of FY08 Projects Approved

Base/Statewide

1. **AFO/CAFO Series (University of Connecticut UConn Plant Science) \$70,000** The primary objective of the project is to provide training to NRCS's Environmental Quality Incentive Program (EQIP) participants about establishing and maintaining Nutrient Management Plans (NMPs). UConn will target watersheds with on-going watershed base planning efforts such as the Niantic, Cognichaug, Broadbrook, and Little River. The NMPs are field-by-field records of recommendations for manure and fertilizer applications, and the nutrient management practices performed by agricultural producers. The secondary objective is to provide training about the use and fate of nutrients including nitrogen and phosphorus, and the concepts underlying the management of nutrients. The training will emphasize methods to minimize the risks to surface water and groundwater resources associated with land application of compost and manure to cropland, hay land and pasture. Training about the proper storage of compost and manure will also be taught. It is expected that an average of five (5) new EQIP contracts will be signed each fiscal year. The additional EQIP contracts are expected to cover 1,000 acres of cropland per year.

<p>2. Integrated Pest Management/Nutrient Management Project (Uconn Plant Science) \$75,000 The University of Connecticut's (UConn) Departments of Plant Science and Cooperative Extension will recruit IPM/ICM project cooperators within a DEP designated priority watershed. UConn will work in the agricultural commodities, which are present in that watershed. This may include vegetables, fruits, greenhouse, nursery and dairy. Education will consist of multiple on-site demonstration projects, individual or group meetings, and/or season-long consultations on proper IPM/Nutrient BMP's. Nutrient testing (preside dress soil nitrate tests and/or cornstalk tests) will be conducted. Surveys will be conducted to assess pre- and post-program inputs and to quantify reductions in pesticide and nutrient loading. Several Watershed-based Plans are currently being developed by USDA Natural Resource Conservation Service and others. When these plans are completed, UConn will be able to work with growers in the designated watershed(s) during the 2009 field season.</p>
<p>3. Project SEARCH (Children's Museum) \$40,000 Project SEARCH is a partnership between the Children's Museum of Connecticut (formerly Science Center of Connecticut) and the CT Department of Environmental Protection. SEARCH staff work with teachers statewide to collect physical, biological, chemical, and land use data from approximately 80 different schools and close to 100 stream sites each year. SEARCH staff will continue to work side-by-side with students and teachers across the state to collect baseline water quality data, including NPS potential surveys. In addition to field assistance, SEARCH staff will distribute NPS and stormwater materials provided by the EPA at workshops and trainings. This funding will also allow for staff to offer training workshops for new teachers entering the program. When new schools join Project SEARCH, staff will guide them in site selection using the 303d list of impaired waterways.</p>
<p>4. Connecticut Conservation Districts NPS Management/ Watershed Protection Planning Projects (CT SWCD) \$250,000 <i>Divided between 5 Conservation Districts to total \$50,000 per District.</i> Connecticut's five Conservation Districts (Districts) will conduct NPS assessments and provide technical reviews and on-site assistance in Connecticut DEP priority waterbodies, and promote practices identified in DEP's 2004 Stormwater Quality Manual. Districts will assist DEP with water quality assessment and development of TMDLs in specific Connecticut 303(d) listed priority waterbodies by completing Track Down Surveys. Surveys, focusing on impairments and proposed enhancements, will be in a standard format agreed upon between the Districts and the DEP. Information will be compiled in a database and summaries will be provided for future reference and for use in planning improvement/implementation projects. Using survey information, Districts will work with DEP to complete basic watershed-based plans following EPA's 9 element model and develop implementation schedules for impaired waterbodies. Districts may choose to conduct stormwater retrofit identification and prioritization projects as an alternative. Districts will investigate, identify, prioritize and report on stormwater discharges requiring retrofits to improve NPS control and prevention in impaired waterbodies in non-MS4 communities.</p>
<p>5. Opportunities/Guidelines for Protecting and Restoring Shorelines along Connecticut Lakes (DEP) \$40,000 Develop public outreach materials targeting residents of lakes and ponds across CT, as well as municipal land use officials. The materials would highlight the ecological importance of maintaining naturally vegetated shorelines (from upland terrestrial through the shoreline and including the emergent and aquatic floating leaf aquatic plant community), and perhaps more importantly, would provide technical guidance on how to restore altered shoreline habitats.</p>
<p>6. Watershed Assistance Small Grants Program Year 6: (Rivers Alliance) \$40,000 This project will fund the seventh year of the CT Watershed Assistance Small Grants Program (WASGP) for local groups working on river-watershed protection in CT, with the aim of reducing NPS pollution. Through this program over thirty-six watershed groups have been active in source water protection from NPS pollution, water monitoring, watershed education, land resource and land use studies and education. Continuing this successful program in 2008 will contribute significantly to improving watershed protection in CT, and reducing NPS pollution of our impaired watercourses.</p>
<p>7. NPS Outreach/Misc. DEP utilizes funding for NPS outreach materials for statewide concerns. (DEP) \$1,000</p>
<p>8. DEP Watershed Base Planning Efforts (DEP) a. WBP/Implementation Steel Brook Watertown, CT \$126,600 b. Mini priority WBP planning/implementation efforts TBD \$48,199</p> <p>a. Steel Brook - This project will complete the detailed design for the selected option; possibly, either a partial breach of the dam spillway and a natural channel design of the side drainage way around the west and north sides of the pond or a full breach of the dam spillway and natural channel design through the sediments above the dam to the upstream end of the pool and stability analysis of the stream to Route 6. Also, the Town of Watertown has recently acquired the dam and pond from Sieman's Company and will acquire any additional land rights and permits to construct the project.</p> <p>b. EPA is requiring that all new 319 implementation projects have a watershed-based plan in-place. (Preferably for impaired waters). The 9 elements of a watershed-based plan include the following:</p> <ul style="list-style-type: none"> (a) Identify causes and sources of impairment (b) Estimate expected load reductions (c) Describe needed NPS management measures (d) Estimate needed technical and financial assistance (e) Public information and education (f) Implementation schedule for NPS management measures (g) Measurable milestones (h) Performance criteria (i) Monitoring Plan

9. Lake Association Capacity Building Small Grants Program Year 2 (CFL) \$20,000 The Connecticut Federation of Lakes (CFL) will continue a small grant program for Connecticut lake associations. The Connecticut Federation of Lakes has worked with many of the principal lake groups in the state. However there are many smaller lakes that have either no or only loosely developed associations. The program provides start up grant funds, of up to \$3,000, for emerging lake associations or lake groups. The specific fundable activities have been determined during the initial develop phase in 2006 and are available at the CFL website.

10. Nitrogen Fertilizer Reductions on Coastal Lawns Through Training and Education Phase 2: (UConn) \$25,000 Year 1 funded with FY07 funding. There have been relatively few changes in fertilization practices of lawns in the past 30 years. The majority of lawn care professionals, municipal workers, and homeowners still rely on decades-old fertilization recommendations and practices where nitrogen is applied on a schedule at a set rate (usually 1 lb N/1000ft² at each application based on holiday dates – Memorial Day, 4th of July, Labor Day, Thanksgiving; equivalent to approximately 175 lbs N/acre/yr) rather than being based on soil nutrient availability as measured by an objective testing method. This greatly increases the chance of over-application of nitrogen that can leach or runoff into receiving waters. The primary objective of this project is to reduce nitrogen application amounts on lawns by training and educating lawn care professionals and municipal workers on: (i) the use of a nitrate soil test to guide N fertilization of lawns, (ii) changes to fall fertilization practices, (iii) use of slow-release fertilizer formulations, and (iv) use of alternative lower-input turf species. Information will be available also to homeowners. The overall objective to reduce the nitrogen load currently applied to lawns will be applicable to the statewide efforts to reduce nitrogen in meeting TMDL goals. A secondary objective is to establish demonstration turf areas showing how quality can be maintained and threats to water quality reduced with alternative, lower input turf species and changes to fertilization practices. It is expected that a 30 to 50% reduction in fertilizer amounts applied to lawns can be achieved with successful implementation of this project.

Connecticut River Basin

11. Water-quality monitoring in the Coginchaug River in Support of a Watershed Based Plan (USGS) \$18,000 USGS would collect water-quality samples at their gaging station on the Coginchaug River in Rockfall Connecticut. Samples would be collected for a two-year period for the following constituents. Nutrients, e. coli bacteria, field measurements (15 times per year), major ions, and trace metals would be collected 8 times per year. This data collection would be used in a report for the 3rd year of the study. This data collection would provide support for the watershed-based plan recently developed by the NRCS. It would also provide information on nutrient loads, and trace metal concentrations in the watershed, to help identify other impairments. **This request is for the first year of a 3-year study.**

Housatonic River Basin

12. North Canaan Nutrient Management - Dairy Manure Composting Phase 2: (Eastern Connecticut RC&D) Proposed \$260,000 (\$144,796 FY-07 and \$115,204 FY-08). Funded 1st year at \$144,796. Phase 1 of this effort is the report "North Canaan Nutrient Management Feasibility Study," completed by Wright-Pierce 2006. The report identified alternative composting strategies and their costs to the farms to compost up to 148 Tons/day. Phase 2 will implement a composting facility for 36 tons per day of dairy manure and bulking agent. The composting facility will include a building to contain compost windrows with turning equipment. Phase 2A (2007) will construct the composting building. Phase 2B (2008) will install a building to store the finished compost, and a tipping shed to store any bulking agent or other compostable materials delivered to the site, operate and maintain the facility for 1 year and prepare an economic summary of the costs and returns.

13. Watershed and In-lake Water Quality Monitoring of Hatch Pond, Kent (Town of Kent) \$15,000 Watershed and Water Quality Monitoring of Hatch pond in South Kent, shall consist of sampling tributaries to and outlet from Hatch Pond for phosphorous, ammonia nitrogen, nitrate nitrogen and total Kjeldahl nitrogen. Also monitoring and analyses for hydrologic and nutrient loading and Sampling for existing seasonal trends in the biology, chemistry, and the physical conditions. This shall be done in a manner to be consistent with the monitoring and analyses work previously done in past few years.

South Central Coastal Basin

No projects were awarded

South Western Coastal Basin

14. Byram Watershed Coalition (Southwest Conservation District) \$30,000 This project will develop a watershed based plan. The funding will be used to build the capacity, and create a plan. Goals will include specific best management practices designed to reduce bacteria loading into the Byram River. The purpose of the Byram Watershed Coalition forum is not only to create the watershed plan, but also to facilitate ongoing collaboration and implementation. The central goal of the forum is to address and mitigate water quality impairments in a consensus-driven interstate watershed based planning and implementation process.

15. Greater Bridgeport Area Watershed Based Plan (City of Bridgeport) \$89,500 The City of Bridgeport will lead an effort to partner with the towns of Monroe and Trumbull to develop a region-wide Watershed Based Plan (WBP) focusing on the three towns. Town leadership have met and agreed to such a need for a WBP, especially in light of health issues associated geese droppings in local water bodies and other health hazards elicited by the recent flood in April 2007. A three-town leadership committee will be formed to provide project stewardship. The committee will hire an environmental consultant to create the plan by working with community stakeholders and each city's staff, as well as perform surveying, research, testing and analysis.

16. Preparation of Watershed Based Plan to Address TMDL Classification (Town of Westport) \$20,000 The Town of Westport Sasco Brook Pollution Abatement Committee will initiate a Sasco Brook Watershed Based Planning effort to pull together the 15 years of water quality sampling data that exists for the Brook, highlight the progress and efforts made by the Town in addressing the problems and outline our future goals and objectives. The plan would include the nine (9) required elements by the EPA.

17. A study of E.coli Bacteria Values in the Pequonnock River (Earthplace, The Nature Discovery Center) (year 1 \$15K) Earthplace propose a two-year study of E.coli bacteria, dissolved oxygen (D.O.), conductivity and water temperature at 10 monitoring sites along the length of the Pequonnock River. Test will be taken every two weeks during both annual periods. The river has been divided into 5 segments from River-01 in Monroe to River005 in Bridgeport. Two testing sites will be located in each segment.

Thames/Pawcatuck/South Eastern Coastal Basins

18. Mashamoquet Brook Water Quality Improvement (ECCD) \$36,000 The Mashamoquet Brook is an impaired water about which little is known. The brook includes a diversion to a swimming pond in Mashamoquet State Park, which experiences closures due to E. coli, and there are likely other NPS pollutants impacting the brook. The Eastern Connecticut Conservation District (ECCD) will thoroughly investigate the brook and its issues, and draft a Watershed Based Plan. Included in the plan will be prioritized implementation actions, and one of the goals of this project will be to initiate the highest priority actions.