Chesapeake Bay Program
Science. Restoration. Partnership.

Backgrounder

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SMALL WATERSHED GRANT (SWG) and INNOVATIVE NUTRIENT AND SEDIMENT REDUCTION (INSR) GRANTS

2014 AWARDEES and PROJECTS

Forty-five projects in the Chesapeake Bay watershed received $9.8 million in grants from the Chesapeake Bay Stewardship Fund, which is administered by the National Fish and Wildlife Foundation (NFWF).

The Small Watershed Grants (SWG) Program awarded $3.9 million to 27 nonprofit organizations and local governments working to improve the condition of their local watersheds.

The Innovative Nutrient and Sediment Reduction (INSR) Grants Program awarded $5.8 million to 18 innovative and cost-effective projects that dramatically reduce or eliminate the flow of nitrogen, phosphorus, and sediment pollution into local waterways and the Chesapeake Bay. Descriptions of each project, by grant and state, are below:

MULTI-STATE PROJECTS

INSR GRANTS

- *Alliance for the Chesapeake Bay, Inc.* ($300,000) will show how barriers to landowner adoption of riparian forest buffers can be overcome through whole farm conservation planning, innovative funding strategies, and training.

SWG GRANTS

- *Alliance for the Chesapeake Bay, Inc.* ($200,000) will install stormwater best management practices (BMPs) on private property in the Yellow Breeches Creek (Pennsylvania). The project will encourage accelerated and cost-effective adoption of rain gardens and conservation landscaping practices to improve water quality.

- *Susquehanna River Basin Commission* ($194,075) will link continuous in-stream monitoring and repeat aquatic community surveys to land use factors. The project findings will be refined into a catalogue of best management practices (BMPs) and an outreach program designed to arm gas operators, rural municipalities, and state agencies on how to minimize erosion and sediment input due to land disturbances and on unpaved roads.

- *Cacapon Institute, Inc.* ($51,559) will engage 6,000 students in 50 small watershed stewardship projects over 18 months. The project, Potomac Headwaters Leaders of Watershed (PHLOW) will offer curriculum, landscape evaluation and multiple best management practices (BMP) implementations for reaching the watershed implementation plan (WIP) Phase II goals.

- *American Rivers, Inc*. ($179,997) will advance recovery strategies for alewife, blueback herring, American and hickory shad, and American eel by focusing on improving access to native spawning and rearing habitat on priority rivers throughout the Chesapeake Bay. The project will establish a model for fish barrier owner engagement, as well as grow a pool of high priority fish barrier removal projects for future implementation.

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DELAWARE PROJECTS

INSR GRANTS

- *University of Delaware* ($316,349) will demonstrate the utility of biochar-amended soil for reducing nitrogen leaching and increasing water retention and infiltration rates. Biochar will be installed in two well-monitored field installations to quantify the effects in roadway filter strips and ditches. Data will then be shared with the state Department of Transportation (DOT) and the City of Charlottesville, Virginia.

SWG GRANTS

- *Sussex Conservation District* ($128,024) will increase awareness of new requirements and regulations, identify potential green infrastructure projects and explore and facilitate implementation of innovative conservation concepts and incentives for businesses. Project outcomes include increased capacity of the municipalities to identify and implement green infrastructure projects.

DISTRICT OF COLUMBIA PROJECTS

INSR GRANTS

- *District Department of the Environment* ($500,000) will fully retrofit an 11 acre site in an ultra-urban watershed with green infrastructure in an effort to restore natural hydrology, and prevent flooding and erosion. The project will retrofit seven drainage areas from a large parking lot with low impact development techniques to slow down, cool off, clean up, and infiltrate polluted stormwater.

SWG GRANTS

- *Anacostia Watershed Society, Inc.* ($200,000) will restore the tidal emergent wetlands of the Anacostia River in the District of Columbia by increasing wetland acreage through native plant revegetation, invasive plant control and other restoration actions. This practice will increase local residents' awareness of the challenges and benefits of the river's revitalization and encourage public participation in its restoration.

- *Casey Trees Endowment Fund* ($114,600) will restore two large tracts of open space in Washington, D.C. – Rock Creek Park and Fort Dupont Park that are impaired with invasive plant species, heavy deer browse, stream bank erosion, and other impacts. These projects will engage over 800 volunteers to plant 750 trees to restore five acres of riparian forested buffers to improve water quality and wildlife habitat.

MARYLAND PROJECTS

INSR GRANTS

- *Prince George's County* ($375,000) will retrofit a 7.8 acre office complex with bioretention facilities using innovative design configurations to enhance the phosphorus and nitrogen removal efficiencies. The project will blend these two technologies with a new innovative high-flow media to form a new design for bioretention facilities which will help increase the volume of stormwater that can be treated.

- *Center for Watershed Protection, Inc.* ($344,384) will develop a body of evidence and recommendations for the application of alternative media to boost the performance of existing best management practice (BMP). The project will provide a comprehensive approach to evaluate and implement emerging technology to enhance BMP performance and make watershed implementation plan (WIP) strategies more cost-effective.

- *Midshore Riverkeeper Conservancy* ($300,000) will design, implement, and test the efficacy of innovative nutrient and sediment reduction practices on key agricultural properties in the Choptank and Wye River watersheds. The goal is to build on the interest that has developed in the agricultural community in innovative practices, and support agricultural landowners with technical assistance and funding not available through federal or state cost share programs.

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- *Oyster Recovery Partnership* ($300,000) will repopulate at least 20 acres of oyster reefs with 100 million oysters in the Little Choptank River, restoring a keystone species that will enhance vital Bay habitat and improve water quality within the Choptank River Basin.

- *Low Impact Development Center, Inc.* ($249,873) will work with 8 to 10 communities in Prince George's County in the Anacostia and urban watersheds as a liaison with Prince George's Department of Environmental Resources and the development community to implement superior water quality solutions that enhance the sustainability and economic viability of the community. *Phase II of project.

SWG GRANTS

- *Civic Works, Inc.* ($200,000) will work with community organizations, nonprofits, and small businesses in Baltimore City to design and install rain gardens that feature micro bioretention areas. This will contribute to reductions in Baltimore City's urban stormwater runoff and allow Civic Works to develop a training and certification model for urban stormwater management.

- *Chesapeake Conservation Landscaping Council* ($200,000) will develop a comprehensive certification program for professional landscape contractors. The certification will provide a standardized evaluation of skills and will be used as a reliable marketing tool for qualified contractors to increase nutrient and sediment removal.

- *National Wildlife Federation Mid-Atlantic Regional Center* ($200,000) will deploy the enhanced Community Wildlife Habitat program in Baltimore to specifically address innovative stormwater management, evaluate attitudes and behavior change of program participants. This will help to solidify local environmental stewardship and sustainability as a topic of regular consideration in the urban setting.

- *St. Mary's River Watershed Association, Inc.* ($34,840) will develop an outreach program that will capture the contagious aspects of "keeping up" environmentally in small neighborhoods of 10-20 homes by engaging the neighborhood as a whole. Incentives to install aesthetic shoreline buffers and rain gardens will stimulate a comprehensive program to engage in homestead best management practices.

- *Chesapeake Wildlife Heritage, Inc.* ($69,320) will work with landowners in the Chester River watershed to restore non-tidal wetlands. The project will take the wetland from concept to design stage to restoration and into early management. Upon completion of this project, 27 acres of non-tidal wetlands will be restored.

PENNSYLVANIA PROJECTS

INSR GRANTS

- *Lancaster Farmland Trust* ($383,744) will utilize Best Management Practice (BMP) data collected on 430 farms in Subbasin 1 to identify six strategic farms to implement a suite of long-term structural and field- BMPs. The project will advance farmers beyond baseline compliance and provide a "road map" for future implementation.

- *Stroud Water Research Center* ($449,864) will achieve whole-farm conservation on 16+ farms, implementing more than 128 best management practices (BMPs). The project will engage many progressive, well-managed farms to implement priority BMPs including manure injection, precision agriculture, silage leachate controls and implement Conservation Reserve Enhancement Program (CREP) forested buffers.

- *Pheasants Forever, Inc.* ($418,830) will support six farm bill biologists to provide technical assistance to landowners in all or part of 20 counties in the Chesapeake Bay Watershed of Pennsylvania. The technical assistance and accelerated outreach provided to landowners will result in increased participation in conservation practices that produce water, soil and wildlife benefits.

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- The *Pennsylvania State University* ($378,105) will accelerate riparian buffer and green infrastructure restoration through an innovative public/private partnership that will engage private consultants and residents to sustain projects. *Phase II of project

- *Alliance for the Chesapeake Bay, Inc.* ($285,802) will accelerate the implementation of green infrastructure and stormwater Best Management Practices in Blair County. The project will result in a list of Green Infrastructure Priority Sites for the county and will identify at least one critical project site for each of the 13 MS4 communities in which to incorporate green infrastructure and stormwater BMPs. *Phase II of project.

SWG GRANTS

- *Chesapeake Bay Foundation, Inc.* ($200,000) will demonstrate strategic and cost-effective solutions for Plain Sect and underserved agricultural producers in the region to accelerate the reduction of nutrient and sediment pollution from agriculture operations in the Juniata River Basin in Pennsylvania.

- *Chiques Creek Watershed Alliance* ($200,000) will eliminate direct bank erosion, base flow denitrification and storm flow filtration within the floodplain of Rife Run. The project will improve 1,042 linear feet of Rife Run resulting in the reduction of 757 lbs of nitrogen, 293 lbs of phosphorus, and 118 tons of sediment while adding nearly 81,000 square feet of wetlands.

- *Trout Unlimited, Inc.* ($152,890) will install an aquatic organism passage friendly structure that will not only increase coldwater habitat, but also reduce nonpoint source sediment inputs to the watershed of Kettle Creek in north central Pennsylvania.

NEW YORK PROJECTS

INSR GRANTS

- *Tioga County Soil and Water Conservation District* ($300,000) will develop and demonstrate a flexible buffer program with innovative tools and programs to fill niches not met by traditional programs. The project will install riparian buffers, livestock exclusion, grazing and other practices through conventional programs and standards using the Upper Susquehanna Coalition (USC) Grazing Initiative integrated approach.

SWG GRANTS

- *Tioga County Soil and Water Conservation District* ($80,505) will develop 3 designs for large-scale natural infrastructure projects that will have significant flood water storage, nutrient and sediment reductions and increased habit acreage and quality. When restored, the site will provide excellent habitat for Eastern Brook Trout and reduce sediment ant nutrient loading.

VIRGINIA PROJECTS

INSR GRANTS

- *Virginia Polytechnic Institute and State University* ($210,652) will enhance adoption of manure injection by developing a novel cost structure and provide data to overcome misconceptions about manure injection. In addition to this, VA Tech will host several demonstrations and field days at large events to broaden knowledge of this technology.

- *Eastern Mennonite University* ($200,000) will address water quality issues in the Bergton community, to assess local streams and prioritize restoration practices. The main goal of the project is to identify barriers to adoption of these BMPs as well as produce information for rural communities that will aid in identifying, engaging and supporting early adopters of riparian protection practices.

- *Virginia Department of Transportation* ($200,000) will restore an area within its right-of-way system using various restoration practices, which include stabilization of the stream channel, land conversion within the riparian area, and buffering sheet flow along the stream's edge. After the restoration project is completed, VDOT will develop a "lessons learned" that evaluates the project from start to finish.

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SWG GRANTS

- *Lynnhaven River 2007* ($200,000) will support forward-thinking advances in oyster reef restoration in the Lynnhaven River, Virginia. The project will construct the first alternative-substrate oyster reef in the river and create a replicable method to stimulate future construction of alternative-substrate sanctuary oyster reefs in the Chesapeake Bay.

- *Urbanna Oyster Festival Foundation* ($56,455) will coordinate the "Restore Urbanna Creek" project for local students and the 50,000-75,000 attendees of the Oyster Festival. A total of 50-100 aquaculture oyster cages will be added to the creek following aquaculture workshops and more than 1,800 pounds of Nitrogen will be sequestered in the system from oysters on sanctuary reefs.

- *The Piedmont Environmental Council, Inc.* ($200,000) will collaborate with home owner associations (HOAs) to plan and implement stormwater improvement and green infrastructure demonstration projects to set the stage for more widespread adoption through a county-wide symposium. In addition, PEC will assist in planning and implementing three best management practices and an urban nutrient management plan for each HOA.

- *Mount Vernon Country Club* ($60,000) will enhance the floodplain of North Fork Dogue Creek. The primary components of the project include the restoration of approximately 631 linear feet of stream channel as well as dredging and expansion of two existing on-site ponds to enhance storm water drainage and improve water quality. *Project funded entirely by United States Golf Association (USGA)*

- *James Madison University* ($200,000) will restore 1,080 feet of a headwaters tributary to Blacks Run in Harrisonburg, Virginia. The innovative design for the restoration includes the creation of interconnected wetland cells in a large floodplain area that are to be reconnected to the tributary, enhance water quality in the urban watershed.

- *Town of Ashland* ($200,000) will replace impervious areas with a cost effective water quality retrofit of the existing lot using permeable pavers. The best management practice (BMP) will treat approximately 9,000 square feet. Along with this, the town will use stream restoration natural channel design techniques to restore approximately 210 linear feet of channel adjacent to the Ashland Police Department.

- *Middle Peninsula Planning District Commission* ($200,000) will design and implement a shoreline resiliency program to offer revolving loans/grants to homeowners to install living shorelines. A demonstration project will be installed along a mile of accessible public waterfront property to promote informed decision making.

- *College of William and Mary, Virginia Institute of Marine Science* ($199,000) will provide the means to create/restore estuarine intertidal and riparian habitat, reduce sediment and nutrient contributions, and provide sustainable coastal hazards protection to a vulnerable historic resource. The project will create about 15,000 square feet of marsh and reduce sediment input by 3,070 lbs, phosphorus by 0.7 lbs and nitrogen by 0.9 lbs.

- *Trout Unlimited, Inc.* ($140,608) will expand the size of existing brook trout habitat patches in the Upper James River watershed of Virginia. TU's primary focus is to install conservation practices that will moderate summer water temperatures, reduce excessive stream sedimentation, and manage agricultural pollution that impairs water quality.

- *City of Norfolk* ($80,000) will expand residential and community water quality improvement programs in the City of Norfolk. The project will install stormwater best management practices (BMP) or habitat restoration projects on residential properties or in the adjoining public right-of-way through the City of Norfolk's recently launched Bay Star Homes program.

WEST VIRGINIA PROJECTS

INSR GRANTS

- *Trout Unlimited, Inc.* ($300,000) will work within an innovative partnership to fulfill and augment outreach, staffing, implementation, and monitoring needs to reduce nutrient and sediment loadings to the Chesapeake Bay tributaries. This project aims to attract and recruit landowner participation in USDA programs that provide construction and implementation dollars to reduce sediment and nutrient runoff.

SWG GRANTS

- *The Potomac Conservancy, Inc.* ($50,000) will engage citizens within the Potomac watershed in protecting the 1,715 acre White Horse Mountain in West Virginia (WV). The project will help defray the costs of conducting due diligence on the property and produce an inspirational video about the Mountain, its conservation values, and community benefits.