

FUNDING PHASE II STORMWATER

*Funding sources
for the development
and implementation of
stormwater control requirements.*

Compiled by the New York Public Interest Research Group (NYPIRG)

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Funding sources for developing and implementing Phase II Stormwater Regulations.

As a signatory to the 1997 Watershed Memorandum of Agreement (MOA), the New York Public Interest Research Group (NYPIRG) has had a long-standing commitment to drinking water protection and environmental conservation. The Agreement was intended to protect and improve the quality of drinking water for more than 9 million New Yorkers—including 85% of Westchester County residents.

One of the greatest challenges to the New York City Watershed is the increased pace of development and the subsequent increased polluted stormwater runoff. Stormwater is the greatest threat to water quality in the New York City Watershed and throughout the United States; in fact it is largely the reason that 40% of U.S. waters do not support such uses as fishing and swimming. Locally, it is the prime reason why most of our reservoirs are phosphorous impaired.

Some of the contaminants found commonly in stormwater discharges include heavy metals, such as copper, zinc, and lead as well as oxygen-robbing nutrients, such as phosphorus and nitrogen, which can choke the life out of streams, rivers, ponds, and lakes.

When stormwater scours pollutants from pavement, these pollutants generally are afforded a direct route into our streams, rivers, and reservoirs, posing a serious public health threat to millions of New Yorkers.

Phase II Stormwater Regulations provide the opportunity to address this problem. Those communities permitted under Phase II are required to develop and implement a comprehensive stormwater management program that includes six minimum measures: public education and outreach, public participation/involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention/good housekeeping.

Adequate finance is essential to achieving these water quality goals. To address funding issues, NYPIRG compiled an informational guide, “Funding Phase II Stormwater,” to provide municipalities a listing of funding sources for developing and implementing a successful Phase II Stormwater program. The guide includes information on:

Grants and Loans: 319 Nonpoint Source Implementation Grants, Clean Water State Revolving Fund (CWSRF), Community Block Development Grant, Environmental Protection Fund (EPF), Flood Mitigation Assistance (FMA), General Challenge and Five Star Restoration Grants, Hudson River Estuary Program, National Tree Trust, North American Wetlands Conservation Act Grants, The Northeast Center for Urban and Community Forestry, Transportation Equity Act for the 21st Century (TEA 21), Urban and Community Forestry Challenge, Water Resources Research Grants and Section 104 (b) (3) Grants.

Fees: Stormwater Utility Fees, User Fees, Impact Fees, Inspection Fees and Effluent Discharge Fees.

Bonds: A requirement that developers establish a dedicated fund, such as a surety bond or irrevocable letter of credit.

Innovative Private Funding: License Plates, Lottery Revenues and Tax Checkoffs.

The guide also presents Case Studies that showcase how other areas around the country fund their stormwater programs and includes an extensive list of References and Resources.

To obtain a copy of Funding Phase II Stormwater or for more information, visit NYPIRG's website at www.nypirg.org or email Cathleen Breen, NYPIRG Watershed Project Coordinator at cbreen@nypirg.org.

Funding sources for the development and implementation of stormwater control requirements.

GRANTS

319 NONPOINT SOURCE IMPLEMENTATION (NPS) GRANTS

The Environmental Protection Agency (EPA) awards CWA Section 319(h) grants to state nonpoint agencies according to a national allocation formula to promote implementation of watershed-based plans that result in improved water quality. Projects include installation of best management practices (BMPs) for animal waste, design and implementation of BMP systems for stream, lake and estuary watersheds, and basin-wide landowner and homeowner education programs. 319 grants are not to be used to pay for projects that are part of a requirement, as in a permit; however, there has been a one-year waiver for FY2003. For more information, contact the New York State Nonpoint Source Coordinator Gerrard Chartier at (518) 402-8244 or Romell Nandi of the Environmental Protection Agency-Office of Water at (202) 566-1203.

CLEAN WATER STATE REVOLVING FUND (CWSRF)

Administered by Environmental Facilities Corporation (EFC) and the New York State Department of Environmental Conservation (DEC). The CWSRF provides low interest rate loans to municipalities to construct water quality protection projects. A variety of publicly-owned water quality improvement projects are eligible for financing. Eligible projects include point source projects such as wastewater treatment facilities and nonpoint source projects such as landfill closures and stormwater management projects, as well as certain habitat restoration and protection projects in national estuary program areas. The Environmental Protection Agency awards grants to States to make low-interest loans for high-priority water quality activities. Repayment period can be as long as 20 years and serve to replenish the fund. For more information, contact David Morseman, Program Representative II, Environmental Facilities Corporation, Division of Program Management at (518) 402-7431, call the toll-free hotline at 1-800-882-9721 or visit their website at www.nysefc.org.

COMMUNITY DEVELOPMENT BLOCK GRANT

Sponsored by the Department of Housing and Urban Development (HUD) and administered by the Governor's Office for Small Cities, this program is intended to develop viable communities by providing decent housing and a suitable living environment for persons of low and moderate income. Projects include public facilities improvements such as new or improved water and sewer facilities and housing and public infrastructure projects, which will solve serious problems affecting public health, welfare and safety, including stormwater. Only non-entitlement communities (NYC and Westchester County are not eligible), units of local government with a population of less than 50,000, and non-urban counties are eligible. Grants have been awarded up to \$400,000 for cities, towns and villages; \$600,000 for counties and joint applications. For more information or to sit down with a program Officer to discuss a proposal call Stacey Pilgrim at (518) 474-2057 or visit their website at www.nysmallcities.com.

ENVIRONMENTAL PROTECTION FUND (EPF)

The Environmental Protection Fund, enacted in 1993, created the first permanent dedicated environmental funding mechanism in New York "so that it would provide a reliable source of income in good, as well as in bad, times." The fund is sustained by real estate transfer taxes, state property sales and leases, conservation license plates and account interest and includes three programs: the open space program, the parks program and the recycling and solid waste program. Each year a total of twenty projects are funded and monies can only be spent subject to appropriations made by the Legislature and Governor. Projects funded include the Hudson River Estuary Management, Nonpoint Source Water Pollution Control, Soil and Water Districts, Biodiversity Stewardship and Research and Local Waterfront Revitalization Grants. For more information, contact Susan Moore at the Department of Environmental Conservation (DEC) at (518) 402-9401 or visit their website at www.dec.state.ny.us.

FLOOD MITIGATION ASSISTANCE (FMA)

This program helps states and communities identify and implement measures to reduce or eliminate the long-term risk of flood damage to homes and other structures insurable under the National Flood Insurance program. Planning is the foundation of FMA. FEMA encourages communities to identify ways to reduce their risk of flood damage by preparing Flood Mitigation Plans. FEMA distributes FMA funds to States, which in turn provide funds to communities. The State serves as the grantee and program administrator for the FMA. FEMA may contribute up to 75 percent of the total eligible costs. At least 25 percent of the total eligible costs must be provided by a nonfederal source. Of this 25 percent, no more than half can be provided as in-kind contributions from third parties. There are limits on the frequency of grants and the amount of funding that can be allocated to a State or community in any 5-year period. For more information, contact the FEMA Region II office at (212) 680-3600 or visit their website at www.fema.gov/fima.

GENERAL CHALLENGE AND FIVE STAR RESTORATION GRANTS

The National Fish and Wildlife Foundation and its partners the National Association of Counties, National Oceanic and Atmospheric Administration's (NOAA) Community-based Restoration Program and the Wildlife Habitat Council funds projects to conserve and restore fish, wildlife, and native plants. Preference is given to projects that include on-the-ground restoration such as stormwater rerouting and implementation of Best Management Practices (BMP). For more information, contact Laura Carrier at the National Fish and Wildlife Foundation at (202) 857-0166 or visit their website at www.nfwf.org.

HUDSON RIVER ESTUARY PROGRAM

The Hudson River Estuary Program is a unique regional partnership designed to protect, conserve, restore, and enhance the estuary. The Hudson's productivity and diversity of natural resources sustain a wide array of present and future human benefits. The Department of Environmental Conservation serves as program manager in a collaboration that includes New York State's Office of Parks, Recreation and Historic Preservation, Department of State, Office of General Services, and Department of Transportation, the Metro-North Railroad, the Hudson River Greenway, the Hudson River Foundation, Cornell University, Soil and Water Conservation Districts, and a citizen advisory committee. Local governments along the estuary also participate. Projects funded include waterfront revitalization, habitat restoration, public access and nonpoint source pollution control. For more information, contact The Hudson River Estuary Program, Department of Environmental Conservation, Region 3 at (845) 256-3016 or visit their website at www.dec.state.ny.us/website/hudson/hrep.html

NATIONAL TREE TRUST

Since 1992, the National Tree Trust has planted more than 10 million trees. The Trust's mission is to promote healthy communities by providing resources to nonprofit tree and conservation groups to educate and empower people to grow and care for urban and community forests. For more information, visit their website at www.national-treetrust.org.

NORTH AMERICAN WETLANDS CONSERVATION ACT GRANTS

The U.S. Fish and Wildlife Service's (FWS) Division of Bird Habitat Conservation administers this matching grants program to carry out wetlands and associated uplands conservation projects. Activities include habitat protection, restoration and enhancement.

The North American Wetlands Conservation Act (Act) of 1989 provides matching grants to private or public organizations or to individuals who have developed partnerships to carry out wetlands conservation projects in the United States, Canada, and Mexico. For more information, contact David Buie at (301) 497-5870, or visit their website at <http://northamerican.fws.gov/NAWCA/grants.htm>

THE NORTHEAST CENTER FOR URBAN AND COMMUNITY FORESTRY

The Northeast Center for Urban and Community Forestry is a cooperative partnership among the USDA Forest Service, Northeastern Area State and Private Forestry, the University of Massachusetts/Amherst, and the seven states of New

England and New York. The Center responds to Urban and Community Forestry needs, facilitates and supports new and existing research, and coordinates the exchange of information among the states in the region in order to contribute to healthy and sustainable communities.

Working with professionals, community groups, state, federal, and local governments, and other organizations, the Center is providing a regional voice for urban forestry initiatives in the Northeast. For more information, contact David V. Bloniarz, Project Coordinator, USDA Forest Service Northeast Center for Urban & Community Forestry, Dept. of Natural Resources Conservation, University of Massachusetts at (413) 545-3755 or Mary Kramarchyk, Volunteer Coordinator, Urban and Community Forestry Partnership, Department of Environmental Conservation at 518-402-9425 or visit their website at www.umass.edu/urbantree.

TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA 21)

This Act funds numerous programs (Surface Transportation Program or STP, National Highway System, etc.) intended to improve the nation's transportation infrastructure, enhance economic growth and protect the environment. States may spend up to 20% of their STP dollars for environmental restoration and pollution abatement projects, including the construction of stormwater treatment systems. States may set aside 10% of STP funds for transportation enhancement projects, which can include acquisition of conservation and scenic easements, wetland mitigation and pollution abatement, and to protect source water areas during construction of transportation corridors. Funds for transportation enhancement projects are available through local and state Department of Transportation. Matching funds are required. For more information on TEA-21, visit www.fhwa.dot.gov/tea21/ or www.dot.state.ny.us.

URBAN AND COMMUNITY FORESTRY CHALLENGE

The U.S. Forest Service's Urban and Community Forestry Challenge Cost-Share Grant and Watershed Stewardship Challenge Program seeks to establish sustainable urban and community forests by encouraging communities to manage and protect their natural resources. The program works to achieve a number of goals, including effectively communicating information about social, economic and ecological value of urban and community forests; involving diverse resource professionals in urban and community forests, and supporting a holistic view of urban and community forests. For more information on the Watershed and Clean Water Grants Program, please contact Al Todd, NA Watershed Staff Specialist at (410) 267-5705; for the Highlands project, contact Marcus Phelps at (413) 577-0650; for the Northeast Center for Urban and Community Forestry, contact Dave Bloniarz at (413) 545-3755 or visit their website at www.na.fs.fed.us.

WATER RESOURCES RESEARCH GRANTS PROGRAM

New York State Water Resources Institute and New York State Department of Environmental Conservation offer funding to New York higher education faculty and staff under the Federal Water Resources Research Act. The primary objective is to foster the involvement of New York's higher education community in the State's nonpoint Source Management program. Applicants must provide \$1.25 of nonfederal matching resources for each \$1.00 of grant requested and priority will be given to stormwater work for the next cycle. For more information New York State Water Resources Institute, Cornell University at (607) 255-5941 or visit their website at <http://wri.eas.cornell.edu>.

SECTION 104(b)(3) GRANT

Assist in developing, implementing, and demonstrating innovative approaches relating to the causes, effects, extent, prevention, reduction and elimination of water pollution. This includes watershed approaches for combined sewer overflow, sanitary sewer overflows, and stormwater discharge problems, pretreatment and sludge (biosolids) program activities, decentralized systems, and alternative ways to measure the effectiveness of point source programs. This authority funds projects, not programs and includes Water Quality Cooperative

Agreements, Watershed Assistance Grants and Watershed Initiative Grants. Eligible activities should be of a relatively short time frame (1 to 2 years) with tangible results. Typical projects include development of model urban wet weather watershed protection strategies; development of State CSO or stormwater control programs for targeted watershed; development of acceptable programs to implement the biosolids regulations; and demonstration of pretreatment measures of program effectiveness. For more information, contact Barry Benroth at the Environmental Protection Agency at (202) 564-0672 or visit their website at www.epa.gov/owm/FY2003WQCA.

FEES

Fees are charges for services rendered and are one way for governments to recover the costs of providing certain services to the public. Although laws vary widely, many states require that fees be set at rates that cover only the actual costs of the services provided, including administrative services.

Stormwater utility fees are imposed on property owners to pay for stormwater management. It is a “stand-alone” service unit that generates revenues through fees for service and is responsible for funding the operation, construction and maintenance of stormwater management devices, for stormwater system planning, and lake management. A stormwater utility generates its revenue through user fees. The fee is based on the amount of stormwater a particular parcel passes to the stormwater system. The more runoff a parcel contributes, the greater the fee. The charge can be based on the amount of runoff generated from the property, the amount of impervious area on the property, or the assessed value of the property. Methodologies should be designed to meet the specific needs of each community and provide equitable, adequate, and stable funding. The key is to tailor the funding to a clear program strategy

User fees are tied directly to the use of a resource or facility (sports fishing and hunting license fees, park entrance fees, etc.). User fees are particularly useful at the local level where user groups are easily identified.

Impact fees transfer the costs of infrastructure services (roads, sewers, stormwater treatment, etc.) needed for private development directly to developers or property owners. Unlike user fees, which recover costs over the life of a project, impact fees are usually collected in one lump sum at the beginning of a project.

Inspection fees are charged to cover the costs of making sure that development plans are properly implemented. These fees may defray the program costs of erosion and sediment control, septic system siting and installation inspections, and stormwater treatment facility operation and maintenance.

Effluent discharge fees are levied on an industrial facility and based on the volume of pollutants discharged into water. Under an effluent discharge fee system, a discharger is required to pay a certain amount for every unit of pollution discharged into surface waters.

BONDS

The municipality also can require the developer(s) to establish a dedicated fund, such as a surety bond or irrevocable letter of credit. In the event the developer fails to properly install and maintain required stormwater management and erosion control practices, the municipality can draw upon the fund to do the necessary work itself or to have it done by another firm. In such case, the municipality should require an easement for the purpose of entering onto the property to install, maintain or repair stormwater and erosion control practices. For more information visit DEC’s website at www.dec.state.ny.us/website/dow.

INNOVATIVE FUNDING

Successful Innovative funding includes license plate programs, lotteries and tax check-offs to help finance natural resource management programs.

License Plates

The State of Maryland has implemented a license plate program to fund its Chesapeake Bay Trust. More than 400,000 "Treasure the Chesapeake" license plates have been sold, raising more than \$4million. In the Baltimore area, car dealers offered Bay license plates at no cost to their new car and truck customers by paying the \$10 fee during a promotion, raising \$20,000 for the Trust.

Lottery Revenues

Kansas uses a portion of its lottery receipts to help finance its water resource management programs, including wetland protection activities. Kansas created the State Water Plan Fund in 1989, for which half of the revenues are derived from the state general fund and state lottery funds. The other half are derived from a system of fees on municipal water use, industrial water use, stockwater use, pesticides, fertilizers, and pollution fines and penalties. In Minnesota, voters approved state constitutional amendments establishing the Environmental and Natural Resources Trust Fund and a state lottery to finance the fund.

Tax Checkoff

Maryland's tax checkoff for the Chesapeake Bay and Endangered Species Fund is included on the standard tax form. Taxpayers can contribute a portion of their taxes to the fund, which yielded a record \$1.1 million in 1992. Divided equally between the Chesapeake Bay Trust and the Department of Natural Resources' Endangered Species Fund, the checkoff funds a variety of Bay restoration and conservation programs.

CASE STUDIES

CWA 319 Grants

California used for 319 grants for the Biologically Integrated Orchard Systems (BIOS) project, which is a community-based pollution prevention program that uses biological methods to replace chemical farming practices. The project began in 1993 to help almond growers and other farmers reduce their reliance on the synthetic pesticide diazinon.

Hawaii's State Department of Health lists the waters of West Maui, Kahului Harbor, and the South Molokai shoreline as water quality-limited segments because they often exceed nutrient and turbidity standards. Construction and grading projects were identified as the primary source of water quality problems. The County's outdated grading ordinance lacked necessary Best Management Practice (BMP) requirements and exempted many activities. 319 funding supported the creation of a revised grading ordinance that required erosion and sediment control BMPs for all construction projects, including minor work that does not require a permit.

Wisconsin, Nonpoint Source Water Pollution Abatement Program provides grants averaging \$20 million per year through two grant programs to address the effects of polluted runoff: The Targeted Runoff Management (TRM) Grant Program provides up to \$150,000 to rural and urban governmental units to control polluted runoff from urban and rural sites, and The Urban Nonpoint Source and Stormwater Grant Program focuses on financial assistance for projects in urban areas, providing up to 70 percent of technical assistance.

Federal Emergency Management Agency (FEMA)

A \$350,000 project to modify, replace and improve portions of the Florida Village of Tequesta's undersized stormwater collection, detention, treatment and conveyance system has been approved and funded. FEMA funded 75 percent of the cost, or \$262,500 of the total. The State of Florida and the local government shared funding of the rest. Proposed improvements are expected to greatly benefit the drainage basin. Low-lying areas in the Tequesta peninsula, located in north Palm Beach County near Jupiter, have experienced repetitive flooding, which was especially bad during Hurricane Georges.

Design and construction of a million-dollar stormwater drainage improvement project was approved for unincorporated Escambia County in northwest Florida's panhandle region. The project intent was to eliminate damage from future runoff floodwaters in the Warrington area west of Pensacola. The area has a population of about 7,500 and is located next to the Pensacola Naval Air Station. FEMA paid \$472,669 of the total project cost of \$630,225. The State of Florida and Escambia County supplied the remaining funds.

In Charlotte, North Carolina a community partnership effort was developed to reduce the impact of natural and man-made disasters on Charlotte and Mecklenburg County begins tomorrow with the signing of an agreement making North Carolina's largest community a partner in Project Impact. Over the years, flooding and stormwater management has been a significant concern to the community. Rare torrential rainstorms resulted in flooded homes, apartments, and businesses when Hurricane Hugo came inland in 1989. FEMA provided an initial grant of \$150,000 for operating expenses and the community received \$11 million for hazard mitigation projects from FEMA and the state. These projects involve buyout of repetitively flooded structures, particularly in

lower income neighborhoods. The city and county formed an effective partnership for floodplain and stormwater management — Charlotte-Mecklenburg Stormwater Services. Both governments created stormwater utilities and are cooperatively administering a stormwater management program. Their combined operating budgets exceed \$31 million annually. The city and county committed several million dollars for detailed flood analyses of drainage basins, prioritizing those undergoing rapid urban development. This effort is complemented by a FEMA-funded re-study of several drainage basins. An electronic database of all flood prone structures has been developed.

National Urban and Community Forestry Advisory Council Grants

The nonprofit, The Gaia Institute, was awarded \$67,050 to examine holding water and creating forested parks in east New York: cleaning the waters of Jamaica Bay. By incorporating forested areas with urban stormwater treatment systems, this project seeks to link these problems with a holistic solution, providing green spaces and wildlife habitat through the creation of wetland gardens and soil buffers.

The Davey Resources Group was awarded \$23,780 to study and report on the catastrophic loss of tree canopy as an opportunity to study the effect of trees on energy use. The objective of this project is to document changes in heating and cooling energy use after the loss of a significant percentage of a community's tree cover due to a catastrophic event, such as an ice storm.

Stormwater Utility Fee

In 2001, the Marion County City-County Council passed a stormwater utility fee to help fund much-needed drainage improvements. The fee is based on how each property affects the drainage system. Throughout 2002, the Stormwater Utility billed some residential customers on existing water/sewer bills and generated additional bills for non-residential customers, churches, schools, and government entities. In order to reduce billing costs and improve customer service, in 2003 the Marion County Stormwater Management District moved to a much more reliable system of billing stormwater charges. Under the terms of the ordinance creating the utility, fees must be billed to each property owner; the inclusion of these fees on the property tax statement, like solid waste charges, is the most effective way to reach and bill property owners in Marion County. Under the new billing arrangement, the stormwater utility fee remains the same: \$1.25/month for residential customers (\$15 annually) and \$1.25/month per 2800 square feet of hard surface for non-residential customers. Funds generated by the stormwater utility fee will be used to benefit everybody in Marion County. The Stormwater Master Plan identifies more than 350 needed projects, prioritized to address the most urgent first. Stormwater utility fees can only be used to fund flood control and drainage projects and to make necessary water quality improvements in Marion County.

In 1997 the Massachusetts Pioneer Valley Planning Commission and the City of Chicopee, Massachusetts, received 319 funding to investigate the feasibility of creating a stormwater utility. Urban runoff and combined sewer overflows are the most significant pollution problems on the lower Connecticut River in Massachusetts. One of the first steps was to research existing utilities around the country to identify key issues and review Massachusetts' laws to determine the legality of creating stormwater utilities. They developed a "how-to" kit and included a summary on the research on other stormwater utilities, all Massachusetts laws and regulations pertaining to stormwater management, and a model stormwater management ordinance. Chicopee then implemented a pilot stormwater utility or fee-based management program and did not establish a storm water utility per se, but incorporated stormwater management into the existing Wastewater Department to save on administrative costs and take advantage of the expertise of the Wastewater Department's staff. Chicopee also passed an ordinance to collect fees from residents specifically for the purpose of managing stormwater. The city conducted extensive research before instituting the stormwater ordinance. Residents said that they would be willing to pay a new fee for stormwater management if they were sure that the money would be used to address the problems directly affecting them, such as sewer back-ups during wet weather. The ordinance was therefore designed to address such concerns. Instituting a specific storm water fee rather than increasing sewer fees to

cover the costs of storm water management had two advantages. First, it meant that Chicopee could assess fees based on the amount of storm water generated by each property tied into the sewer system. Second, the city expects that over time, large storm water generators will begin to invest in best management practices and remediation measures to treat their storm water in order to reduce their storm water management fee, thus reducing the amount of storm water pollution being generated. In the first year, the city raised some \$400,000 for stormwater management; to date, the money has been used for activities such as stepping up cleaning of catch basins, purchasing a catch basin cleaning truck, grouting joints in the sewer system to stop leakage and inflow, stenciling storm drains, and cleaning sewer lines. Chicopee has also used the funds to leverage additional state loan funding for a \$5 million sewer separation project.

In 2001, the Arvada City Council approved an Ordinance that established a Stormwater Utility to fund two very specific needs in the City. First, \$500,000 of the Utility each year funds programs that the City is required to implement under the new Federally mandated Stormwater Permit. Under this Permit, the City must satisfy six measurable goals. Second, the Stormwater Utility funds \$50 million of needed flood control projects within the City over the next 20 years. An estimated \$1.5 million each year will be allocated to these flood control projects. The City is projecting that of the \$50 million needed, \$20 million will be contributed by other agencies through cost-sharing. The approval of the Stormwater Utility came after studying the issue for months, working with a citizen-based Stormwater Implementation Task Force, and conducting extensive public outreach. Single Family Residence pays on average \$3.15 each month for an average single-family residence that contains a little over 2800 square feet of impervious area, which may include patios, driveways, and rooftops. Commercial or Office Building pays on average \$72.00 each month for a medium-sized office building containing approximately 64,000 square feet of impervious area, which may include rooftops and parking lots.

Impact Fees for New Development

Carroll County, Maryland, charges an impact fee on new land development. The amount of the fee depends on the type of development (i.e., a single-family home, commercial development, etc.). These fees fund a variety of programs ranging from water supply protection to elementary school education.

In California, several wastewater treatment plants have been financed with fees paid by developers based on the projects' anticipated treatment requirements. Impact fees can be used to fund the installation and maintenance of stormwater management facilities on newly developed sites.

Homeowners Pay Inspection and Operation and Maintenance Fees

Otter Tail County, Minnesota, has developed an onsite utility to protect its lakes from contamination due to onsite sewage disposal system failures. All onsite system owners pay a basic fee for inspections and administration costs and have the option to pay an additional amount for additional services; operation and maintenance costs are financed by fees paid by homeowners.

Effluent Discharge Fees for Industrial and Municipal Sources

Wisconsin has established an unusually comprehensive fee system for its water program to recover total direct and indirect program costs. The state issues general permits and levies permit fees for discharges based on volume and type of pollutant. Such pollutants are associated with various industrial sources or users, such as concrete products operations; sand, gravel, or crushed stone operations; swimming pools; petroleum storage terminals; water treatment plants; and dredging projects involving uncontaminated sediments.

References and Resources

[Catalog of Federal Domestic Assistance Programs \(CFDA\)](#)

<http://aspe.os.dhhs.gov/cfda>

Center for Urban Policy and the Environment at Indiana University-Purdue University
Indianapolis (IUPUI)

<http://stormwaterfinance.urbancenter.iupui.edu/home.htm>

[Flood Mitigation](#)

<http://www.fema.gov/fima> or <http://www.nycofunding.org/newcofund/>

[National Tree Trust](#)

<http://www.nationaltreetrust.org>

[New York State Water Resources Institute](#)

<http://wri.eas.cornell.edu/>

New York State Water and Sewer Infrastructure Co-funding Initiative

<http://www.nycofunding.org/newcofund/about.htm>

The Governor's Office for Small Cities

<http://www.nysmallcities.com/>

The Council of Infrastructure Financing Authorities (CIFA), <http://www.cifanet.org/mission/mission.html>

U.S. Environmental Protection Agency

Environmental Finance Program

<http://www.epa.gov/efinpage/>

Catalog of Federal Funding Sources for Watershed Protection <http://www.epa.gov/OWOW/watershed/wacademy/fund.html>.

A Guidebook of Financial Tools: Paying for Sustainable Environmental Systems <http://www.epa.gov/efinpage/guidbk98/index.htm>

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