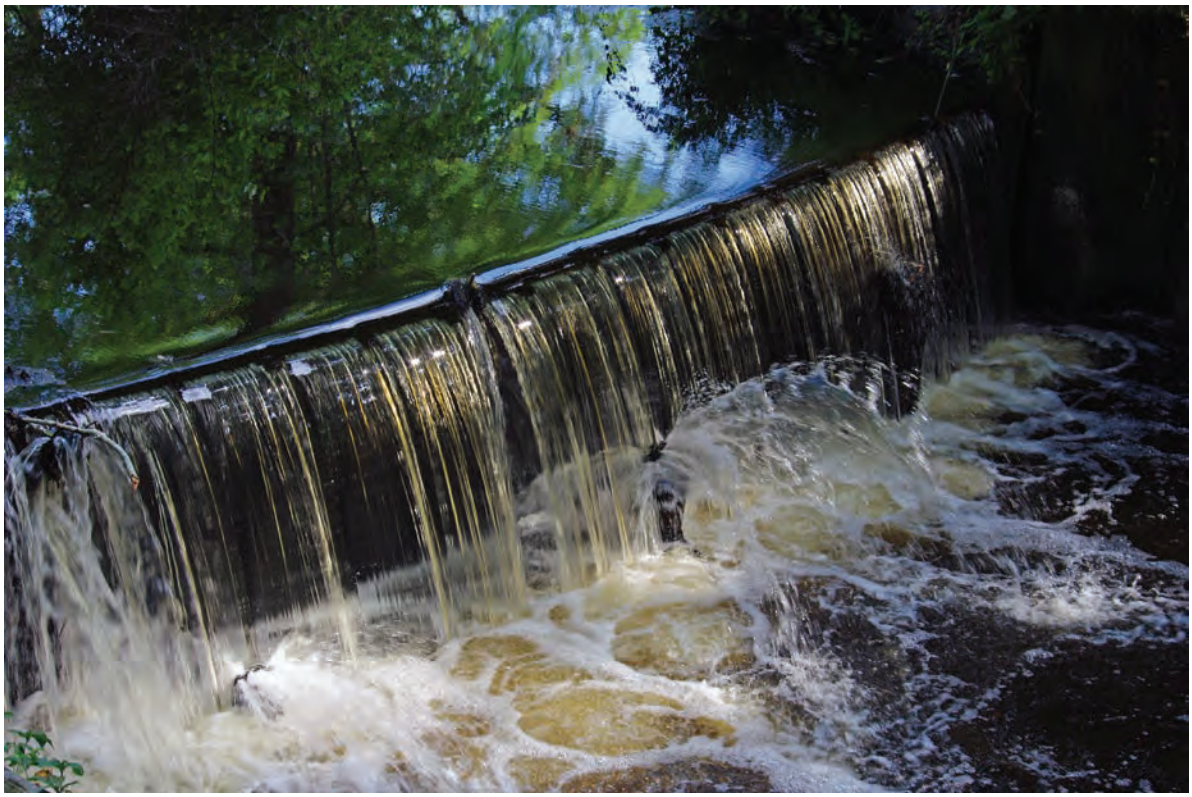


Spillway, Trap Pond State Park, Sussex County

Delaware General Assembly

Final Report of the Clean Water and Flood Abatement Task Force, Established under the Provisions of Senate Concurrent Resolution No. 30 of the 148th General Assembly, Passed by the Senate on June 6, 2015, and by the House of Representatives on July 1, 2015.

Table of Contents

Note: The complete report and appendices is available online by going to the Clean Water Task Force webpage at:
https://legis.delaware.gov/TaskForceDetail?taskForceId=171

Meeting of the Clean Water and Flood Abatement Task Force in the Buck Library of the Buena Vista State Conference Center, New Castle, on July 28, 2015.

Introduction

April 24, 2017

Clean water is essential to Delaware's future, its economy, its environment, and the health of its citizens. As a coastal and agricultural state, Delaware cannot afford for politics to trump policy when it comes to clean water and water infrastructure. After many years of underinvestment from state and federal levels, nutrients, other forms of water pollution, and flooding have become real threats to Delaware's prosperity.

To address these issues, the 148th General Assembly passed Senate Concurrent Resolution No. 30 and established the Clean Water and Flood Abatement Task Force (the "Task Force"). In authorizing the Task Force, the General Assembly instructed it to inquire into, examine, study, and make Findings and Recommendations related to improving clean water and flood abatement in Delaware.

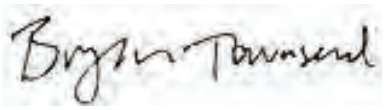
This Report summarizes the work of the Task Force and sets forth legislation the Task Force proposes be enacted by the General Assembly for the long-term benefit of Delawareans. The Task Force was comprised of members from the General Assembly; cabinet-level members of Governor Markell's administration; representatives from various State agencies; offices from all three counties in Delaware; several private organizations; the Water Infrastructure Advisory Council (WIAC); several non-profit organizations; and the agricultural community, among others.

The provisions of the legislation in particular, and the Findings and Recommendations upon which the legislation is based more generally, might not receive the endorsement of every single member of the Task Force. Differences of opinion can be made clear in the legislative process and public meetings to come, as well as via review of the meeting minutes included in this Report. At this moment, the Report and its legislation represent the culmination of many people's hard work, efforts, and thoughtful deliberations and discussions.

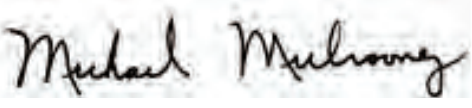
The members of the Task Force discharged their duties over the course of 18 meetings from July 2015 until June 2016. The Task Force members worked diligently, in good faith, and with the goal of identifying ways to improve water quality and relieve flooding in Delaware. Since June 2016, the co-chairs have waited to see if any developments from during or after the 2016 presidential election would help to address Delaware's water-quality challenges and, therefore, possibly reduce the urgency of the Report's recommendations. Unfortunately, little-to-no relief has been indicated, no federal infrastructure plan has been announced, and funding for critical cleanup efforts – such as for the Chesapeake Bay – is actually now at threat, despite strong bipartisan advocacy at the local level. We have not updated the Report's recommendations to account for the stagnation or even deterioration since June 2016, but we stress how important it is for Delaware, its Governor, and its General Assembly to lead on water-quality issues of paramount importance to our state.

In the pages that follow, the Findings, Recommendations, and Draft Legislation of the Task Force are set forth. For those readers who are in interested in more detail, the formal Meeting Minutes of each meeting are also provided. We invite the reader to review the detailed Meeting Minutes so as to understand more fully the hard work and thorough deliberation of the Task Force.

The Task Force Co-Chairs thank each and every member of the Task Force for their service and participation in the course of the Task Force's work. The Task Force identified several areas for improvement, as well as examples of recent improvement that may not have been widely known. It will be the responsibility of our elected and appointed officials to follow through on the thorough work of the Task Force and to examine and implement its Recommendations. We accept that responsibility, and we look forward to fulfilling it in the weeks and months to come.



Senator Bryan Townsend
Co-Chair



Representative Michael Mulrooney
Co-Chair

Task Force Enabling Legislation: Senate Concurrent Resolution 30

SPONSOR: Sen. Townsend & Sen. McBride & Rep. Mulrooney

DELAWARE STATE SENATE
148th GENERAL ASSEMBLY

SENATE CONCURRENT RESOLUTION NO. 30

ESTABLISHING A CLEAN WATER AND FLOOD ABATEMENT TASK FORCE.

WHEREAS the State of Delaware has a compelling interest in ensuring that all Delawareans have access to clean water; and

WHEREAS the State of Delaware has a compelling interest in minimizing the negative impacts that flooding has on the Delaware economy and the health and well-being of Delawareans; and

WHEREAS most of Delaware's waters do not meet water quality standards for their designated uses, such as drinking, swimming, and supporting fish and other aquatic life; and

WHEREAS although certain federal grants are available to local governments through the Safe Drinking Water Act, the Clean Water Act and other programs, federal funding is insufficient to meet the State's demands, and existing State resources are inadequate to meet current and future needs; and

WHEREAS it is fitting and proper for the State to encourage local governments to undertake clean water projects and flood abatement projects by establishing state mechanisms to finance such projects at the lowest reasonable costs; and

WHEREAS it is fitting and proper for the State to more effectively leverage and maximize the impact of all public, private, and philanthropic resources available for achieving clean water standards in all Delaware waterways and reasonable, cost-effective measures for flood abatement;

NOW, THEREFORE:

BE IT RESOLVED by the Senate of the 148th General Assembly of the State of Delaware, the House concurring therein, that the Clean Water & Flood Abatement Task Force ("Task Force") be established to study and make findings and recommendations regarding ways to improve water quality and alleviate flooding in Delaware.

BE IT FURTHER RESOLVED that the Task Force be composed of the following members:

1. Two members of the Delaware Senate (one from the majority party and one from the minority party), including a co-chair, appointed by the President *pro tempore*,
2. Two members of the Delaware House of Representatives (one from the majority party and one from the minority party), including a co-chair, as appointed by the Speaker of the House,

SD : TGW : TMG
5151480105

Jun 23, 2015

3. The Secretary of the Department of Natural Resources and Environmental Control, or someone designated by the Secretary;
4. The Secretary of Agriculture, or someone designated by the Secretary;
5. The Secretary of the Department of Transportation, or someone designated by the Secretary;
6. The Secretary of the Department of Health and Social Services, or someone designated by the Secretary;
7. The Director of the Delaware Economic Development Office, or someone designated by the Director;
8. A designee of the Water Infrastructure Advisory Council;
9. A designee of the New Castle County Executive;
10. A designee of the Kent County Administrator;
11. A designee of the Sussex County Administrator;
12. A designee of the Delaware League of Local Governments;
13. A designee of the Delaware Nature Society;
14. A designee of the Delaware Center for the Inland Bays;
15. A designee of the Partnership for the Delaware Estuary;
16. A designee of the University of Delaware's Water Resources Agency;
17. A designee of the Delaware Association of Conservation Districts;
18. A designee of the National Association of Water Companies – Delaware Chapter;
19. A designee of the Delaware State Chamber of Commerce;
20. A designee of the Committee of 100;
21. A designee of the Delaware Business Roundtable;
22. A designee of the Delaware Contractors Association;
23. A designee of Associated Builders and Contractors, Inc. – Delaware;
24. A designee of the Delaware Association of Realtors;
25. A designee of the Delaware Homebuilders Association;
26. A designee of the Delaware Farm Bureau;
27. A designee of the American Council of Engineering Companies – Delaware; and
28. A designee of the Delaware State AFL-CIO.

BE IT FURTHER RESOLVED that the co-chairs of the Task Force be responsible for guiding the administration of the Task Force which includes:

1. Setting a date, time and place for the initial organizational meeting;

2. Supervising the preparation and distribution of meeting notices, agendas, minutes, correspondences, and reports of Task Force;

3. Sending, after the first meeting to the Task Force, a list of the members of the Task Force and the person who appointed them to the Director of Research of Legislative Council; and

4. Ensuring that the final report of the Task Force is submitted to the President *pro tempore* of the Senate and the Speaker of the House of Representatives, with a copy to the Governor.

BE IT FURTHER RESOLVED that the Senate Majority Caucus be responsible for providing reasonable and necessary support staff and materials for the Task Force.

BE IT FURTHER RESOLVED that the Task Force begins meeting within four weeks of the passage of this resolution, meets at least once every month unless otherwise instructed by the co-chairs, meets at least once in each county, and issues recommendations to the President Pro Tempore of the Senate and the Speaker of the House of Representatives no later than January 31, 2016.

SYNOPSIS

This concurrent resolution establishes a Clean Water and Flood Abatement Task Force.

Author: Senator Townsend

SD:TGW:TMG
5151480105

June 23, 2015

Reporting Date Extensions

The Delaware General Assembly enacted three resolutions extending the reporting date of the Clean Water and Flood Abatement Task Force. These were:

Resolution Number	Date Approved
SCR No. 41	1/19/2016
SCR No. 54	3/24/2016
SCR No. 66	4/21/2016

Task Force meetings. Upper left: Jeffrey Bross and Patty Cannon; Upper right: (l to r) Rep. Ron Gray, Rep. Mike Mulrooney, Sen. Bryan Townsend, Michelle Zdeb, and Sen. Bryant Richardson; Lower left: DNREC Secretary David Small and Virgil Holmes; Lower right: (l to r) Sen. Richardson, DelDOT Secretary Jennifer Cohan, Gerard Esposito, Dian Taylor, Gerald Kauffman, and Joseph Corrado.

Composition of the Task Force

1. Two members of the Delaware Senate (one from the majority party and one from the minority party), including a co-chair, appointed by the President pro tempore,
2. Two members of the Delaware House of Representatives (one from the majority party and one from the minority party), including a co-chair, as appointed by the Speaker of the House,
3. The Secretary of the Department of Natural Resources and Environmental Control, or someone designated by the Secretary;
4. The Secretary of Agriculture, or someone designated by the Secretary;
5. The Secretary of the Department of Transportation, or someone designated by the Secretary;
6. The Secretary of the Department of Health and Social Services, or someone designated by the Secretary;
7. The Director of the Delaware Economic Development Office, or someone designated by the Director;
8. A designee of the Water Infrastructure Advisory Council;
9. A designee of the New Castle County Executive;
10. A designee of the Kent County Administrator;
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26. A designee of the Delaware Farm Bureau;
27. A designee of the American Council of Engineering Companies – Delaware; and
28. A designee of the Delaware State AFL-CIO.

Members of the Task Force

Appointee:	Appointed by:	Appointment Date:
Sen. Bryan Townsend, co-chair	President Pro Tempore	07/09/2015
Rep. Michael Mulrooney, co-chair	Speaker of the House	07/09/2015
Sen. Bryant Richardson	President Pro Tempore	07/09/2015
Rep. Ronald Gray	Speaker of the House	07/09/2015
Secretary David Small	DNREC	07/16/2015
Holly Porter	Dept. of Agriculture	07/16/2015
Secretary Jennifer Cohan	DelDOT	07/16/2015
Thom May	DHSS	07/16/2015
Patty Cannon	DEDO	07/16/2015
Brenna Goggin	Delaware Nature Society	07/16/2015
Jen Adkins	Partnership for the Delaware Estuary	07/16/2015
Gerald Kauffman	Univ. of Delaware Water Resources Agency	07/16/2015
Robert Baldwin	Delaware Assoc. of Conservation Districts	07/16/2015
Christine Mason	Nat'l Assoc. of Water Companies - DE Chapter	07/16/2015
Gerard "Jerry" Esposito	Delaware State Chamber of Commerce	07/16/2015
Paul Morrill	Committee of 100	07/16/2105
Dian Taylor	Delaware Business Roundtable	07/16/2015
Joseph Corrado	Delaware Contractors Association	07/16/2015
Howard "Lew" Morrison	Assoc. Builders and Contractors, Inc. - Delaware	07/16/2015
Michael Reimann	Delaware Homebuilders Association	07/16/2015
F. Thomas Unruh	Delaware Farm Bureau	07/16/2015
Bruce W. Jones, P.E.	American Council of Engineering Companies of Delaware	07/16/2015
Sam Lathem	Delaware State AFL-CIO	07/16/2015
Jeffrey Bross	Water Infrastructure Advisory Council	07/20/2015
Gina Jennings	Sussex County Administrator	07/20/2015
Lew Killmer	Delaware League of Local Governments	09/25/2015
Roy W. Miller	Delaware Center for the Inland Bays	07/30/2015
George Haggerty	New Castle County Executive	09/08/2015
Andrew Sakubowitch	Kent County Administrator	10/20/2015
William Lucks	Delaware Association of Realtors	07/16/2015

Clean Water and Flood Abatement Task Force Support Team:

- Michelle Zdeb, *Legislative Assistant for the Delaware State Senate Majority Caucus and Task Force Staffer: operated the functions of the Task Force meetings, planned and coordinated the work of the Task Force and its members, provided liaison services between the Task Force and public, while summarizing and reviewing of the Meeting Minutes, Report Materials and the Task Force Final Report.*
- Caitlyn Gordon, *Legislative Aide for the Delaware State Senate Majority Caucus: summarized the Task Force Meeting Minutes, while assisting in staffing and the operational functions of the Task Force meetings.*
- Dick Carter, *Special Projects Director for the Delaware State Senate Majority Caucus: provided assistance in the Report Materials, while compiling and reviewing the Task Force Final Report.*
- Jesse Chadderdon, *Communications Director for the Delaware State Senate Majority Caucus: conveyed photography services during the Task Force meetings.*

The co-chairs would like to express a special thanks to Michelle Zdeb for her tremendous and tireless work in organizing and staffing the Task Force throughout its meetings and deliberations and assisting greatly with compiling this final report. We hope that one day Delaware can be proud of having revitalized its waterways, and when it is, it, too, will thank Michelle.

Task Force Findings

1. Clean water is essential to the health and vibrancy of Delaware's population, economy, and environment.

2. Over time, total funding for water quality has not kept pace with funding needs and with increasingly rigorous standards for what is considered to be clean, unimpaired water. Federal funding has not increased over time, and state-level funding has been inconsistent, even in the face of regulatory drivers that ultimately have consumed so much of any available funding. Inconsistent state-level funding includes the recent underfunding of Delaware's Twenty-First Century Fund to address stormwater and flood control, as well as agricultural projects. In total, this has resulted in insufficient funding to meet Delaware's water quality challenges. There currently is a shortage of $100 million annually in the amount of funding needed for water quality programs in Delaware.

3. As of 2017, Delaware faces significant challenges with regards to statewide water quality. More than 90 percent of Delaware's waterways are impaired. This impairment is due largely to nutrient pollution but also due to toxic pollutants. Although point-source pollution should be minimized and laws enforced as much as possible, non-point source pollution poses a clear, present, and driving threat to water quality in Delaware.

4. Legacy issues are a significant source of impairment in Delaware's waterways, though ongoing activities and nonpoint source pollution continue to pose challenges. In total, barriers to clean water threaten segments of Delaware's economy that: (1) comprise $6 to $7 billion in annual economic activity in tourism/recreation, fish/wildlife activities, agriculture, ports, water supplies, and ecosystems, (2) support over 70,000 jobs with $2 billion in wages, and (3) account for over $200 million in annual revenues to the State.

5. Delaware's agricultural community has adopted many voluntary Best Management Practices (BMP's) as well as regulatory practices through the Nutrient Management Law in order to minimize non-point source pollution. A large portion of the voluntary BMP efforts are known to Delaware agricultural leaders and environmental regulators through cost-share programs, but there are many others that farmers have implemented that may not be accounted for, including rates of cover crops.

6. Statewide, Delaware has made significant progress in adopting better pollution controls in recent years. The impairment of Delaware's waterways did not occur quickly, however, and even with recent adoption of better practices it will take time to return our waterways to a healthy state.

7. Delaware utilizes a number of programs to evaluate and deliver projects, funding, and services to protect and enhance water quality. These programs, coordinated through federal, state and local governments, along with non-governmental organizations, have proved effective in reaching a variety of constituents and implementing programs and projects to serve a variety of sector interests including the agriculture and business community, municipal and county governments and private utilities. These programs are housed in the Departments of Health and Social Services, Agriculture, Economic Development, Natural Resources and Environmental Control, and Conservation Districts, along with the United States Department of Agriculture and the Environmental Protection Agency. The processes and criteria used by these agencies to identify priorities for funding should be continued without the addition of new bureaucracy or programs. Additional planning that integrates existing initiatives could result in more strategic investment and better coordination across programs.

8. Through its Water Infrastructure Advisory Council (WIAC), over time Delaware has addressed many important water quality projects. The funding for these projects has come in the form of both loans and grants, and the awarding of funds has involved a transparent, data-driven review and implementation process. The Clean Water State Revolving Fund and Drinking Water State Revolving Fund, under WIAC oversight, currently have issued loans for water quality projects in Delaware totaling approximately $338 million and $172 million, respectively.

Funding in terms of loans and grants varies from year to year depending upon demand and availability of funds, but has ranged from $7 million to $86 million annually, with an annual average of $34 million over the last 6 years.

9. At times, local governments have been unwilling (e.g., refusing to go to referendum) or unable (e.g., failing to pass a referendum) to secure partial funding from their own local tax bases to provide critical partial matching of the Council's resources. This has resulted in pressures and requests for grant money, rather than in local governments entering into long-term loan arrangements.

10. The current model and amount of resources are not meeting
Delaware's water quality needs. More funding is needed, and a sustained, predictable source of funding that can be leveraged is a model that could have a tremendously positive impact on water quality in Delaware, particularly if the model also accounted for public-private partnerships that might form around clean water initiatives.

11. There is no perfect collection process for any statewide fee that might be implemented to raise resources for clean water and flood abatement projects. Any system would inevitably involve administrative costs, and tying collections to existing forms of billing or collections for other water-related activities would risk confusing the reasons for the additional fees as well as the parties responsible for levying and directing the fees.

12. The composition of WIAC, as well as the length of its members' terms, can be updated to include Delaware's agricultural community and to encourage more frequent appointments or reappointments to WIAC.

13. There is a consistent lack of public awareness and understanding of water quality issues and the drivers of Delaware's impaired waterways. A sustained campaign promoting public education on these issues would be of broad public benefit, including efforts that distinguish between the water pollution that is occurring upstream from Delaware and the water pollution that is occurring right here within our own borders.

14. In addition to the direct, long-term economic, environmental, and health benefits of clean water in Delaware, projects to enhance water quality will have a stimulating effect on the Delaware economy through the employment of community members involved in the design, construction, and monitoring of water quality projects.

15. Delaware has the scientific knowledge and engineering know-how to resolve its water quality challenges. It currently lacks sufficient funding to do so. Yet in a survey, nearly 75 percent of Delawareans indicated they would be willing to pay $3.75 per month (which amounts to $45 per year) for clean water projects.

Task Force Recommendations

1. The Delaware General Assembly should significantly increase the annual investments in upgrading and maintaining Delaware's water infrastructure, promoting water quality, alleviating flooding and providing flood control, and preventing or responding to stormwater damage.

2. Annual investments in water infrastructure should be funded via a statewide per-household and per-business fee ("Clean Water Fee") that enables sustained, reliable funding as well as the leveraging of these resources to obtain additional funding from federal and private sources.

3. The Clean Water Fee should be collected in an administratively practical way, to the most effective and efficient extent possible. The revenues from the Fee should be pooled in a fund whose use – absent a supermajority vote of the General Assembly – is focused exclusively on water-quality projects and on the scientific monitoring and measurement necessary to gauge accurately the impacts of the projects and the overall quality of water in Delaware.

4. Increased annual investments in water infrastructure should be made in the form of loans and grants, with loan and grant decisions made in a manner similar to the established policies and practices of Delaware's Water Infrastructure Advisory Council (WIAC), a diverse group of informed individuals. The membership of WIAC should continue to include a mix of public sector and private sector appointees who represent a variety of perspectives that come to bear on the measurement, design, construction, implementation, and maintenance of systems relating to water quality and flood control. Delaware's agricultural community and conservation districts should be represented within this diverse group, especially in light of the continued opportunities to enhance water quality in Delaware via coordination with these groups.

5. WIAC's investment decisions should be made in accordance with a transparent, data-driven application process, on the basis of the merits underlying each application for funding, with an eye towards matching funds and incentive-based models, and generally in accordance with an updated long-term clean water plan for Delaware. Appropriate consideration should be given not only to projected efficiencies (such as consideration of a project's proposed cost-per-pound of reduced nutrient runoff, for which cover crops might shine) and utilization of green infrastructure techniques, but also to environmental justice. Here, environmental justice refers to the ideal that people of more limited economic means should not consequently have to live in environmental conditions hazardous to their health. This ideal can be realized by consideration specifically being given to grant applications or grant expenditures that would alleviate water quality challenges or flood control challenges for communities of limited economic means.

6. Collection of the Clean Water Fee should be facilitated via the Delaware Department of Finance, as a surcharge to personal income tax liability and as an increase in business license fees. This Task Force considered several alternatives to this proposal, including via property taxes, surcharges on water bills, increases to the personal accommodation tax, charges on septic system and well permits, and other methods. Ultimately the Task Force deemed this proposal to be the one most likely to lead to a successful collection of the Clean Water Fee, including administrative practicality and clarity, as well as equity more broadly.

7. As public education is a critical element of building and sustaining public awareness of water quality and flood issues, as well as the public's faith in the merits of the Clean Water Fee and the WIAC, a sustained public education and outreach campaign should be developed and appropriately funded. This development and funding should be in addition to the scientific measurement of water quality and flooding in Delaware, as well as the construction, operation, and maintenance of physical projects that will address water quality and flooding in Delaware.

Scope of Challenges

DRINKING WATER

Clean drinking water is one of the most essential and fundamental needs of human life. Much of Delaware's drinking water infrastructure is nearing the end of its useful life and approaching the age at which it needs to be replaced or repaired. This means that water is being lost to leaking pipes, broken water mains, and faulty meters. In addition, water treatment plants are struggling to meet treatment demands to provide safe drinking water to our population.

"Drinking water infrastructure" is a term used to describe an entire drinking water system, from the source to the tap. The needs associated with the components of a drinking water system can be broken down into the following five groups: (1) source, (2) treatment, (3) storage, (4) transmission/distribution, and (5) other.

Source projects include the installation and rehabilitation of ground water sources (wells) and surface water intakes to ensure an adequate supply of water is available to meet daily demands.

Treatment projects include those needed to reduce contaminants through processes such as filtration, disinfection, corrosion control, and aeration. The installation, upgrade, or rehabilitation of treatment infrastructure provides for the removal of contaminants that can cause chronic health effects or taste, odor, and other aesthetic problems.

Storage projects construct new or rehabilitate existing raw and/or finished water storage tanks. Construction of new tanks is necessary if the system cannot provide adequate flows and pressure during peak demand periods. Many projects in this category involve rehabilitating existing tanks to prevent structural failures or sanitary defects that can allow microbiological contamination.

The transmission and distribution category includes the installation and rehabilitation of raw and finished water transmission and distribution mains, as well as the replacement of lead service lines, flushing hydrants, valves, meters, and backflow prevention devices. Utilities need to install and maintain distribution systems to provide potable water to their customers while preventing contamination of that water prior to delivery. Although treatment plants or elevated storage tanks are usually the most visible components of a water system, most of a system's infrastructure is underground in the form of transmission and distribution mains. Failure of transmission and distribution mains can interrupt the delivery of water leading to a loss of pressure, possibly allowing a backflow of contaminated water into the system. Broken transmission lines also can disrupt the treatment process.

The "other" category reflects needs that cannot be assigned to one of the prior categories. Examples include emergency power generators not associated with a specific system component, computer and automation equipment, and projects for system security (fencing, security cameras, etc.).

Program Needs

A State funded grant incentive is needed to repair, replace, or rehabilitate existing water facilities and to encourage communities to implement sustainable practices and address at risk drinking water systems such as very small, privately/non-municipally owned systems.

WASTEWATER

Across the state of Delaware wastewater infrastructure serves over 85% of our population. This infrastructure is aging, and investment is not able to keep up with the need. When the Clean Water Act was passed in 1972, it was accompanied by considerable federal funding to support the construction and upgrading of these facilities to insure that impacts from municipal wastewater would be controlled. These efforts were largely successful, as the period from the 1970s through the 1980s saw significant water quality improvement across the State. However, since then funding for maintaining and upgrading these facilities has been greatly reduced. As many of these plants that reach the end of their 30- to 40-year design lives, previous water quality gains are in danger of being lost.

Currently, there are 32 publicly owned wastewater systems in Delaware. Twenty-two of the public wastewater systems include a treatment plant and 10 of the public wastewater systems are collection-only systems. Of these 22 treatment plants, 15 facilities have surface water discharge permits and nine facilities have groundwater permits. Also surveyed are 12 operating and two proposed privately owned systems. The 22 public and 12 private WasteWater Treatment Plants (WWTPs) provide centralized collection and treatment to a population of nearly 800,000. About 60 percent of those with centralized collection are serviced at the Wilmington WWTP. The Wilmington WWTP provides secondary treatment to an average daily flow of 75 million gallons per day (MGD) before surface water discharge. About 32,000 individuals are serviced by the other treatment plants in New Castle County, with a total average daily flow of 2 MGD. About 35 percent of those with centralized collection are serviced at public treatment plants in Kent County and Sussex County with average daily flows of 23.3 MGD.

In addition to the treatment plants themselves, sewer systems that convey wastewater to the plants for treatment are also deteriorating. Overflows of raw sewage from these sanitary systems, as well as from older combined sewer systems that capture both sanitary wastewater and storm runoff and are designed to overflow during heavy rain and runoff events, result in considerable water quality impacts across the State.

Because Delaware depends on our vast water resources for industry, recreation, and tourism, clean water is vital for our economy across the State. The protection of our waters, the health of our communities, and the prospects for future economic growth are linked to modern, reliable, and efficient wastewater treatment systems. An inadequate wastewater treatment infrastructure jeopardizes the viability of current and future businesses, stymies economic growth and development, and threatens the quality of life for Delawareans.

"Wastewater infrastructure" is a term used to describe the network for collection, treatment, and disposal of sewage in a community, i.e., pipes, sewage treatment plants, outfalls, etc. The needs associated with the components of a wastewater system can be broken down into the following three groups: (1) collection and conveyance, (2) treatment and disposal, and (3) other.

There are two major components of a collection and conveyance system: wastewater collection pipelines and wastewater pump stations. The largest component of the collection and conveyance system is gravity sewers. Gravity sewers collect and convey wastewater by gravity to a central location for either treatment or to a pump station for further conveyance.

Pump stations convey wastewater through pressurized pipes called "forcemains" to wastewater treatment facilities or to other pump stations. Most of our wastewater gravity systems, pump stations, and forcemains are near the end of their useful life and require repair, rehabilitation, or replacement.

In a wastewater treatment plant, domestic wastewater is treated to enable it to be discharged back into a watercourse. The wastewater produced by private households is polluted largely by dissolved biodegradable substances. A wastewater treatment plant is essentially divided into the following sections: mechanical treatment; biological treatment; and sludge treatment. Depending on the properties of the wastewater and the treated water quality requirements, further steps may be necessary, such as removal of nitrogen, phosphorus, and toxics.

Wastewater collection, conveyance, treatment and disposal facilities in Delaware are deteriorating. Most of Delaware's residents rely on these facilities to treat wastewater from our homes and businesses before they return it to our waterbodies.

Program Needs

- A State-funded grant incentive is needed to repair, replace, or rehabilitate existing wastewater facilities and encourage communities to implement sustainable wastewater collection, conveyance, treatment, and disposal practices.

- Funding to support program staff responsible for the issuance of permits, compliance monitoring, and enforcement.

STORMWATER

Delaware has difficulties addressing our stormwater infrastructure needs for resolving growing water quality and quantity challenges. From meeting regulatory requirements to maintaining and updating infrastructure in the face of tightening and sometimes shrinking budgets, along with very limited federal funding, Delaware's public sector is faced with an increasing set of challenges to meet our residents' important water resource needs

Stormwater Management needs are generally grouped into four subcategories: (1) conveyance of stormwater via pipes, inlets, roadside ditches, and other similar mechanisms; (2) treating stormwater with wet ponds, dry ponds, manufactured devices, or similar means; (3) low-impact development and green infrastructure projects; (4) general stormwater management activities, such as street sweepers, vacuum trucks, education program startup costs, and mapping and tracking systems.

In addition to the stormwater needs presented above, the Clean Water Act (CWA) that became law in 1972 requires that Delaware's (and all U.S.) streams, rivers, and lakes meet certain water quality standards. The CWA also requires that Delaware conduct monitoring to identify polluted waters or those that do not meet standards. Through this required program, the state of Delaware has found that many stream segments do not meet State water quality standards for protection of the five beneficial uses: fishing, swimming, shellfish, aquatic life, and drinking.

When streams fail to meet standards, the CWA requires that a water quality implementation plan be developed that identify comprehensive, multi-year water quality implementation projects. The purpose of the projects is to implement on-the-ground activities or Best Management Practices (BMPs) in order to improve water quality and meet water quality standards. The goal of these projects, through restoration and protection efforts, is to meet water quality standards.

More than 85 percent of Delaware's waterways do not meet one or more water quality standards and are considered too polluted for their intended uses. Water quality implementation plans must be developed and implemented for each of these waterways.

Finally, in 1990, EPA promulgated rules (Phase I of the National Pollutant Discharge Elimination System [NPDES]) requiring Municipal Separate Storm Sewer Systems (MS4s) , that is, those storm sewer systems that generally serve populations of 100,000 or greater, to implement a stormwater management program as a means to control polluted discharges from these MS4s. Coverage of the NPDES stormwater program has been extended to include certain "small" communities.

Twenty MS4 communities have been identified in the state of Delaware. Each of these MS4s must prepare a stormwater management program containing elements that address the following six technical areas: 1) Public Education and Outreach; 2) Public Involvement and Participation; 3) Illicit Discharge, Detection and Elimination; 4) Construction Site Stormwater Runoff Control; 5) Post-Construction Storm Water Management; and 6) Pollution Prevention and Good Housekeeping.

Program Needs

- A State-funded grant incentive is needed to help make Clean Water State Revolving Fund loans more affordable and to provide needed grant assistance for project planning and design, and for water quality implementation and MS4 compliance plans. Incentive programs are needed to encourage communities to move forward with sustainability and stormwater utility projects.
- Creation of a program to continue assessment of trends and implementation/coordination of priority remediation and restoration projects.
- Additional stream gauge and monitoring stations and support for program staffing.
- Additional funding to support core water permitting services and timely issuance of permits.

FLOODING/DRAINAGE

Many Delaware communities are plagued by flooding that is anticipated to worsen as climate patterns change. Significant flooding is documented throughout the state of Delaware; one does not need to live on the coast to be at risk. Flash floods, inland flooding, and seasonal storms affect every region of the state, significantly impacting homes, businesses, properties, and natural resources.

With a mean elevation of just 60 feet above sea level, Delaware is especially vulnerable to flooding from rising sea levels and coastal storms. More than 331 square miles of Delaware's land mass, or about 17 percent, are within a mapped 100-year floodplain. From urban areas to farming communities, flooding and drainage issues affect most Delawareans at one time or another.

With respect to drainage in Delaware, between 2007 and 2011, DNREC and the three Conservation Districts responded to over 2,000 requests for assistance with drainage problems at the homeowner or community level. Over a five-year period, these drainage concerns represent one for every 228, 154, and 122 housing units in New Castle, Kent, and Sussex Counties, respectively.

To address flooding and drainage issues, Delaware established a five-year investment process to create the Twenty-First Century Fund Resource Conservation & Development (RC&D) program in 1996 as a funding mechanism to enhance the health of communities and to assess and address watershed and drainage issues statewide through small studies, watershed planning, channel maintenance and restoration, stormwater facility maintenance, and small capital improvement projects.

In order to stimulate private, nonprofit, and governmental involvement, the RC&D program has dollar match requirements and loan programs to leverage monies from foundations, local governments, the federal government, and the business community. As payments from the five-year settlement period ended, any additional or continued funding for RC&D relies on either State General Funds or interest earnings on unspent Twenty-First Century Fund balances

The demand for project funds has fluctuated each year, as demand for new projects is often related to wet weather problems. Demand for the use of these funds has also been tied to development trends. As many of the projects completed with these funds solve community drainage problems, as land development moved from its peak in New Castle County to Sussex County the need to solve similar drainage and watershed issues has increased in the southern region of the State. The current deficit of the Twenty-First Century Fund RC&D program is over $73 Million.

As development increases and climate patterns continue to change, flooding and drainage issues at the State, County, and local government level will require additional funding for the development of long-term flood protection/resilience and drainage improvement plans, and the implementation of flood mitigation and drainage improvement projects.

Program Needs

- Additional funding beyond the current cost-share funds provided by Delaware's operating budget.
- Additional funding to provide technical assistance necessary for planning, surveying, engineering, and landowner work for drainage projects statewide.
- Additional funding to provide 21st Century Fund drainage improvement projects.
- Engineering and construction funds to conduct several multi-phase major flood management and reduction projects statewide annually.

AGRICULTURE

Close to 40 percent of the land in Delaware is devoted to agricultural production. Delaware's family farmers are essential to feeding the state of Delaware, the country, and the world. Agriculture provides over 30,000 jobs in Delaware, has an economic impact of more than $8 billion, and has been part of Delaware's heritage since the beginning of the State.

Delaware's largest agricultural commodity is poultry, with Sussex County leading the nation as the top meat chicken producer. To complement this industry, corn and soybeans are harvested on over 168,000 and 183,000 acres, respectively.

Over time, past agricultural practices have produced runoff of nutrients and sediment into our waterways. In 1999, the Nutrient Management Law was passed. This law applies to all animal feeding operations and anyone that applies nutrients to 10 acres or more, including crop farmers, golf course operators, and lawn companies. The law requires education, certification, the development of a nutrient management plan, and the submission of an annual report that shows how much and what type (manure vs. commercial) nutrients were used on the land.

The law also established the Nutrient Management Commission, which includes a wide range of representatives, including farmers, environmental advocates, and golf course representatives. The Commission directs and develops regulations pertaining to nutrient management. This is a collaborative effort with many stakeholders participating to maintain and improve water quality.

As part of the Nutrient Management Plan, farmers have included Best Management Practices (BMPs) that are encouraged and mostly voluntary, and beneficial to reducing nutrient runoff. These include soil testing, the planting of cover crops, planting grass and forest buffers, installation of concrete pads for poultry houses, and transporting manure to locations that are in need of the organic fertilizer.

Irrigation, when used within the context of a properly executed Nutrient Management Plan, often produces beneficial results and can be classified as a BMP. When plants are responsibly irrigated, they thrive and grow properly, meaning they efficiently take in the nutrients they need, resulting in higher crop yields and fewer nutrients being in the ground to run off. Irrigation may also provide for the recycling of legacy nutrients found in groundwater. In 1973, only 20,000 acres were irrigated, mainly for vegetables. Currently more than 140,000 acres are under irrigation, with a majority for corn and soybeans.

While many of these BMPs are beneficial to water quality, they are not all necessarily beneficial to the economics of the farm. Therefore cost-share funding is important to make sure there is a balance of equity for those that are contributing to the costs of water quality. Over the years, this has been provided as a partnership between DDA, DNREC, USDA, and EPA. However, both state and federal funds have been slowly decreasing, and there are currently more applications for cost-share than there are funds available.

Program Needs

- Additional funds are needed for the Conservation Districts to allow for additional cost-share, especially for cover crops, buffer initiatives, poultry production areas, and tax ditch restoration projects.
- Additional funding is also needed for manure relocation, Nutrient Management Plan cost-share, and to be used for research and funding for alternative manure uses.
- Maintain funding for the Delaware Rural Irrigation Program (DRIP) Revolving Loan Fund, administered by DDA and the Delaware Economic Development Office.

REMEDIATION

Delaware has a rich industrial past that has left a legacy of an environment degraded by hazardous substances (chemical pollutants). While most of the operations that created these have long since left the State, past operations and releases still leave their mark on soil, sediment, surface water, and groundwater. Prevention of release and

remediation of release of hazardous substances to the environment are regulated by the DNREC Division of Waste and Hazardous Substances (DWHS).

DWHS works to reduce the release of hazardous substances and also remediate releases that have occurred in the past or even recently. A clean environment leads to fewer costs for water purveyors to treat ground and surface water prior to service and therefore to reduced costs to citizens of the State. Targeting the problem at the source allows for focused problem solving and leads to an overall improvement in the health of the environment.

DNREC has been working on these tasks for over 20 years through multiple programs, each with a distinct area of authority. Recently, DNREC has implemented the Watershed Approach to Toxics Assessment and Restoration (WATAR) to identify, characterize, and mitigate pervasive, bio-accumulative and toxic contaminants in surface water and sediment. These contaminants are wide spread, accumulate in living organisms, and have detrimental effects on those organisms. Through the implementation of fine resolution sampling methods and innovative remediation technologies, long-term answers to water quality issues are being achieved. The WATAR Team has developed a Priority Projects list that once implemented would dramatically decrease the time frame for waterways to become fishable, swimmable, and potable as it relates to toxics.

The release of hazardous substances is associated with the storage, sale, or point-of-use of petroleum products across the state of Delaware. DWHS has aggressively sought to limit the potential for release of petroleum products to the environment through compliance inspections along with directly working with homeowners to remove or close in place home heating tanks no longer in use. The Heating Fuel Underground Storage Tank Closure Assistance program addresses the multitude of small potential sources of groundwater contamination to limit the potential for catastrophic release of petroleum by removing or properly closing home heating oil tanks.

Program Needs

- Funding to reinvigorate the Home Heating Fuel Removal program to aggressively reduce the potential for petroleum releases to the environment.
- Funding to continue monitoring the progress that the Department has made through remediation of priority sites, and to implement targeted WATAR Priority Projects at HSCA sites along within impaired waterways themselves to accelerate recover of the natural resource.

GROUNDWATER

Ground water is generally of good quality suitable for most uses except in the isolated parts of confined aquifers that contain saline water. Treatment to remove dissolved iron is needed in some parts of the unconfined aquifer. Nitrate plus nitrite concentrations commonly are a problem in the unconfined aquifer, principally in Kent and Sussex Counties in rural areas where agriculture is a major land use and the primary method of wastewater treatment is through septic systems. Intrusion of brackish or saline water has occurred in the unconfined aquifer adjacent to Delaware Bay and the Atlantic Ocean.

Contamination from waste-disposal practices causes some localized issues. Most of the industrial waste-disposal sites are located in New Castle County along the Delaware River. Contaminants from these sites include iron, manganese, dissolved solids, organic acids, and volatile organic compounds.

Groundwater quality in Delaware was assessed based on raw-water data collected during 2012-13 from public water-supply (PWS) wells. The water-quality database consisted of over 40,000 analyses. Five aquifer types were recognized for reporting purposes: (1) unconfined, (2) confined, (3) semi-confined, (4) fractured-rock, and (5) karst. Unconfined, confined, and semi-confined aquifers occur in the mid-Atlantic Coastal Plain Physiographic Province, which comprises most (~96%) of Delaware's land-surface area. Fractured-rock and karst aquifers occur in the Piedmont Physiographic Province in the remaining northernmost portion of the state. There are 1,187 active PWS wells and more than three quarters (77%) of these wells produce from Coastal-Plain aquifers; 5% produce from Piedmont aquifers; and aquifer designations for the remaining 18% are either not known or not

yet established. Well depths range from 22 to 957 feet, with a median well depth of 140 feet. Highlights from the groundwater-quality assessment follow:

- Based on nitrate data, almost half of the wells evaluated are susceptible to human influence.
- The unconfined and karst aquifers are the most susceptible to human influence.
- Nitrate concentrations exceeded the drinking-water standard in <5% of all samples.
- Overall, nitrate concentrations decrease with depth.
- Organic compounds were frequently undetectable.
- Organic compounds rarely exceeded drinking-water standards.
- Some organic compounds have depth trends similar to nitrate. Specifically, concentrations of methyl tert-butyl ether (MTBE), tetrachloroethylene (PCE), and trichloroethylene (TCE) with respect to sample depth indicate that the vertical extent of human impact in the Coastal-Plain aquifers is limited to depths of approximately 215 feet.
- Trace elements were frequently undetectable. Trace elements were not detected in 66% of the analyses.

The above referenced groundwater-quality assessment is DNREC's fourth attempt to report raw or apparently raw groundwater data with respect to hydrogeologic setting on a statewide basis. The results of this assessment represent a subset of the total number of active public water-supply wells in Delaware and, therefore, should be viewed in that context. Provided that water-quality data continue to be identified by DNREC, future 305(b) groundwater-quality assessments should provide a more complete picture of groundwater quality in Delaware.

Program Needs

- Funding for statewide and ongoing regional efforts to assess and monitor groundwater through a variety of sampling and monitoring programs.
- Funding for additional well and monitoring stations and support for program staff responsible for the protection of groundwater resources via permitting, compliance monitoring, and enforcement.

Draft Legislation:

An Act to Amend the Delaware Code Relating to Clean Water for Delaware

SPONSOR: Rep. Mulrooney & Sen. Townsend

HOUSE OF REPRESENTATIVES
149th GENERAL ASSEMBLY

HOUSE BILL

AN ACT TO AMEND THE DELAWARE CODE RELATING TO CLEAN WATER FOR DELAWARE.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF DELAWARE (Three-fifths of all members elected to each house thereof concurring therein):

Section 1. Amend Chapter 80, Title 29 of the Delaware Code by making deletions as shown by strike through and insertions as shown by underline as follows:

Subchapter III. Clean Water for Delaware Act.

§ 8070. Short title.

This Act shall be known and may be cited as the "Clean Water for Delaware Act."

§ 8071. Legislative findings.

(a) The General Assembly finds all of the following:

(1) The waters of this State are among Delaware's most basic and valuable resources and should be conserved and protected in a manner to realize their full benefits.

(2) The State has a compelling interest in ensuring that all Delawareans have access to clean water.

(3) Many Delaware homes and businesses are at risk from flooding and drainage hazards, which have environmental, public safety, health, and economic impacts.

(4) Delaware's continued economic vitality is dependent upon maintaining the State's water and wastewater systems and protecting and enhancing the State's water resources as an attraction for tourism and new employers.

(5) Some Delawareans do not have access to potable drinking water or basic wastewater disposal in their homes.

(6) Most of Delaware's waters do not meet water quality standards for their designated uses, such as drinking, swimming, and supporting fish and other aquatic life.

(7) Delaware's list of impaired waters includes 377 bodies of water that suffer from excess nutrients, low dissolved oxygen, toxins, and bacteria.

(8) Extensive analysis of chemical contaminants in fish has led to advisories that fish in more than 30 waterways statewide are unsafe to eat.

(9) Groundwater is the primary source of public, rural, and industrial water supply in 94% of the State, supplying drinking water to approximately 60% of the population of the State.

(10) The Department of Natural Resources and Environmental Control has implemented over 110 Groundwater Management Zones across the State in areas known to have groundwater impacted or threatened by hazardous substances.

(11) Although certain federal grants are available to local governments through the Safe Drinking Water Act, the Clean Water Act, and other programs, federal funding is insufficient to meet the State's demands, and existing State resources are inadequate to meet current and future needs.

(12) It is fitting and proper for the State to encourage local governments, private entities, and farmers to undertake clean water projects that effectively and efficiently reduce pollution in the waters of the State by establishing state mechanisms to finance such projects at the lowest reasonable costs.

(13) It is fitting and proper for the State to more effectively leverage and maximize the impact of all public, private, and philanthropic resources available for achieving clean water standards in all Delaware waterways.

(b) Based on its findings in subsection (a) of this section, the General Assembly determines that it is in the public interest to establish the Delaware Clean Water Trust to maximize and coordinate the reduction of flood risks and the removal of impairments to designated water uses through the management of financial resources available to the State for drinking water, wastewater, stormwater, non-point source pollution reduction, removal of toxins, ecological restoration, recreation, public education and outreach efforts, and other eligible projects to be funded from the following sources:

(1) A Clean Water Surcharge Account established under § 8075 of this title.

(2) Grants from the U.S. Environmental Protection Agency ("EPA") under the Clean Water Act and the Safe Drinking Water Act, together with any matching State funds or funds received from any other federal agency allocated to the Trust by a state agency.

(3) Moneys received as repayments of principal and interest on loans, interest received on invested funds, and other funding made available to the Delaware Water Pollution Control Revolving Fund established under § 8003(12) of this title or the Delaware Safe Drinking Water Revolving Fund established under § 7903(14) of this title.

(4) Funds from the Hazardous Substance Cleanup Fund under § 9113 of Title 7 for remediation projects in response to the release of hazardous substances or petroleum products that have or may adversely impact water quality.

(5) Moneys received from other sources for the purposes directed by this subchapter.

§ 8072. Definitions.

As used in this subchapter:

(1) "Applicant" means a person who submits an application to the Department to receive funds for a project.

(2) "Authorization Act" means an act of the General Assembly, concurred in by three-fourths of all the members elected to each House of the General Assembly, appropriating funds from the proceeds of bonds authorized to be issued by such act.

(3) "Clean Water Act" means the Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seq.

(4) "Clean Water Fund" means the Delaware Clean Water Fund, which is comprised of the Clean Water Surcharge Account, the Drinking Water Fund, the Water Pollution Control Fund, the Hazardous Substance Cleanup Fund, and any other money received from other sources for the purposes directed by this subchapter.

(5) "Clean Water Plan" means the Clean Water Plan required to be developed by the Water Infrastructure Advisory Council under § 8011 of this title.

(6) "Clean Water Surcharge Account" means the account established under § 8075 of this title and into which the clean water surcharges under Chapter 66 of Title 30 shall be deposited.

(7) "Clean Water Revenue Bonds" or "Bonds" mean any revenue bonds, notes, or other obligations issued by the Trust pursuant to § 8077 of this title, repayment of which is secured and repaid as provided therein.

(8) "Combined Sewer System" means a wastewater collection system designed to carry sanitary sewage, consisting of domestic, commercial, and industrial wastewater, and stormwater in a single pipe to a treatment facility.

(9) "Conservation Districts" means the three entities described in § 3903 of Title 7.

(10) "Cost" means the limited and reasonable expenses attributable to the labor, materials, machinery and equipment, lands, property, rights and easements, financing charges, interest on bonds, plans and specifications, surveys or estimates of costs and revenues, engineering, legal services, education, outreach, permitting, and all other expenses necessary or incident to all or part of a project.

(11) "Council" means the Water Infrastructure Advisory Council established under § 8011 of this title.

(12) "DDA" means the Department of Agriculture.

(13) "DHSS" means the Department of Health and Social Services.

(14) "DNREC" or "Department" means the Department of Natural Resources and Environmental Control.

(15) "Drinking Water Fund" means the Delaware Safe Drinking Water Revolving Fund established under § 7903(14) of this title.

(16) "Hazardous Substance Cleanup Fund" means the Hazardous Substance Cleanup Fund established under § 9113 of Title 7.

(17) "Issuing officers" means as defined in § 7401 of this title.

(18) "Local government unit" means a State authority, county, municipality, or any other political subdivision of this State.

(19) "Person" includes an individual; corporation; business trust; estate trust; partnership; limited liability company; association; joint venture; government; governmental subdivision, agency, or instrumentality; public corporation; or any other legal or commercial entity.

(20) "Project" means the acquisition, construction, installation, modification, renovation, repair, extension, renewal, replacement, rehabilitation, or administration of land, interest in land, buildings, structures, facilities, or other improvements and the acquisition, installation, modification, renovation, repair, extension, renewal, replacement, rehabilitation, or furnishing of fixtures, machinery, equipment, or other property of any nature whatsoever used on, in, or in connection with any such land, interest in land, building, structure, facility, or other improvement for the purpose of or relating to the provision, preservation, or maintenance of clean water or water quality and reduction of flooding. "Project" includes all of the following:

a. An agricultural project. For purposes of this subchapter, an "agricultural project" means agricultural natural resource conservation cost-share programs developed by the Conservation Districts, DNREC, or the DDA, including cover crops, forested and grass buffers, manure relocation, tax ditch restoration, and other best management practices that are consistent with implementing nutrient management plans or farm conservation plans.

b. A conservation project. For purposes of this subchapter, a "conservation project" means a project with the primary purpose of improving water quality and fish and wildlife habitat; a project that preserves intact habitat to mitigate impacts to threatened species, waterway or land conservation, a habitat, or stream restoration; a project that offsets impacts to natural resources including natural resources restoration, enhancement, and creation and a wetlands or stormwater mitigation bank; a project that generates water quality or quantity credits; or a recreational facilities project as permitted by § 5423 of Title 30 or § 6102A of this title. "Conservation project" does not mean a regional infrastructure project that is unrelated to the provision, preservation, or maintenance of clean water or water quality.

c. An EPA eligible project. For purposes of this subchapter, "EPA eligible project" means any project permitted to be funded under the Safe Drinking Water Act and Clean Water Act.

d. A flooding and drainage project. For purposes of this subchapter, a "flooding and drainage project"

means a project with the primary purpose of managing the impacts from drainage, preventing flooding of lands, or managing water for resource conservation for public benefit and conducive to the public health, safety, and welfare with a specific goal towards maintaining natural drainage flow and conservation and management of the soil, water, wildlife, forest, and other resources of this State.

e. A remediation project. For purposes of this subchapter, a "remediation project" means a project, undertaken under Chapters 74, 74A, or 91 of Title 7, to provide a remedy that addresses the release of a hazardous substance or a petroleum product that has adversely impacted water quality.

f. A stormwater management project. For purposes of this subchapter, a "stormwater management project" means any work relating to the planning, acquisition, construction, improvement, repair, or reconstruction of all or part of any structure, facility, equipment, or real or personal property that is necessary for, or is ancillary to, any stormwater management system.

g. A wastewater treatment system project. For purposes of this subchapter, "wastewater treatment system project" means any work relating to the acquisition, construction, improvement, repair, or reconstruction of all or part of any structure, facility, equipment, or real or personal property that is necessary for, or is ancillary to any wastewater treatment system. "Wastewater treatment system project" includes upgrading connecting properties with septic systems, seepage pits, and failing community systems and repairing or replacing failing or at-risk individual, community, non-profit, or homeowner association-owned systems.

h. A water supply project. For purposes of this subchapter, "water supply project" means any work relating to the acquisition, construction, improvement, repair, or reconstruction of all or part of any structure, water supply facility, equipment, or real or personal property that is necessary for, or is ancillary to, water supply; any work relating to the purposes set forth in § 8076 of this title; or any work relating to any other EPA eligible project for funding under the Safe Drinking Water Act.

(21) "Public water utility" means any investor-owned water company or small water company.

(22) "Secretary" means the Secretary of DNREC.

(23) "Safe Drinking Water Act" means the federal Safe Drinking Water Act, 42 U.S.C. 300f et seq.

(24) "Small water company" means any non-profit or for-profit company, purveyor, or entity, other than a governmental agency, that provides water for human consumption and which regularly serves less than 3,300 customers. "Small water company" includes a non-profit, non-community water system owned or operated by a nonprofit organization.

(25) "Stormwater" means the runoff of water from the surface of the land resulting from precipitation or snow or ice melt.

(26) "Stormwater management system" means any equipment, plant, structure, machinery, apparatus, management practice, or land, or any combination thereof, that is acquired, used, constructed, implemented, or operated to prevent nonpoint source pollution, abate improper cross-connections and interconnections between stormwater and sewer systems, minimize stormwater runoff and flooding, reduce soil erosion, or enhance stormwater runoff volume reduction, or any combination thereof.

(27) "Strategic Plan" means the Strategic Plan required to be included in the Clean Water Plan by the Water Infrastructure Advisory Council under § 8011 of this title.

(28) "Trust" means the Delaware Clean Water Trust authorized under this subchapter.

(29) "Trust Board" means the Board of Directors of the Trust established under § 8073 of this title.

(30) "Wastewater" means residential, commercial, industrial, or agricultural liquid waste, sewage, seepage, or other liquid residue, or any combination thereof, that may be discharged or collected into a sewer system.

(31) "Wastewater treatment system" means any equipment, plant, structure, machinery, apparatus, land, or any combination thereof, acquired, used, constructed, or operated for the storage, collection, reduction, recycling, reclamation, disposal, separation, or other treatment of wastewater or sewage sludge, or for the collection or treatment, or both, of wastewater, or for the final disposal of residues resulting from the treatment of wastewater, including pumping and ventilating stations, treatment plants and works, connections, outfall sewers, interceptors, trunk lines, and other personal property and appurtenances necessary for their use or operation.

(32) "Water Pollution Control Fund" means the Delaware Water Pollution Control Revolving Fund established under § 8003(12) of this title.

(33) "Water supply facility" means a plant, structure, interconnection between existing facilities, machinery, equipment, and other property real, personal, or mixed that is acquired, constructed, or operated or to be acquired, constructed, or operated, in whole or in part, by or on behalf of a public water utility or small water company or by or on the behalf of the State or a local government unit for the purpose of augmenting the natural water resources of the State and making available an increased supply of water for all uses; conserving existing water resources and any and all appurtenances necessary, useful, or convenient for the collecting, impounding, storing, improving, treating, filtering, conserving, or transmitting of water; preserving and protecting these resources and facilities; and providing for the conservation and development of future water supply resources and facilitating incidental recreational uses of future water supply resources.

§ 8073. Establishment of the Delaware Clean Water Trust and the Board of Directors of the Trust; members; dissolution; Trust Administrator.

(a) The Delaware Clean Water Trust is established as a body corporate and politic. The Trust is a public instrumentality of the State, and its exercise of the powers conferred by this subchapter is an essential governmental function of the State in order to create a coordinated plan to clean the State's waterways, ensure clean and safe drinking water for all Delawareans, and protect the State's citizens from the effects of flooding.

(b) The Trust is managed by a Board of Directors. The Trust may act only by resolution of the Board of Directors. The Board of Directors is comprised of all of the following members:

(1) The Secretary of DNREC.

(2) The Secretary of the Department of Finance.

(3) The Secretary of DDA.

(4) The Secretary of DHSS.

(5) A director with expertise in public and private finance, appointed by the Governor with the advice and consent of the Senate.

(c) The director with expertise in public and private finance under paragraph (b)(5) of this section serves a 4-year term and holds over until the director's successor has been confirmed and qualified. An individual is eligible for reappointment as a director. A vacancy under this subsection is filled in the same manner as the original appointment. An individual filling a vacancy under this subsection serves only for the unexpired portion of the term.

(d) The Secretary of DNREC is the Chair of the Trust Board.

(e) The position of Trust Administrator is created within DNREC. The Trust Board shall appoint the Trust Administrator, who serves at the pleasure of the Trust Board.

(f) The Trust may be dissolved by an act of the General Assembly on condition that the Trust has no debts or obligations outstanding or that provision has been made for the payment or retirement of such debts or obligations. Upon any such dissolution of the Trust, all property, funds, and assets of the Trust are vested in the State and any moneys or assets collected pursuant to the assessment under another provision of the Delaware Code are to be returned to the designated funds established by those provisions.

(g) No director, officer, employee, or agent of the Trust may have an interest either directly or indirectly in any project or in any contract, sale, purchase, lead, or transfer of real or personal property to which the Trust is a party. The existence of any such interest does not affect the validity of bonds issued under this subchapter.

(h) No director, officer, employee, or agent of the Trust is deemed to have forfeited or shall forfeit any other state office or employment or any benefits or emoluments of the state office or employment by reason of acceptance of an office of the Trust or provision of services for the Trust, subject to this subchapter.

§ 8074. Powers of the Trust related to projects.

(a) The Trust shall be responsible for oversight of the financial assets of the Clean Water Fund to maximize and coordinate the management of the resources available for projects.

(b) If the Trust determines that demand for funding for projects exceeds all available resources, the Trust may issue bonds, notes, and other obligations as set forth in § 8077 of this title.

(c) Notwithstanding subsection (b) of this section, at the request of the Department, the Trust may issue bonds, notes, and other obligations from the Hazardous Substance Cleanup Fund for the purposes of Chapters 74, 74A, and 91 of Title 7.

(d) The Trust shall receive recommendations from the Water Infrastructure Advisory Council and issue loans and grants in consideration of the common platform developed by the Council for soliciting, prioritizing, and determining creditworthiness, closing, and managing loans and grants in accordance with EPA policy. Consistent with the purposes of this subchapter, the Council, DNREC, DHSS, DDA, and the Conservation Districts shall utilize appropriate programs, processes, and criteria to prioritize, plan for, and identify projects, and this information shall inform the development of a Clean Water Plan and recommendations of the Council to the Trust.

(1) The Council's recommendations of agricultural projects to the Trust shall conform with all of the following:

a. The Council shall add the cost-share and other soil and water conservation projects approved by the Conservation Districts or the Department to the Council's project priority listing as submitted.

b. If additional resources from the Clean Water Fund are to be provided for any agricultural project, the Council shall consider the addition of the resources using the Council's overall project prioritization process.

(2) The Council's recommendations of remediation projects to the Trust shall conform with all of the following:

a. The Department shall provide a list of all active remediation projects that have a direct impact on water quality to the Council for inclusion in the Council's Strategic Plan.

b. If additional resources from the Clean Water Fund or other sources are to be provided for any remediation project, the Council shall consider the addition of the resources using the Council's overall project prioritization process.

(3) The Council's recommendations of flooding and drainage projects to the Trust shall conform with all of the following:

a. The Council shall add flooding and drainage projects approved by the Conservation Districts to the Council's project priority listing as submitted, provided that any single project may not exceed $250,000 in cost.

b. The Council shall make available a minimum of $2,000,000 from the Clean Water Fund for flooding and drainage projects annually.

c. The Council may provide funding above the project cap or minimum funding availability, provided that the project meets the Council's prioritization criteria and is consistent with the Clean Water Plan and Strategic Plan.

(e) The Trust may transfer funds available for loans between the Drinking Water Fund and Water Pollution Control Fund programs based on demand, contingent on the requirements of the EPA and others, and provided a transfer of funds is identified in the Intended Use Plan and Annual Report for each revolving loan fund.

(f) The Trust shall develop the framework required to maximize private and philanthropic resources under the requirements of this subchapter, determine program structure, obtain and maintain credit ratings, maintain and manage cash and investment accounts including those necessary for debt service or private financing repayment, coordinate the issuance of bonds or private financing, disburse proceeds, and maintain compliance with regulatory requirements.

(g) The Trust shall prepare report annually to the General Assembly's Joint Committee on Capital Improvement, Natural Resources Committee of the House of Representatives, and Natural Resources and Environmental Control Committee of the Senate.

(1) The Trust shall include all of the following in the report required by this subsection:

a. An accounting of the Trust's revenues and expenditures.

b. Information on the Trust's cash management.

c. An updated Strategic Plan.

d. Project priority lists.

e. Information on the Trust's progress toward achieving the State's water quality goals, as set forth in the Clean Water Plan.

f. A complete financial statement covering the Trust's operations during the past fiscal year.

g. Copies of the audit required to be obtained by the Trust under § 8082 of this title.

(2) The Secretary of the Department shall deliver the annual report to the legislative committees listed in this subsection and shall make the annual report available for public review.

§8075. Clean Water Surcharge Account.

(a) A Clean Water Surcharge Account is established to provide sustainable financial resources for undertaking activities designed to enhance the quality of waters of this State.

(1) Under the direction and with the approval of the Trust, the Secretary shall manage and administer the Clean Water Surcharge Account for the exclusive purpose of funding specific, sustainable projects designed to enhance the State's water quality in accordance with the Trust's fiscal policies and the Clean Water Plan.

(2) The Clean Water Surcharge Account may be expended for the purposes of this subchapter including providing low-interest loans, grants, leveraged financing, and other incentives, including the purchase of or funding the development of water quality or quantity credits, to implement projects, including those designated to reduce toxins pollution, sediment, or nutrient loads and bacteria impacts or to remediate hazardous substance and petroleum product releases in the surface and ground waters of Delaware, as well as to increase the resiliency of communities, enhance economic development, and reduce the risk of flooding.

(3) The Clean Water Surcharge Account may also be used to pay debt service on any revenue bonds issued under § 8077 of this title.

(b) The Clean Water Surcharge Account is a Special Fund of the State.

(c) An amount not to exceed 12% in the first two years of the Clean Water Fund, and not to exceed 10% thereafter, of the moneys deposited in the Clean Water Surcharge Account, may be used to pay the costs of administering this subchapter.

§ 8076. Clean water loans or grants issued by the Trust.

(a) The Trust may make and contract to make loans to persons that are legally authorized to borrow or receive funding to finance the costs of any project. Project applications must include evidence of the sustainability of the project and show its life-cycle costs, including operations and maintenance.

(b) Preference shall be given to projects that do one or more of the following:

1. Utilize and enhance natural systems to provide ecological benefits that improve water quality.

2. Demonstrate a high ratio of nutrient or pollution reduction to the amount of funding.

3. Improve community resilience to extreme weather, sea level rise, and other climate impacts.

4. Benefit low-income and traditionally underserved communities through lower interest rates and affordability grants.

5. Leverage public funds through the attraction of private and philanthropic investment through innovative financing models, including the purchase, generation, or sale of water quality or quantity improvements or water quality and quantity credits.

(c) The Trust shall make loans or grants under this section subject to such terms and conditions as the Council shall determine to be consistent with the purposes of this section. Each loan, and the terms and conditions of each loan, made by the Trust shall be consistent with the fiscal policies established by the Trust.

(d) The Trust shall review information, statistical data, and reports of independent consultants or experts as it shall deem necessary in order to evaluate the requested loan or grant. Each loan to a local government unit, public water utility, or any other person shall be evidenced by notes, bonds, or other obligations issued to the Trust. In the case of each local government unit, notes and bonds to be issued to the Trust by the local government unit shall be authorized and issued as provided by law for the issuance of notes and bonds by the local government unit. Each loan to a local government unit, public water utility, or any other person and the notes, bonds, or other obligations issued shall bear interest at such rate per annum as the Trust and the applicant may agree.

§ 8077. Clean Water Revenue Bonds; refunding bonds; security for obligations.

(a) Except as otherwise expressly provided in this section, the Trust may issue Clean Water Revenue Bonds in any principal amounts, subject to this subchapter, as necessary, in the judgment of the Trust and on the advice of the Council, to provide sufficient funds for any of its corporate purposes, including the funding of loans made for any project, the establishment or increase of reserves or other funds to secure or to pay the Clean Water Revenue Bonds, as the case may be, or interest thereon, and all other costs or expenses of the Trust incident to and necessary to carry out its corporate purposes and powers. The Trust may only issue Clean Water Revenue Bonds in the amounts approved by an Authorization Act of the General Assembly.

(b) Clean Water Revenue Bonds shall be negotiable instruments and securities under the Uniform Commercial Code, Subtitle I of Title 6.

(c) Clean Water Revenue Bonds shall be authorized by a resolution of the Trust Board; may be issued in one or more series; and shall bear such date, mature at such time, bear interest at such rate, be in such denominations, be of a single denomination payable in installments, be in such form, either registered or book-entry, carry such conversion or registration privileges, have such rank or priority, be executed in such manner, be payable in any coin or currency of the United States which at the time of payment is legal tender for the payment of public and private debts, at such place or places within or without the State, and be subject to such terms of redemption by the Trust or the holders thereof, with or without premium, as such resolution may provide. A resolution of the Trust authorizing the issuance of Clean Water

Revenue Bonds may provide that such Clean Water Revenue Bonds be secured by a trust indenture between the Trust and a trustee, vesting in the trustee any property rights, powers, and duties in trust as the Trust may determine.

(d) Prior to issuance of the Clear Water Revenue Bonds, the issuing officers shall approve the issuance of such Clean Water Revenue Bonds by resolution adopted by the unanimous vote of the issuing officers. Each issuing officer may designate a deputy to represent the issuing officer at meetings of the issuing officers with full powers to act and vote on the issuing officer's behalf. Clean Water Revenue Bonds shall be issued for the purposes authorized by this subchapter and Chapters 74, 74A, and 91 of Title 7. Clean Water Revenue Bonds may be issued regardless of the treatment of interest thereon for federal income tax purposes.

(e) Following approval by the issuing officers, the Clean Water Revenue Bonds shall be executed by the Chair of the Trust Board and do not require additional consent of any department, division, board, bureau, or agency of this State or any other proceedings or the happening of any other conditions or things, other than those consents, proceedings, conditions, or things which are specifically required by this section.

(f) Clean Water Revenue Bonds may be sold at any price and in any manner as the Trust may determine. Each such Bond shall mature and be paid not later than 30 years from its effective date. All Clean Water Revenue Bonds may be sold at public or private negotiated sale and for such price as the Trust determines. If sold at public sale, the procedures applicable to the sale shall be set forth in the authorizing resolution of the Trust Board.

(g) Clean Water Revenue Bonds issued under this section are not general obligations of the State and may not pledge the full faith and credit of the State. Such Bonds may not be considered as debt of the State and may not be treated as a tax supported obligation of the State, as defined in § 7422 of this title. All Bonds, unless funded or refunded by Clean Water Revenue Bonds, shall be payable solely from revenues or funds pledged or available for their payment as authorized herein and as provided in the authorizing resolution of the Trust Board. Each Clean Water Revenue Bond shall contain on its face all of the following statements:

(1) The Trust is obligated to pay the principal thereof or the interest thereon only from its revenues, receipts, or funds pledged or available for their payment.

(2) Neither the State nor any political subdivision thereof is obligated to pay the principal of or interest on such Clean Water Revenue Bonds.

(3) The faith and credit of the State, or any political subdivision thereof, is not pledged to the payment of the principal of or the interest on the Clean Water Revenue Bonds.

(4) The Trust has no taxing power other than collecting revenues, including the Clean Water Surcharge, delineated in this subchapter.

(5) The aggregate principal amount of Clean Water Revenue Bonds may not exceed the amount approved from time to time by Acts of the General Assembly. Such limitation shall exclude all the Clean Water Revenue Bonds, which have been refunded whenever the refunding shall be determined to result in a savings.

(6) The Trust may authorize the issuance of refunding bonds to refund, prior to their stated maturity, all or any portion of the outstanding Clean Water Revenue Bonds issued by the Trust and costs incidental thereto; provided, however, that the present value of the aggregate principal and interest payments of the refunding bonds must be less than the present value of the aggregate principal and interest payments on the Clean Water Revenue Bonds to be refunded.

(7) Refunding bonds may be issued in a principal amount which exceeds the principal amount of the respective Clean Water Revenue Bonds to be refunded, so long as the present value of the aggregate principal and interest payments of the refunding bonds are less than the present value of the aggregate principal and interest payments on such Clean Water Revenue Bonds to be refunded.

(h) Each issue of Clean Water Revenue Bonds shall be issued as special obligations thereof payable out of particular revenues, receipts, or funds and may be secured by one or more of the following as set forth in the authorizing resolution of the Trust Board:

(1) A pledge of revenues and other receipts to be derived from the payment of the interest on and principal of notes, bonds, or other obligations issued by State agencies, local government units, or private companies and held in the Water Pollution Control Fund or the Drinking Water Fund. These notes, bonds, and obligations shall be designated and described in the Trust's resolution authorizing the issuance of the Bonds, and may only be pledged if such issuance complies with all EPA requirements applicable to the Water Pollution Control Fund and the Drinking Water Fund. Subject to the foregoing, DNREC and DHSS are authorized to assign and pledge such notes, bonds, or other obligations as security for any Clean Water Revenue Bonds.

(2) A pledge of payments made pursuant to loans to be made by the Trust from the proceeds of the Clean Water Revenue Bonds or from amounts held in the Clean Water Surcharge Account and those amounts held in the Hazardous Substance Cleanup Fund for the purposes of remediating hazardous substance or petroleum product releases that have, or may, adversely impact water quality.

(3) A pledge of the Clean Water Surcharge and all amounts held in the Clean Water Surcharge Account and those amounts held in the Hazardous Substance Cleanup Fund for purposes related to hazardous substances or petroleum product releases that have, or may, adversely impact water quality.

(4) A pledge of all moneys, funds, accounts, securities, and other funds held pursuant to a trust indenture securing the Clean Water Revenue Bonds, including the proceeds of the Clean Water Revenue Bonds.

(i) Bonds may be issued as separate issues or series, may finance any type of project as provided in the authorizing resolution, may be secured by part or all of the revenues or properties described in paragraphs (h)(1) through (4) of this section as provided in the authorizing resolution, and may be tax-exempt (either essential government or exempt facility private activity bonds) or taxable for federal income tax purposes.

§ 8078. Agreement not to abridge Trust powers; preventing diversion of funds through securitization; pledges of future revenues.

(a)(1) The State does pledge to and covenants and agrees with the holders of any Bonds issued under this subchapter all of the following:

a. The State will not limit or alter the rights or powers vested in the Trust to perform and fulfill the terms of any agreement made with the holders of the Bonds, nor will it limit or alter the imposition of the Clean Water Surcharge, as assessed under Chapter 66 of Title 30, as long as the Bonds, together with interest thereon, are fully met and discharged or provided for.

b. The State will not limit or alter the rights or powers vested in the Trust to administer its financial assets as may be convenient or necessary to produce sufficient revenues to meet all expenses of the Trust and to fulfill the terms of any agreement made with the holders of Bonds, including the obligations to pay the principal of and interest and premium on those Bonds, with interest on any unpaid installments of interest, and all costs and expenses in connection with any action or proceedings by or on behalf of the holder.

c. The State will not limit or alter the rights and powers of any local government unit to pay and perform its obligations owed to the Trust in connection with loans received from the Trust until the Bonds, together with interest thereon, are fully met and discharged or provided for.

(2) Notwithstanding this subsection, the State is not limited in its ability to change the rates, terms, and conditions applicable to the personal income tax or to business or occupational license fees.

(b) Any pledge of revenues, receipts, moneys, funds or other property or instruments made by the Trust shall be valid and binding from the time when the pledge is made. The revenues, receipts, moneys, funds, loans, or other property so pledged and thereafter received by the Trust or by the Water Pollution Control Fund, the Drinking Water Fund, the Clean Water Surcharge Account, or the Hazardous Substance Cleanup Fund shall immediately be subject to the lien of the pledge without any physical delivery thereof or further act. The lien of any pledge shall be valid and binding as against all parties having claims of any kind in tort, contract, or otherwise against the Trust, DNREC, DHSS, or the Clean Water Fund,

irrespective of whether the parties have notice thereof. Neither the resolution, trust indenture, or any other instrument by which a pledge under this section is created need to be filed or recorded, except in the records of the Trust.

(c) Any loan held in the Water Pollution Control Fund or Drinking Water Fund, and any loan made by the Trust under the powers in this subchapter, shall be subject to the terms of this subchapter and, if applicable, shall be identified as security for any series of Bonds in the resolution of the Trust adopted in connection with the issuance of such Bonds.

(d) The State pledges to the owners of any Clean Water Revenue Bonds to not reduce the amount of the Clean Water Surcharge imposed pursuant to Chapter 66 of Title 30 and deposited to the Clean Water Surcharge Account under Section § 8075 of this title and to not expand any exemptions to or discounts from such Clean Water Surcharge so long as any Bonds secured by the Clean Water Surcharge are outstanding.

§ 8079. Personal liability on Clean Water Revenue Bonds.

The Secretaries of Finance, DNREC, DHSS, DDA, or any person executing Clean Water Revenue Bonds issued under this subchapter are not liable personally on such Bonds by reason of the issuance thereof.

§ 8080. Exemption from taxation.

All Bonds issued under this subchapter are declared to be issued by a body corporate and politic of the State and for an essential public and governmental purpose, and those Bonds, the interest on those Bonds, and the income from those Bonds and from the sale, exchange, or other transfer of those Bonds is exempt from taxation by the State or any political subdivision of the State.

§ 8081. Receipts; application.

Sums of money received, whether as proceeds from the sale of particular Bonds or as particular revenues or receipts of the Trust, are deemed to be funds of the Trust and are to be held and applied solely as provided in the resolution or trust indenture under which a particular series of Bonds is authorized or secured. Any officer with whom, or any bank or trust company with which, those sums of money are deposited as trustee thereof shall hold and apply the same for the purposes thereof, subject to any provision as the aforementioned acts and the resolution or trust indenture authorizing or securing such series of Bonds may provide.

§ 8082. Audit.

(a) At least once a year, the Trust, through DNREC, shall independently conduct a financial and compliance audit of the Clean Water Surcharge funds received and the projects undertaken.

(b) The auditor who conducts the audit required under subsection (a) of this section must be a certified public accountant, a public accountant licensed on or before December 31, 1970, or a governmental auditor who meets all of the following:

(1) The qualification standard contained in the federal Government Accountability Office's generally accepted government auditing standards.

(2) The independence standard as enumerated by the federal General Accounting Office and the American Institute of Certified Public Accountants.

(c) The audit conducted under subsection (a) of this section must contain an opinion on the financial statements of the Clean Water Surcharge funds received, the projects undertaken, and the internal controls of the Trust.

(d) The audit conducted under subsection (a) of this section must be completed within one year of the end of the State's fiscal year and submitted to the Trust within 30 days of completion.

(e) The audit conducted under subsection (a) of this section may be conducted in conjunction with audits conducted under the Drinking Water Fund and Water Pollution Control Fund programs.

§ 8083. Liberal construction of subchapter.

This subchapter, being necessary for the prosperity and welfare of the State and its citizens, is to be liberally construed to effectuate the purposes of this subchapter.

Section 2. Amend § 8003, Title 29 of the Delaware Code by making deletions as shown by strike through and insertions as shown by underline as follows:

§ 8003. Powers, duties and functions of the Secretary.

The Secretary may:

(12) ~~The Secretary is empowered to administer~~ Administer a state revolving loan program in accordance with the requirements set forth in Title VI of the Federal Water Pollution Control Act.

d. Coordination with Delaware Clean Water Trust:

The administration of the Delaware Water Pollution Control Revolving Fund by the Secretary as set forth in this section shall be subject to the provisions of subchapter III of this chapter. If there is a conflict or inconsistency between the provisions of this paragraph (12) and subchapter III of this chapter, the provisions of subchapter III of this chapter govern.

Section 3. Amend § 7903, Title 29 of the Delaware Code by making deletions as shown by strike through and insertions as shown by underline as follows:

§ 7903. Powers, duties and functions of the Secretary.

The Secretary may:

(14) ~~The Secretary is empowered to administer~~ Administer a state revolving loan program in accordance with requirements set forth in the Federal Safe Drinking Water Act [42 U.S.C. § 300f et seq.].

c. Administration of Fund subject to subchapter III, Chapter 80 of this title. - The administration of the Delaware Safe Drinking Water Revolving Fund shall be subject to the provisions of subchapter III, Chapter 80 of this title. If there is a conflict or inconsistency between the provisions of this paragraph (14) and subchapter III, Chapter 80 of this title, the provisions of subchapter III, Chapter 80 of this title govern.

Section 4. Amend § 8011, Title 29 of the Delaware Code by making deletions as shown by strike through and insertions as shown by underline as follows:

(c) The Water Infrastructure Advisory Council (the "Council") shall serve in an advisory capacity in the development of programs related to water quality, water supply, drainage, stormwater management, and flood control to the Delaware Clean Water Trust and to the Secretaries of the Departments of Natural Resources and Environmental Control ("DNREC"), Agriculture, Health and Social Services ~~("DHSS")~~ ("DHSS"), and Finance ("DOF") ~~and collectively the ("Secretaries")~~, collectively the "Secretaries". The Council shall be composed of 13 members appointed by the Governor with the advice and consent of the Senate. The Governor shall appoint a chairperson. Members of the Council shall serve for up to 3 years excluding the Chairperson who shall serve at the pleasure of the Governor. Members may be reappointed for up to 3 terms. Members shall be appointed for staggered terms so that no more than 4 members' terms expire in any calendar year. There shall be at least 1 member who is a resident of New Castle County, 1 member who is a resident of Kent County, 1 member who is a resident of Sussex County, and 1 member who is a resident of the City of Wilmington. There shall also be 1 member representing each of the following organizations: the Delaware League of Local Governments, the Delaware Association of Counties, the Delaware Farm Bureau, the Delaware Nutrient Management Commission, the Delaware Association of Conservation Districts, an environmental organization, American Council of Engineering Companies of Delaware, and the National Association of Water Companies of Delaware. Members of the Council shall represent interest and possess expertise in the areas of wastewater, stormwater ~~and drinking water infrastructure~~, drinking water, and ecological systems. Members may include~~, but not be limited to~~ representatives from local ~~government,~~ government; non-profit environmental ~~organizations,~~ organizations; boating, sporting, and fishing users of the State's water resources; public ~~health,~~ health; agriculture ~~and~~ ; and financial management. No more than 7 members shall be affiliated with any major political party.

(e) The Council's duties and responsibilities shall include the following:

~~(1) To evaluate, establish, recommend, and adopt a long-term plan for the public funding of drinking water supply and wastewater facility infrastructure projects that shall cover a period of not less than 6 years. The plan shall be updated and prioritized on an annual basis and incorporated in DNREC's and DHSS's annual capital budget requests to the Governor. A copy of the adopted plan shall be submitted to members of the General Assembly on or before~~

~~November 15 of each year beginning in calendar year 1995;~~ To develop, with the support of the Conservation Districts, DNREC, DHSS, the Department of Agriculture, and other appropriate public and private entities, a Clean Water Plan for approval by the Delaware Clean Water Trust. The Clean Water Plan shall include, at a minimum, all of the following elements:

a. The programs and activities of the agencies related to water supply, water quality, flood protection and floodplain management, and natural systems. This shall include the collection and evaluation of surface water and groundwater data; programs to protect and manage water resources; programs to provide remedies with respect to releases or imminent threats of release of a hazardous substance at or from facilities; programs for regional water resource implementation programs; programs for the construction, operation, and maintenance of major public works facilities to provide for flood control, water storage, and groundwater recharge augmentation; and related technical assistance to local governments and to government-owned and privately owned water utilities.

b. The water quality standards of this State.

c. Any water resource management plans developed by the Conservation Districts.

d. A Strategic Plan, to be updated and reported to the General Assembly annually, which shall be based upon policies and directives from the Council, as approved by the Trust, that shall meet the following minimum requirements:

1. Establishes water resources management priorities for a minimum of 5 years into the future, including water supply, water quality, flood protection and floodplain management, and natural systems.

2. Identifies the goals, strategies, success indicators, funding sources, deliverables, and milestones to accomplish the strategic priorities.

3. Includes as an Addendum a separate Annual Work Plan Report on the implementation of the Strategic Plan for the previous fiscal year, addressing success indicators, deliverables, and milestones.

4. Includes at least one publicly noticed meeting to allow public comment on the proposed Strategic Plan.

(6) The Council shall make funding recommendations to the Delaware Clean Water Trust and to the Secretaries of ~~the~~ DNREC and DHSS ~~of~~ for drinking water and wastewater ~~infrastructure~~ projects that are "ready to proceed."

(h) The Council shall provide guidance ~~and policy advice to the Governor and Secretaries and assistance in the development of programs related to water supply, drainage, stormwater management, and flood control. This guidance shall include State level direction the DNREC and DHSS~~ to the Delaware Clean Water Trust; DNREC; the Department of

Agriculture; Conservation Districts, described in § 3309 of Title 7; DHSS; and local agencies and operating units in the development of standardized processes and procedures for identifying and prioritizing problems and development of watershed-based solutions. The Council also shall provide guidance to the State in improving the quality of customer service and reviewing annual localized work plans.

Section 5. Amend Part VI, Title 30 of the Delaware Code by making deletions as shown by strike through and insertions as shown by underline as follows:

Chapter 66. Clean Water Surcharges.

§ 6601. Definitions.

As used in this chapter:

(1) "Allowable tax credits" means the amount of tax credits an individual is allowed under §§ 1111, 1112, 1113, 1114, and 1117 of this title and Chapters 18 and 20 of this title.

(2) "Gross income tax liability" means either of the following:

a. For resident individuals, an amount equal to the tax determined under § 1102 of this title reduced by the credit allowed under § 1110(b) of this title.

b. For non-resident individuals, an amount equal to the amount derived under § 1121 of this title.

(3) "Net income tax liability" means gross income tax liability less any allowable tax credits.

§ 6602. Clean Water Personal Income Tax Surcharge.

There shall be a Clean Water Personal Income Tax Surcharge in an amount equal to 10% of the net income tax liability of each resident and non-resident taxpayer, but in no event shall such surcharge exceed $80 in the case of individuals filing a joint return or $40 in the case of all other individuals.

§ 6603. Clean Water Business License Surcharge.

(a) In addition to the annual business and occupational license fees required under this title, there shall be levied a Clean Water Business License Surcharge according to the following schedule:

(1) For all annual occupational license fees required under § 2301(a) of this title, there shall be added a surcharge in the amount of $45.

(2) For annual licenses issued pursuant to § 2301(b) of this title, there shall be added a surcharge in the amount of $45.

(3) For annual licenses issued pursuant to § 2502(a) of this title, there shall be added a surcharge in the amount of $45.

(4) For annual licenses issued pursuant to § 2702(a) and § 2703(b) of this title, there shall be added a surcharge in the amount of $45.

(5) For annual licenses issued pursuant to § 2902(b), § 2903(b), § 2904(b), and § 2907(b) of this title, there shall be added a surcharge in the amount of $45.

(6) For annual licenses issued pursuant to § 2905(a), § 2906(b), and § 2908(b), of this title, there shall be added a surcharge in the amount of $45.

(7) For annual licenses issued pursuant to § 3005(a) of this title, there shall be added a surcharge in the amount of $45.

(8) For annual licenses issued pursuant to § 4305(a) of this title, there shall be added a surcharge in the amount of $45.

(b) All surcharge amounts enumerated in subsection (a) of this section shall be tripled for any person electing a three-year license term under § 2102(b) of this title.

§ 6604. Surcharge proceeds.

(a) The Director of Revenue shall be entitled to retain an amount not to exceed 0.5% of all proceeds collected under this chapter for the costs of administering and collecting the surcharges provided for under this chapter.

(b) The Director of Revenue shall transfer all proceeds collected, net of the reimbursement permitted under § 6604(a), and refunds issued, if any, under this chapter to the Clean Water Surcharge Account established under § 8075 of Title 29. The Director shall endeavor to effectuate such transfers in a timely manner, but such transfers shall include only amounts arising from filings the Director deems to be completed filings, which require no additional processing, documentation, audit, or due process requirements resulting from a taxpayer's protest or appeal.

Section 6. Effective Date. Sections 1 through 4 of this Act take effect upon enactment. Section 5 of this Act is effective for tax periods beginning after December 31, 2016.

Section 7. Severability. If any provision of this Act or the application thereof to any person or circumstance is held invalid, the invalidity does not affect any other provisions or applications of the Act which can be given effect without the invalid provision or application; and, to that end, the provisions of this Act are declared to be severable.

SYNOPSIS

This Act establishes a framework for assessing needs, planning and implementing projects, and providing a funding source to enhance and accelerate Delaware's efforts in cleaning up its contaminated water resources, ensuring that all our citizens have safe drinking water, reducing flooding, and protecting jobs in agriculture and tourism. Most of the State's waters do not meet water quality standards to support their designated uses, such as for drinking, swimming or supporting aquatic life.

This Act increases the level and reliability of funding available to restore Delaware's streams, rivers, bays, and groundwater through construction of much needed wastewater, drinking water, and drainage projects and increased use of agricultural best practices. Over the next 5 years, more than $500 million in water and wastewater system upgrades are

needed statewide, including systems for underserved communities and numerous at-risk systems currently operated by homeowner's associations in Sussex County. More than $150 million in stormwater upgrades are needed throughout the State along with more than $75 million for removing toxic pollutants from various waterways. In addition, demand for agriculture cost-share funds used to reduce pollution from nutrients far surpasses available resources.

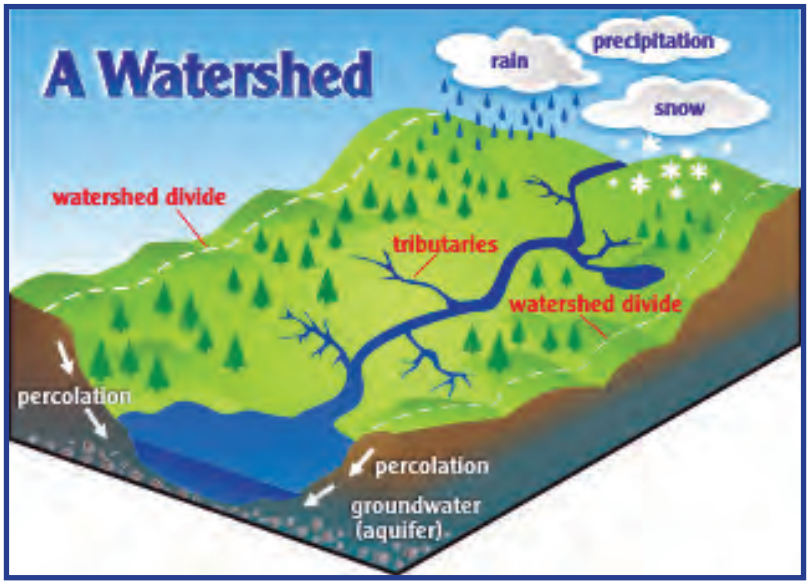
This Act creates a Clean Water Trust, supported by dedicating several existing revenue sources and a proposed new dedicated Clean Water Surcharge that will be levied on personal income tax payments and business license fees. The surcharge will be capped at $40 for individual tax filers, $80 for individuals filing a joint return, and $45 for business licenses. The Clean Water Surcharge will be used for capital projects, not to grow government; the allowance for administrative expenses is capped at 10% after the first 2 years and companion legislation creating a constitutionally protected "lock box" is being introduced to provide permanent protection against the fee being diverted for operating expenses. Total revenues from the surcharge are estimated to be approximately $20 million annually. The dedicated Clean Water Surcharge could leverage as much as $50 million in total financing annually for clean water investments and support more than 800 direct and indirect jobs per year.

The Trust will be managed by a 5-member Board comprised of the Secretary of the Department of Natural Resources and Environmental Control, the Secretary of Finance, the Secretary of Agriculture, the Secretary of Health and Social Services, and an appointed member with financial expertise. The Trust is authorized to issue Clean Water Revenue Bonds for projects approved by the General Assembly and will administer the funds through the already existing Water Infrastructure Advisory Council with the goal of assisting municipal and county governments and others in implementing more affordable water quality projects through low-interest loans, grants, and public-private partnerships. The Trust and Council are required to develop a Clean Water Plan with an annually updated 5-year Strategic Plan. The Trust is required to undergo an audit each year and to report annually to the General Assembly on its activities and its progress toward meeting the goals of the Clean Water Plan.

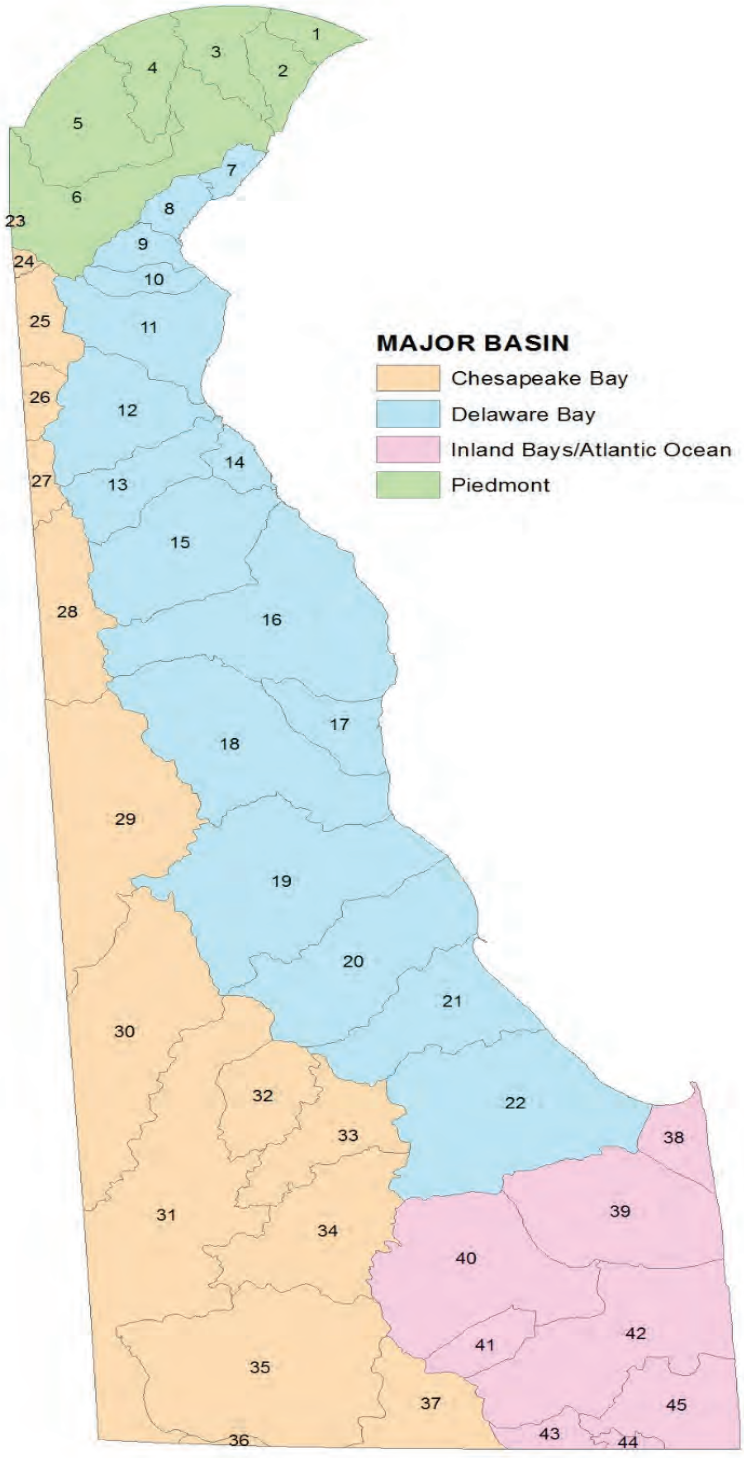
Appendices

Appendix No. 1:

DNREC - Delaware Watersheds



Delaware Watersheds



Piedmont Watershed
1. Naamans Creek
2. Shellpot Creek
3. Brandywine Creek
4. Red Clay Creek
5. White Clay Creek
6. Christina River

Delaware Bay Watershed
7. Delaware River
8. Army Creek
9. Red Lion Creek
10. Dragon Run Creek
11. C & D Canal East
12. Appoquinimink River
13. Blackbird Creek
14. Delaware Bay
15. Smyrna River
16. Leipsic River
17. Little Creek
18. St. Jones River
19. Murderkill River
20. Mispillion River
21. Cedar Creek
22. Broadkill River

Chesapeake Bay Watershed
23. Elk Creek
24. Perch Creek
25. C & D Canal West
26. Bohemia Creek
27. Sassafras River
28. Chester River
29. Choptank River
30. Marshyhope Creek
31. Nanticoke River
32. Gum Branch
33. Gravelly Branch
34. Deep Creek
35. Broad Creek
36. Wicomico
37. Pocomoke River

Inland Bays Watershed
38. Lewes-Rehoboth Canal
39. Rehoboth Bay
40. Indian River
41. Iron Branch
42. Indian River Bay
43. Buntings Branch
44. Assawoman
45. Little Assawoman

Piedmont

Watersheds of the Piedmont: Brandywine Creek | Christina River | Naamans' Creek | Red Clay Creek | Shellpot Creek | White Clay Creek

Characteristics

The entire Piedmont Basin, 80% of which lies in Pennsylvania, empties into the Delaware River and is part of the Delaware Estuary. The Piedmont Basin contains the Brandywine Creek, Red Clay Creek, White Clay Creek, Christina River, Naamans Creek, and Shellpot Creek watersheds.

The Piedmont Basin supplies a significant source of freshwater from both surface water and groundwater sources. The largest surface water supply for the Piedmont Basin is the Delaware River, yet use is limited to industrial cooling due to the brackish-to-saline nature of the water.

The Brandywine Creek serves the largest surface water drinking water supply with most of the Brandywine drainage area in Chester County, Pennsylvania. Other sources of surface water supply include the Red and White Clay Creeks and the Christina River.

Wildlife and Fisheries

The tidal waters of the Christina River support a striped bass fishery and spawning grounds, while the nontidal waters of the Brandywine Creek provide exceptional smallmouth bass fishing habitat. Sampling conducted by the Delaware Department of Natural Resources and Environmental Control (DNREC) in 2010 show that there are abundant anadromous fish species present and spawning in the White Clay Creek, including American shad, Hickory shad, White perch, Striped bass, Alewives, and Blueback herring. Efforts to remove the dams for fish to migrate further up the Brandywine and White Clay Creeks are underway.

Water Quality

The Piedmont is home to among the most intensive land uses and historic industrial and manufacturing facilities in the state. In addition to sediments and nutrients draining into the basin from headwaters in Pennsylvania, parts of the Piedmont are challenged by legacy contaminants such as toxics and metals, which were disposed of prior to modern, environmentally sustainable practices.

Delaware Bay & Estuary Basin

Watersheds of the Delaware Bay & Estuary Basin: Appoquinimink River | Army Creek | Blackbird Creek | Broadkill River | C&D Canal East | Cedar Creek | Delaware Bay | Delaware River | Dragon Run Creek | Leipsic River | Little Creek | Mispillion River | Murderkill River | Red Lion Creek | Smyrna River | St. Jones River

Characteristics

The Delaware Bay & Estuary Basin is located in eastern New Castle, Kent, and Sussex counties, and drains runoff from the Delaware Bay and Delaware Estuary. The basin drains approximately 520,960 acres, or 814 square miles, and encompasses the following watersheds: Delaware River, Army Creek, Red Lion Creek, Dragon Run Creek, Chesapeake & Delaware Canal East, Appoquinimink River, Blackbird Creek, Delaware Bay, Smyrna River, Leipsic River, Little Creek, St. Jones River, Murderkill River, Mispillion River, Cedar Creek, and Broadkill River.

Wildlife and Fisheries

Because of its strategic location, the Delaware Basin and its wetlands and associated uplands are extremely important to waterfowl and other wetland dependent migratory birds in the Atlantic Flyway. The wetlands across the Basin are regionally small but when interconnected form a critical route for birds that migrate between and/or winter in the Delaware and Chesapeake Bays. For this reason, conservation agencies place the highest priority on the protection, restoration and enhancement of habitats that serve as wintering areas or reduce fragmentation of prominent migration corridors for migratory birds. The Delaware Basin provides unique habitat during migration for high priority species designated by the North American Waterfowl Conservation Act (NAWCA) which includes the Black Duck, Mallard, and Northern Pintail, and is a focus area for the Atlantic Coast Joint Venture.

Water Quality

Water quality challenges in the Delaware Estuary Watershed come from a variety of sources including nutrients from a variety of activities including agriculture, sepitc systems, wastewater treatment plants and lawn fertilization. In addition, certain areas are impacted by contaminants from industrial, manufacturing or historic disposal practices of hazardous contaminants such as metals, volatile organic compounds.

Inland Bays

Watersheds of the Inland Bays: Assawoman | Buntings Branch | Indian River | Indian River Bay | Iron Branch | Lewes-Rehoboth Canal | Little Assawoman | Rehoboth Bay

Characteristics

The Inland Bays/Atlantic Ocean Basin comprises approximately 313 square miles of eastern Sussex County. Distinctive physiographic characteristics include the flat topography and man-made drainage ditches that are used to drain soils with perennially high water tables, which are mostly limited to the area south of Millsboro and Indian River Bay.

Water Quality

The Inland Bay waters are highly enriched with the nutrients nitrogen and phosphorus, the contaminants having the greatest impact on the surface and groundwater of the Inland Bays. While nitrogen and phosphorus are essential for plant and animal growth, when excess amounts enter the bays, water quality can deteriorate as aquatic plant growth accelerates and the level of oxygen is reduced, leading to eutrophication.

Existing contamination may be the result of either pastor present human activities. Past practices, such as landfill operations (now closed) and Superfund sites may still be contaminant sources. Contamination from current activities may occur routinely, as in a permitted discharge of a municipal wastewater treatment plant; or may occur as a result of a spill or leak, as in ground-water contamination from a leaking underground storage tank. Contamination may be transported or exchanged between various media, such as a contaminant that was land applied that is subsequently transported in ground or surface water.

Nitrogen and phosphorus originating from agricultural activities have been identified as key factors in non-point source pollution in the Inland Bays/Atlantic Ocean Basin. There are approximately 72,000 acres of agricultural land in the Basin, representing more than 40 percent of the total land area. The majority of croplands are devoted to growing corn, soybeans, and sorghum, which go to feed the Basin's thriving poultry industry.

Wildlife and Fisheries

Recreational saltwater fishing within the Inland Bays and nearshore Atlantic Ocean is extremely popular. In Falk's 1995 Boating Survey, 78 percent of the boaters listed fishing as the primary reason for boating. The Inland Bays received an estimated 481,123 boating days. If 78 percent of the boaters also fished, a total of 375,276 days were spent fishing on the Inland Bays (as compared to 112,583 days on the ocean.)

The game species most sought after within the Inland Bays are summer flounder, sea trout, bluefish, tautog, white perch, rockfish, and winter flounder. In addition to these species, smooth dogfish, sandbar sharks, and kingfish are caught in the surf. The fishery in the ocean has the added variety of pelagic fish such as white marlin, yellowfin tuna, mako shark, cod, and ling.

Chesapeake Bay

Bohemia Creek | Broad Creek | C&D Canal West | Chester River | Choptank River | Deep Creek | Elk River | Gravelly Branch | Gum Branch | Marshyhope Creek | Nanticoke River | Perch Creek | Pocomoke River | Sassafras River | Wicomico River

Characteristics

The Chesapeake Basin is named for the nation's largest estuary, the Chesapeake Bay. As an estuary, the Bay contains a mixture of fresh and saltwater, creating an ideal habitat for a diverse array of plants and animals. The Bay's welfare is heavily reliant on the land use of the Basin, since Delaware's portion of the Chesapeake Basin contains headwater areas, the area where a waterway originates. The Basin encompasses a 769-square-mile area of land in western New Castle, Kent, and Sussex Counties.

Wildlife and Fisheries

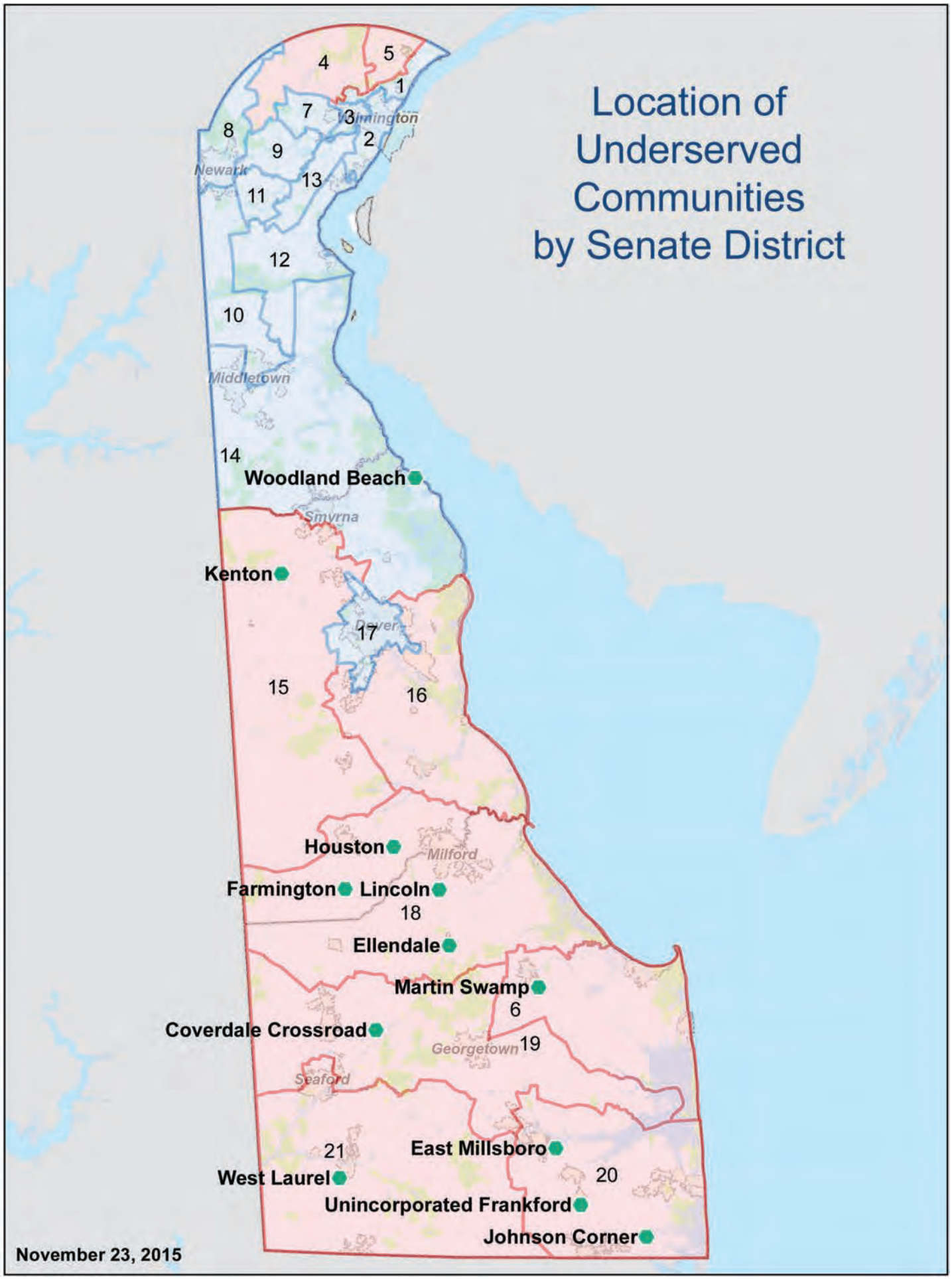
The streams and rivers that drain into the Chesapeake Bay support many species of fish harvested for both food and profit. Substantial commercial fishing efforts take place in the Nanticoke River, with American shad, blueback herring, alewife, white catfish, channel catfish, striped bass, and white perch representing the highest percentage of the catch. Many of Delaware's residents and visitors depend on water for their recreation enjoyment. Fishing, swimming, and boating are popular activities throughout Delaware. Delaware's portion of the Chesapeake Basin includes a dozen publically-owned ponds and lakes, comprising nearly 700 acres that serve recreational needs. The health of Delaware's waters will affect the recreation potential of these ponds and streams. Delaware's wildlife represents a vital recreational resource base as well. Both hunting and birding depend on the health of the state's natural resource.

Water Quality

The primary water quality concerns in the watershed are from nutrients entering the Bay from agricultural runoff, urban runoff, and municipal and industrial point source discharges. In addition to agriculture, septic systems also contribute high amounts of nutrients to the Chesapeake Bay. The Chesapeake Basin has one of the highest percentages, 95%, of land area covered by septic systems. Water naturally contains nutrients as natural erosion and organic material degeneration occurs. However, soil erosion, domestic waste disposal, and runoff can lead to an unhealthily high concentration of nutrients in the water, a situation referred to as eutrophication. Eurtrophication occurs when an excess of nutrients, primarily nitrogen and phosphorus, enters the water and causes accelerated growth of algae and phankton, depletion of dissolved oxygen, increased turbidity, and an overall decrease in water quality. Fish and aquatic organisms cannot survive without dissolved oxygen; eutrophication is one of the most serious problems facing the Chesapeake Bay today.

Appendix No. 2:

Underserved Communities


Location of Underserved Communities by Senate District
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9
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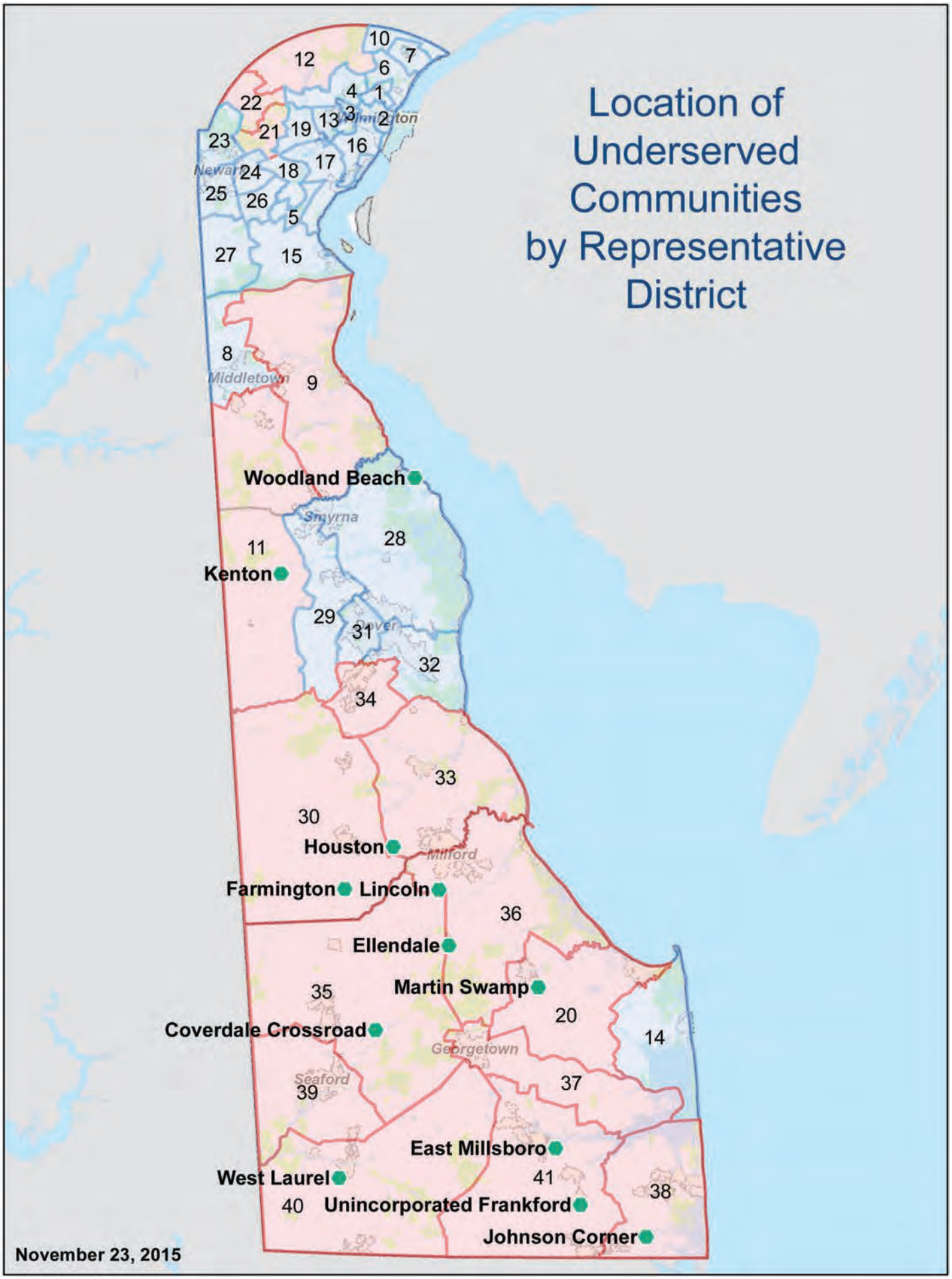
12
10
14
Newark
Middletown
Smyrna
Dover
17
15
16
18
6
19
21
20
Woodland Beach
Kenton
Houston
Milford
Farmington
Lincoln
Ellendale
Martin Swamp
Coverdale Crossroad
Georgetown
Seaford
East Millsboro
West Laurel
Unincorporated Frankford
Johnson Corner
November 23, 2015


Location of Underserved Communities by Representative District
10
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4
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22
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13
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21
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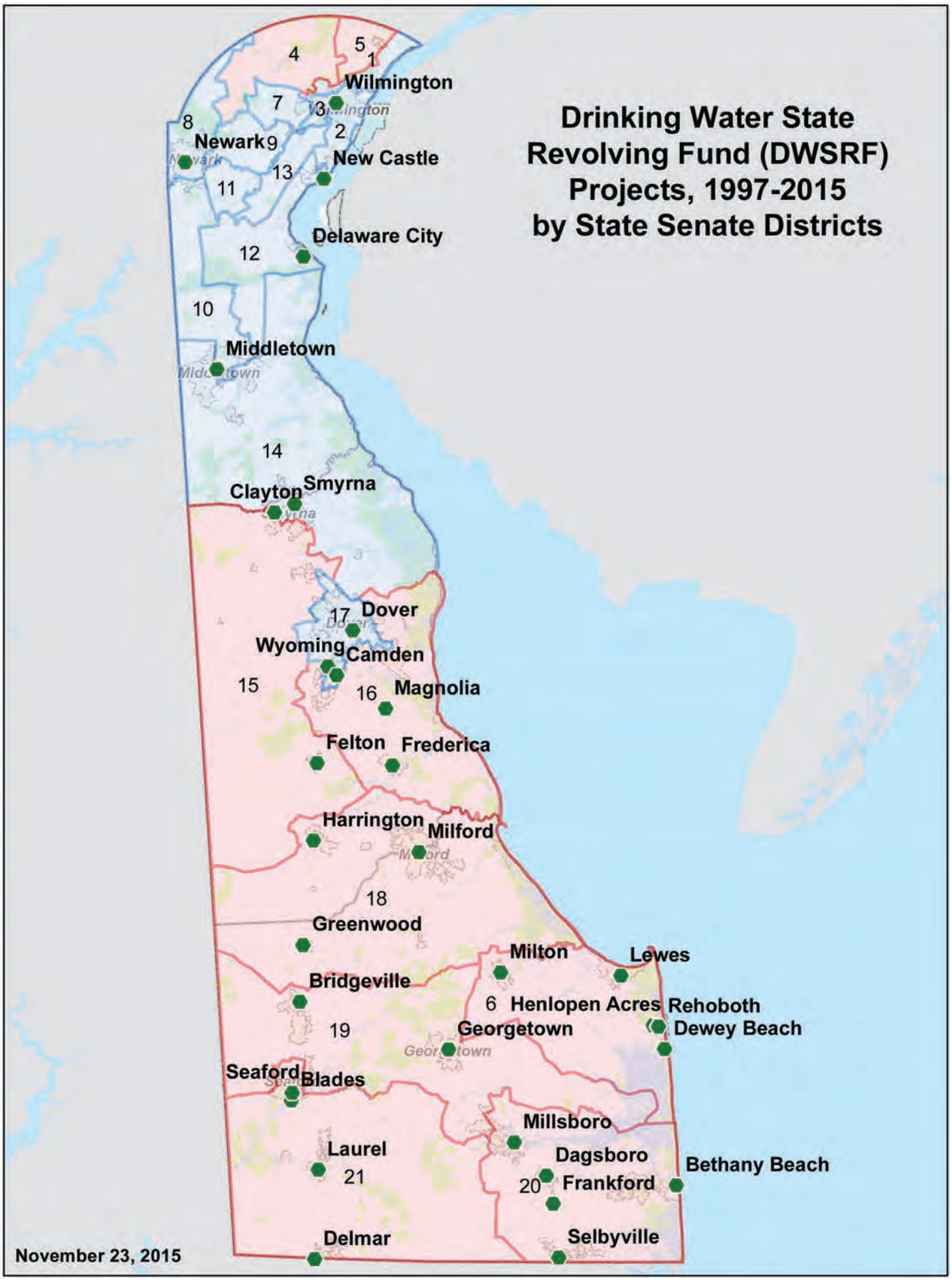
26
5
27
15
8
9
Middletown
Woodland Beach
Smyrna
28
11
Kenton
29
31
32
34
33
30
Houston
Milford
Farmington
Lincoln
36
Ellendale
Martin Swamp
35
20
14
Coverdale Crossroad
Georgetown
Seaford
37
39
East Millsboro
West Laurel
41
38
40
Unincorporated Frankford
Johnson Corner
November 23, 2015

Underserved Communities in Delaware

Underserved Community	Address	Town	State	Zip	Location	Cost (in 1998)	Senate District	House District
Woodland Beach	83 Smryna Ave	Smyrna	DE	19977	East of Smyrna Rt 6	$639,000	14	28
Kenton	284 S Main St	Kenton	DE	19955	Rts 42 and 300 W of Clayton	$679,000	15	11
Houston	143 Broad St	Houston	DE	19954	S Rt 14 between Milford and Harrington	$1,382,000	18	33
Farmington	20920 S DuPont Hwy	Farmington	DE	19950	W Rt 13 south of Harrington	$671,000	18	30
Lincoln	8419 Rd 38B	Lincoln	DE	19960	E Rt 113 south of Milford	$1,878,000	18	36
Ellendale	300 McCaulley Ave	Ellendale	DE	19941	E Rt 113 along Rt 16	$2,037,000	18	36
Martin Swamp	16372 Sam Lucas Rd	Milton	DE	19968	E Milton along Sam Lucas Rd	$491,000	6	20
Coverdale Crossroads	20265 Coverdale Rd	Bridgeville	DE	19933	Rt 18 and Coverdale Rd	$1,161,000	18	35
East Millsboro	29984 Pinnacle Way	Millsboro	DE	19966	Area around closed Pinnacle Foods plant	$2,127,000	20	41
West Laurel	9012 Sharptown Rd	Laurel	DE	19956	SW of Laurel	$5,428,000	21	40
Unincorporated Frankford	34572 Delaware Ave	Frankford	DE	19945	S of Frankford on Delaware Ave	$217,000	20	41
Johnson's Corner	35141 Johnson Store Rd	Selbyville	DE	19975	SE of Roxana	$828,000	20	30
						$17,538,000		

Appendix No. 3:

Statewide Wastewater, Stormwater, and Other Infrastructure-Related Needs, 1997 through 2015


Drinking Water State Revolving Fund (DWSRF) Projects, 1997-2015 by State Senate Districts
Wilmington
New Castle
Newark
Delaware City
Middletown
Smyrna
Clayton
Dover
Wyoming
Camden
Magnolia
Felton
Frederica
Harrington
Milford
Greenwood
Milton
Lewes
Bridgeville
Henlopen Acres
Rehoboth
Georgetown
Dewey Beach
Seaford
Blades
Millsboro
Laurel
Dagsboro
Bethany Beach
Frankford
Delmar
Selbyville
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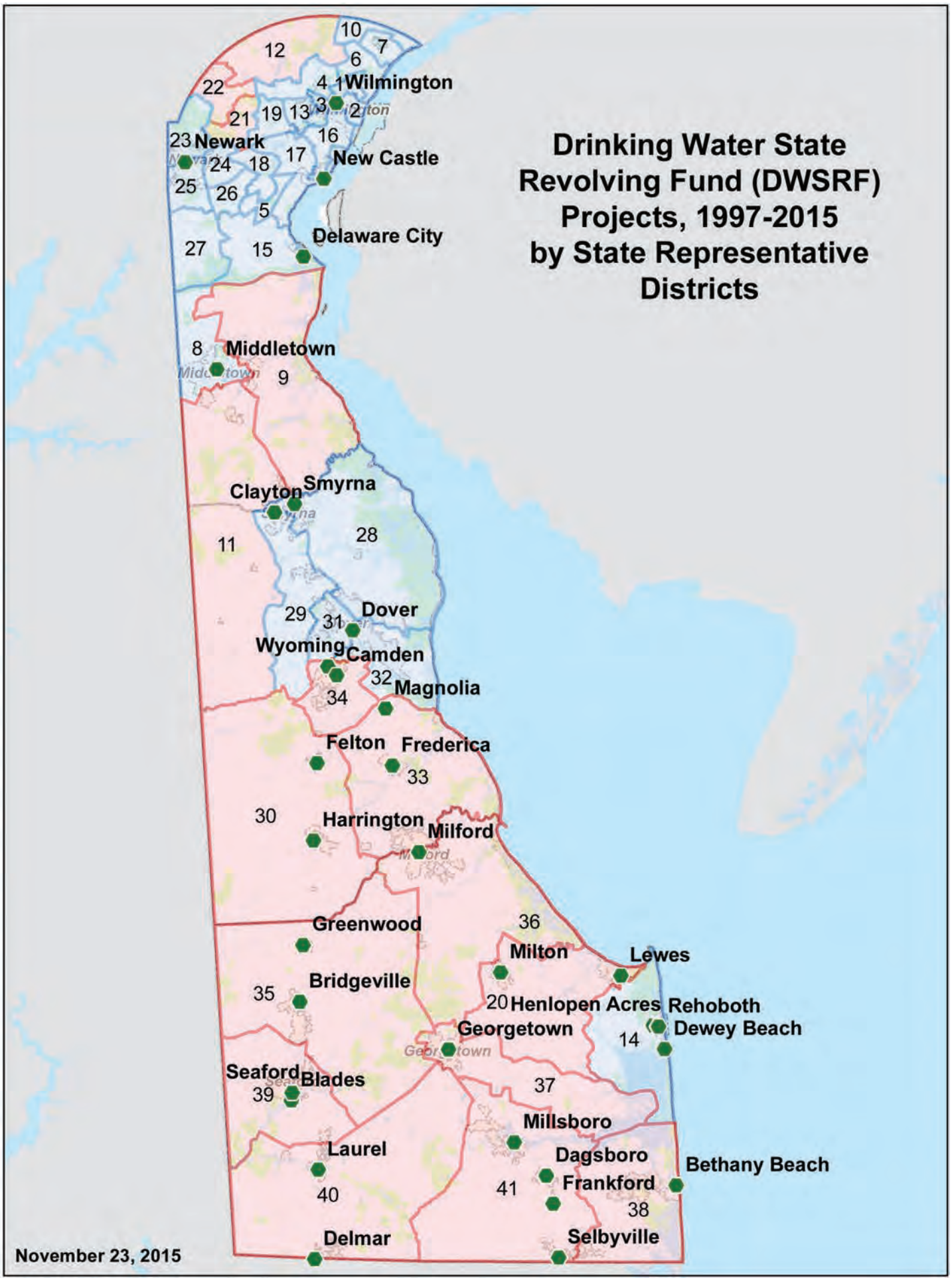
November 23, 2015


Drinking Water State Revolving Fund (DWSRF) Projects, 1997-2015 by State Representative Districts
Wilmington
Newark
New Castle
Delaware City
Middletown
Clayton
Smyrna
Dover
Wyoming
Camden
Magnolia
Felton
Frederica
Harrington
Milford
Greenwood
Milton
Lewes
Bridgeville
Henlopen Acres
Rehoboth
Georgetown
Dewey Beach
Seaford
Blades
Millsboro
Laurel
Dagsboro
Bethany Beach
Frankford
Delmar
Selbyville
November 23, 2015

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
LAST UPDATE: MAY 2016

Data Source: Updated Statewide Wastewater Assessment Study; Clean Water State Revolving Fund (CWSRF) Project Notices-of-Intent (NOIs); and Municipal Capital Improvement Plans. CWSRF NOIs are solicited twice per year; therefor estimated project needs change from year to year.
"Wastewater" project needs primarily include repair, upgrade, and replacement of existing facilities, except for Sussex County which include new sewer districts and expansion of existing sewer districts.
"Stormwater" project needs include new infrastructure to address flooding and drainage concerns.
"Other" includes needed studies, ancillary equipment needs, and green infrastructure such as pervious walking path replacement, and pervious parking lots.

Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
New Castle County	Brandywine Hundred South Rehab Phase 1	$8,500,000				$8,500,000	X			1	2
	Brandywine Hundred South Rehab Phase 2	$300,000	$500,000	$500,000	$500,000	$1,800,000	X			1	2
	South Christiana Interceptor Analysis		$3,000,000	$4,500,000	$3,000,000	$10,500,000	X			17	9
	Brandywine Hundred North Rehab Phase 1	$5,500,000				$5,500,000	X			7	1
	Brandywine Hundred North Rehab Phase 2	$300,000	$500,000	$500,000	$500,000	$1,800,000	X			7	1
	Richardson Park Pump Station Upgrade		$5,000,000			$5,000,000	X			2	3
	Brandywine Interceptor Renovation	$1,000,000	$1,000,000			$2,000,000	X			4,6,10,12	1,4,5
	Little Mill Basin Rehabilitation		$1,500,000	$1,500,000	$1,500,000	$4,500,000	X			12,21,22,23	4,7,8,9
	Stoney Creek Basin Rehabilitation	$1,000,000	$1,000,000			$2,000,000	X			1,4,6,7,10,12	1,4,5
	Southern Sewer Service Area		$400,000	$400,000		$800,000	X			8,9	10,14
	Pump Station Rehabilitation	$900,000	$900,000	$900,000	$900,000	$3,600,000	X			Countywide	Countywide
	Christiana River Force Main	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$8,000,000	X			Countywide	Countywide
	Countywide Manhole Rehabilitation		$750,000	$750,000	$750,000	$2,250,000	X			Countywide	Countywide
	Asset Management	$700,000				$700,000			X	Countywide	Countywide
	DelDOT Coordination Project		$1,000,000	$1,000,000	$1,000,000	$3,000,000		X		Countywide	Countywide
	Sewer Repairs and Rehabilitation II		$1,500,000	$1,500,000	$1,500,000	$4,500,000	X			Countywide	Countywide
	Countywide Trenchless Rehab		$1,000,000	$1,000,000	$1,000,000	$3,000,000	X			Countywide	Countywide
	Glasgow Area Sewer Improvements		$1,000,000			$1,000,000	X			Countywide	Countywide
	Backwater Valve Improvements		$100,000	$100,000	$100,000	$300,000	X			Countywide	Countywide
	MOT Area Maintenance Base		$500,000			$500,000	X			Countywide	Countywide
	Wastewater Treatment Plants / Discharge		$50,000			$50,000	X			Countywide	Countywide
	Mill Creek Interceptor Relief	$1,500,000	$1,000,000			$2,500,000	X			12	8
	Brandywine Hundred Clearwater Program					$0	X			6	1
	White Clay Creek Sewer Basin Rehabilitation		$1,150,000	$1,000,000	$3,500,000	$5,650,000	X			23	8
	Pike Creek Improvements	$2,000,000				$2,000,000	X			23	8
	General Sewer Improvements	$500,000	$525,000	$550,000	$575,000	$2,150,000	X			All*	All*
	Kirkwood Trunk Line Interceptor	$3,000,000				$3,000,000	X			15	12
	Delaware City Treatment Plant Rehabilitation	$800,000				$800,000	X			15	12
New Castle County -Subtotal:		**$28,000,000**	**$24,375,000**	**$16,200,000**	**$16,825,000**	**$85,400,000**					

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
LAST UPDATE: MAY 2016

Data Source: Updated Statewide Wastewater Assessment Study; Clean Water State Revolving Fund (CWSRF) Project Notices-of-Intent (NOIs); and Municipal Capital Improvement Plans. CWSRF NOIs are solicited twice per year; therefor estimated project needs change from year to year.
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"Other" includes needed studies, ancillary equipment needs, and green infrastructure such as pervious walking path replacement, and pervious parking lots.

Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
Town of Middletown	Frog Hollow sludge removal from aeration lagoon (cost a prelim. estimate)	$200,000				$200,000	X			9	10
(Middletown and Frog Hollow)	Modification to existing test RIBS on Ford and VonCroy Farms for University Study	$100,000				$100,000	X			11	14
	RIBS at existing Ford and VonCroy Farms		$2,405,000			$2,405,000	X			11	14
	Various upgrades, rehabilitation, and new installations to laterals, force mains, pump stations, and filters	$3,000,000				$3,000,000	X			8	14
	PLC implementation on 3 regional lift stations that flow to headworks of Middletown Wastewater Treatment Plant	$50,000				$50,000	X			8,9,11	10,14
	Two filters at existing Industrial Drive filter plant location		$1,500,000			$1,500,000	X			8	14
	SBR plant at existing Industrial Drive location; possible alternate treatment		$16,500,000			$16,500,000	X			8	14
	Vehicle Replacements (Collection and Transport)	$60,000	$60,000			$120,000			X	8	14
	Saint Anne's Spray Facility permitting	$20,000				$20,000	X				
	Headworks capacity increase / improvements		$500,000			$500,000	X			8,9,11	10,14
	SCADA upgrades	$108,000				$108,000	X			8,9,11	10,14
	Wood St. Road Utility and Stormwater Rehab	$111,000				$111,000	X			8,9,11	10,14
	Wood St. Road Utility and Stormwater Rehab	$217,400				$217,400		X		8,9,11	10,14
Town of Middletown - Subtotal:		**$3,866,400**	**$20,965,000**	**$0**	**$0**	**$24,831,400**					

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
LAST UPDATE: MAY 2016

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Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
City of Wilmington	Annual Minor Sewer Construction	$1,500,000				$1,500,000	X			1,2,3,4,13	1,2,3
	Major Sewer Improvements	$5,000,000				$5,000,000	X			1,2,3,4,13	1,2,3
	Sewer Separation & Flow Monitoring	$2,000,000				$2,000,000	X			1,2,3,4,13	1,2,3
	Stormwater Drainage Project	$1,800,000				$1,800,000		X		1,2,3,4,13	1,2,3
	11th St Pumping Station Upgrade	$2,000,000				$2,000,000	X			2,4	1,2,3
	Urban Forest Mgmt Program	$500,000				$500,000			X	1,2,3,4,13	1,2,3
	2018 Sewer Placeholder		$8,000,000			$8,000,000	X			1,2,3,4,13	1,2,3
	Stormwater Mitigation (Water Quality)	$1,000,000				$1,000,000		X		1,2,3,4,13	1,2,3
	WWTP Electrical Improvements	$2,500,000				$2,500,000	X			1,2,3,4,13	1,2,3
	South Wilmington Wetlands Park	$8,400,000				$8,400,000		X		1,2,3,4,13	1,2,3
	Ed Oliver Golf Course Water Harvesting and Reuse Project		$2,465,000			$2,465,000		X		1,2,3,4,13	1,2,3
	Shallcross Avenue Sewer Separation		$925,000			$925,000	X			1,2,3,4,13	1,2,3
City of Wilmington - Subtotal:		**$24,700,000**	**$11,390,000**	**$0**	**$0**	**$36,090,000**					
City of Newark Sewer Authority	S0904, Sanitary Sewer Study	$587,500	$600,000	$700,000	$750,000	$2,637,500	X			23,24,25	8,9,10,11
	Western Area Drainage Ditch Flood Mitigation	$10,000,000				$10,000,000		X		23,24,25	8,9,10,11
City of Newark - Subtotal:		**$10,587,500**	**$600,000**	**$700,000**	**$750,000**	**$12,637,500**					

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
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Municipality	Project								Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
Kent County	Treatment Plant Upgrades:										
	TMDL Study for development of water standards	$200,000	$200,000	$200,000	$200,000	$800,000			X	33	16
	Spray Irrigation, Land Acquisition and Permitting	$600,000	$600,000	$600,000	$600,000	$2,400,000	X			33	16
	Replace Pumps and Valves Recycle PS 1 &2	$80,000	$80,000			$160,000	X			33	16
	Bio Solids Capacity Expansion	$2,400,000	$2,000,000			$4,400,000	X			33	16
	Replace Clarifier 1 & 2 Superstructure	$500,000				$500,000	X			33	16
	Air Blower System Optimization	$4,090,000	$1,114,000			$5,204,000	X			33	16
	Guaranteed Energy Efficiency Project		$12,666,667	$12,666,667	$12,666,667	$38,000,000	X			33	16
	Conveyance System Upgrades:										
	North Central Bypass	$450,000				$450,000	X			33	16
Kent County - Subtotal:		**$8,320,000**	**$16,660,667**	**$13,466,667**	**$13,466,667**	**$51,914,000**					
City of Harrington	Decommission Old Wastewater Lagoons	$1,000,000				$1,000,000	X			30	18
	Sewer Rehabilitations	$1,000,000	$700,000			$1,700,000	X			30	18
	I&I Study and Projects	$1,500,000	$1,000,000			$2,500,000	X			30	18
City of Harrington - Subtotal		**$3,500,000**	**$1,700,000**	**$0**	**$0**	**$5,200,000**					
Camden-Wyoming	Septic elimination, Existing homes, Route 10, and existing Tamarac/Burwood development	$350,000				$350,000	X			34	17
Sewer & Water Authority	Sanitary Sewer Survey, Flushing, video taping, and smoke testing of the sanitary sewer system.	$50,000				$50,000	X			34	17
	Replacement of Old North Road gravity sanitary sewer system, Approx. 1,400 LF sanitary sewer main and 9 manholes	$162,500				$162,500	X			34	17
	Rehabilitation of existing manholes, Especially in flood prone areas	$150,000				$150,000	X			34	17
	Large-scale replacement of existing sanitary sewer collection system, Approx. 47,200 LF of vitrified clay	$3,800,000				$3,800,000	X			34	17
	Replacement of Mechanic Street gravity sanitary sewer system, Approx. 3,000 LF sanitary sewer main, 12 manholes, and 75 laterals	$823,500				$823,500	X			34	17
Camden-Wyoming - Subtotal		**$5,336,000**	**$0**	**$0**	**$0**	**$5,336,000**					

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
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"Other" includes needed studies, ancillary equipment needs, and green infrastructure such as pervious walking path replacement, and pervious parking lots.

Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
City of Dover	Tar Ditch Interceptor Upgrade (NOI)	$350,000				$350,000		X		31,32	17
	Lepore Road Sewer Upgrade (NOI)		$50,000	$250,000		$300,000	X			31,32	17
	Rolling Acres Pump Station Upgrade	$52,000	$372,000			$424,000	X			31,32	17
	Del Tech Pump Station Replacement (NOI)		$52,000	$384,000		$436,000	X			31,32	17
	Silver Lake Pump Station Replacement (NOI)			$52,000	$396,000	$448,000	X			31,32	17
	Walker Woods Pump Station Replacement (NOI)				$52,000	$52,000	X			31,32	17
	Retreat Pump Station Replacement	$360,500				$360,500	X			31,32	17
	Inflow/Infiltration Removal/System Improvements	$875,000	$1,196,000	$1,250,000	$1,250,000	$4,571,000	X			31,32	17
	Misc. Sewer System Improvements	$300,000				$300,000	X			31,32	17
City of Dover - Subtotal		**$1,937,500**	**$1,670,000**	**$1,936,000**	**$1,698,000**	**$7,241,500**					
Milford Sewer Authority	Fisher Ave Pump Station Rehab	$750,000				$750,000	X			36	18
	Misc Pump Station Rehabs		$800,000			$800,000	X			33,36	18
	Shawnee Acres Pump Station Replacement	$1,000,000				$1,000,000	X			36	18
	SCADA Integration		$250,000			$250,000	X			33,36	18
City of Milford - Subtotal		**$1,750,000**	**$1,050,000**	**$0**	**$0**	**$2,800,000**					
Town of Clayton	I&I - Studying now, cost unknown	$2,000,000				$2,000,000	X			28	14
	Minor Planned repair/Upgrades	$2,000,000				$2,000,000	X			28	14
Town of Clayton - Subtotal		**$4,000,000**	**$0**	**$0**	**$0**	**$4,000,000**					
Town of Smyrna	North Main Street Sewer Replacement, Replacement of approximately 386 linear feet of old sewer main and all service connections along N. Main.	$500,000				$500,000	X			28	14
	Greens Branch Pump Station Upgrades, Replacement of the existing failing shaft-driven dry pit pumps in Greens Branch Pump Station and upgrades of electrical controls at	$750,000				$750,000	X			28	14
	West Cummins Street Sewer Replacement, Replacement of approximately 618 linear feet of old sewer main and all service connections along W.Cummins St.	$500,000				$500,000	X			28	14
	Water and Sewer Replacement (S Main St)	$1,000,000				$1,000,000	X			28	14
Town of Smyrna - Subtotal		**$2,750,000**	**$0**	**$0**	**$0**	**$2,750,000**					

STATEWIDE WASTEWATER, STORMWATER, AND OTHER INFRASTRUCTURE RELATED NEEDS 2016 THROUGH 2019
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"Wastewater" project needs primarily include repair, upgrade, and replacement of existing facilities, except for Sussex County which include new sewer districts and expansion of existing sewer districts.
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"Other" includes needed studies, ancillary equipment needs, and green infrastructure such as pervious walking path replacement, and pervious parking lots.

Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
Sussex County	Goslee Creek Pump Station	$3,600,000	$2,000,000			$5,600,000	X			14	6
	Pump Station #210 and Forcemain	$6,000,000	$2,000,000			$8,000,000	X			14	6
	Herring Creek Sewer District	$330,000	$1,330,000	$1,640,000		$3,300,000	X			20,37	6,19
	Concord Road Sewer Expansion	$1,400,000	$400,000			$1,800,000	X			39	21
	Route 26 Sewer	$1,400,000	$1,400,000	$700,000		$3,500,000	X			38	20
	Route 54 Extension	$680,000	$1,000,000			$1,680,000	X			38	20
	Inland Bays RWF -Class A Sludge Phase 1 and 2	$2,000,000	$3,500,000			$5,500,000	X			37	19
	Inland Bays RWF Expansion	$700,000	$1,200,000	$6,000,000	$6,000,000	$13,900,000	X			37	19
	Dewey/Henlopen contribution to Rehoboth WWTP	$700,000	$800,000	$2,500,000	$6,000,000	$10,000,000	X			14	6
	Chapel Green Oak Crest Farms	$240,000	$240,000	$1,500,000		$1,980,000	X			20	6
	Wolfe Neck Improvements			$500,000	$1,000,000	$1,500,000	X			14	6
	Branch, Autumn and Tucks Road (Long Neck)		$80,000	$400,000	$320,000	$800,000	X			37	19
	Blackwater Creek Expansion		$200,000	$2,000,000	$3,000,000	$5,200,000	X			38	20
	Piney Neck Headworks		$200,000	$1,200,000		$1,400,000	X			41	20
	Clayton Avenue Pump Station and Forcemain		$600,000	$1,800,000	$1,800,000	$4,200,000	X			41	20
	Pump Station 45		$500,000	$700,000		$1,200,000	X			39	21
	SCRWF Sand Filter Update		$400,000	$2,100,000		$2,500,000	X			38	20
	Bay Farm Road Area Sewer			$100,000	$750,000	$850,000	X			37	19
	Tanglewood/Oak Acres (Miller Creek)			$1,520,000	$1,261,000	$2,781,000	X			38	20
	Delaware Avenue Sewer Expansion			$450,000		$450,000	X			41	20
	Miller Creek Expansion (Beaver Dam)			$500,000	$2,300,000	$2,800,000	X			38	20
	Joy Beach Sewer			$500,000	$2,000,000	$2,500,000	X			14	6
	Millville Expansion			$75,000	$1,000,000	$1,075,000	X			38	20
	Mullbery Knoll		$2,813,062			$2,813,062	X			38	20
	Bethany Forest		$2,452,154			$2,452,154	X			38	20
Sussex County - Subtotal		**$17,050,000**	**$21,115,216**	**$24,185,000**	**$25,431,000**	**$87,781,216**					
City of Lewes	Donovan Smith 4" & 6" lines	$309,500				$309,500	X			20	6
	New WWTP Outfall Pipe Renewal	$350,000				$350,000	X			20	6
	Manhole Replacement/Rehab	$221,025				$221,025	X			20	6
	Sewer Lift Station Renewal	$202,000				$202,000	X			20	6
	George HP Smith Park Walking Path Replacement	$190,000				$190,000			X	20	6
	Little League Pervious Parking	$31,000				$31,000			X	20	6
City of Lewes - Subtotal		**$1,303,525**	**$0**	**$0**	**$0**	**$1,303,525**					

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Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
City of Rehoboth Beach	Ocean Outfall, Construct ocean outfall from beach to diffuser located approximately 6,000 ft offshore	$18,600,000				$18,600,000	X			14	6
	Pump Station and Force Main , Construct new effluent pump station at WWTP and force main to new ocean	$5,250,000				$5,250,000	X			14	6
	Treatment Plant Upgrade	$10,500,000				$10,500,000	X			14	6
	Biosolids Upgrade	$12,500,000				$12,500,000	X			14	6
City of Rehoboth Beach - Subtotal		**$46,850,000**	**$0**	**$0**	**$0**	**$46,850,000**					
City of Seaford	Oxic tank membrane replacement	$32,000				$32,000	X			39	21
	Lift station RTU replacement	$7,000				$7,000	X			39	21
City of Seaford - Subtotal		**$39,000**	**$0**	**$0**	**$0**	**$39,000**					
Delmar Sewer Authority	Bi-State/Connelly Mill Pump Sta.	$1,719,611				$1,719,611	X			40	21
	Lab Cabinets - Restored	$4,020				$4,020	X			40	21
	Line Replacement / Slip Lining Pipe	$1,575,000				$1,575,000	X			40	21
	Stage Rd #2 Pump Station	$700,786				$700,786	X			40	21
	Winch to Raise Basket Pine St. /PS	$2,300				$2,300	X			40	21
Town of Delmar - Subtotal		**$4,001,717**	**$0**	**$0**	**$0**	**$4,001,717**					
Town of Georgetown	I&I Related Sewer Project (Not Funded)		$300,000			$300,000	X			37	19
	Pump Station Upgrades and Force Main Improvements	$2,500,000				$2,500,000	X			37	19
Town of Georgetown - Subtotal		**$2,500,000**	**$300,000**	**$0**	**$0**	**$2,800,000**					
Town of Selbyville	Miscellaneous WWTP Headworks Upgrades	$1,500,000				$1,500,000	X			41	20
Town of Selbyville - Subtotal		**$1,500,000**	**$0**	**$0**	**$0**	**$1,500,000**					
Town of Bridgeville	WWTP Upgrade	$11,600,000				$11,600,000	X			35	19
	HVAC- Main Building, Unkn Qnty	$100,000				$100,000	X			35	19
	Raw Pump Wet Well, Pump Only	$30,000				$30,000	X			35	19
	Effluent Pump Contact Tank, Pump Only	$30,000				$30,000	X			35	19
	Sludge Pump Clarifier, Pump Only	$30,000				$30,000	X			35	19
	Comminutor, Assume 1 unit	$50,000				$50,000	X			35	19
	RBC Gearbox Replacement (2), Assume $200K each	$400,000				$400,000	X			35	19
	Digester Mixer, Assume motor/mixer only	$100,000				$100,000	X			35	19
	Utility Mapping/Schedule, Unkn Qnty	$100,000				$100,000	X			35	19
Town of Bridgeville - Subtotal		**$12,440,000**	**$0**	**$0**	**$0**	**$12,440,000**					

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Municipality	Project									Legislative Districts	
		2016	2017	2018	2019	Total	Wastewater	Stormwater	Other	House	Senate
Town of Laurel	Miscellaneous Sewer Rehabilitation	$250,000				$250,000	X			40	21
	Miscellaneous Sewer Extensions	$8,800,000				$8,800,000	X			40	21
Town of Laurel - Subtotal		**$9,050,000**	**$0**	**$0**	**$0**	**$9,050,000**					
Town of Millsboro	Pump Station Rehabs	$250,000				$250,000	X			41	20
	Stormwater Line Replacement	$30,000				$30,000		X		41	20
	I&I Study	$500,000				$500,000	X			41	20
	Sewer Line and MH Replacement	$60,000				$60,000	X			41	20
	Forcemain Replacement		$150,000			$150,000	X			41	20
Town of Millsboro - Subtotal		**$840,000**	**$150,000**	**$0**	**$0**	**$990,000**					
Town of Milton	WWTP Replacement	$6,400,000				$6,400,000	X			20	6
Town of Milton - Subtotal		**$6,400,000**	**$0**	**$0**	**$0**	**$6,400,000**					

New Castle County	**$67,153,900**	**$57,330,000**	**$16,900,000**	**$17,575,000**	**$158,958,900**
Kent County	**27,593,500**	**21,080,667**	**15,402,667**	**15,164,667**	**79,241,500**
Sussex County	**101,974,242**	**21,565,216**	**24,185,000**	**25,431,000**	**173,155,458**
State of Delaware	**$196,721,642**	**$99,975,883**	**$56,487,667**	**$58,170,667**	**$411,355,858**

	Collection & Conveyance	Treatment	Disposal	Totals
New Castle County	**$125,483,900**	**$33,255,000**	**$220,000**	**$158,958,900**
Kent County	**26,777,500**	**50,064,000**	**2,400,000**	**79,241,500**
Sussex County	**72,279,438**	**44,776,020**	**56,100,000**	**173,155,458**
State of Delaware	**$224,540,838**	**$128,095,020**	**$58,720,000**	**$411,355,858**

Appendix No. 4:

Statewide Wastewater, Stormwater, and Other Infrastructure-Related Needs, 2016 through 2019

Resource, Conservation & Development - 21st Century Fund Projects

A special appropriation account called the Resource Conservation Account was created as part of Twenty-First Century Fund Investments Act of 1995. The fund was created with a portion of the settlement funds from the Delaware v. New York Supreme Court settlement. The Resource Conservation Account, often referred to as the 21st Century fund, "shall be dedicated to improve the health of communities by addressing a variety of statewide watershed and drainage issues consistent with the policies of the Cabinet Committee on State Planning Issues." Fiscal Year 1996 was the first year that funds were out into the account to be used to fund approved projects. Initially all projects were required to have a 25 percent match and be approved by the Joint Committee on Capital Improvement. The Twenty-First Century Investments Act stated that upon approval funds shall be allocated be allocated sufficient to fund the State share, 75 percent, of the project. This was the case in fiscal years 1996 and 1997. However the funding available was unable to keep pace with the requests. Starting in fiscal year 1998 and continuing through fiscal year 2009 appropriated funds were allocated to each project on prorated basis. This scenario created an issue that it took years for projects to accumulate enough funding to construct. In fiscal year 2013 the management of the fund was switched from a project basis to a county basis and projects are now funded based on a prioritization process that is documented in an annual report provided to the Joint Committee on Capital Improvement. Project also now only require a 10% match. As of April 26, 2016 there are 779 approved projects and the fund has a deficit of $73,241,058. The list below contains project that the Drainage Program and Conservation districts anticipate expenditures on during the FY16-FY18. Descriptions for individual projects can be found in the RC&D 21st century fund annual report available from the DNREC, Drainage Program.

Project ID	Project	Project Category	State Costs	Matching Funds	FY2016 21CF Projected	FY17 21CF Planned	FY18 21CF Planned	Representative District	Represenative	Senatorial District	Senator
2014-N-1	Port Penn Dike Rehabilitation	RC&D 21st Century	$ 3,000,000	TBD	$ 152,222	$ 2,850,000		9	Kevin S. Hensley	14	Bruce C. Ennis
2014-N-2	Westminster-Cheltenham Bridge	RC&D 21st Century	$ 420,000	TBD	$ 420,103			4	Gerald L. Brady	7	Anthony Delcollo
2012-N-3	DuRoss Heights	RC&D 21st Century	$ 225,000	$ 150,000	$ 184,000			17	Michael P. Mulrooney	13	David B. McBride
2014-N-4	Rutherford - BOA Pond Expansion	RC&D 21st Century	$ 295,000	$ 279,730	$ 16,000			18	David Bentz	9	John J. Walsh, III
2008-N-5	Bayview Beach flood protection	RC&D 21st Century	$ 750,000	$ 200,000	$ 200,000			8	S. Quinton Johnson	10	Stephanie L.Hansen
2015-N-6	Herring Branch Tax Ditch	RC&D 21st Century	$ 80,000	$ 10,000	$ -			11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2017-N-7	1609 Joe Goldsborough Road	RC&D 21st Century	$ -		$ -			11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2017-N-8	185 Blackbird Station Road	RC&D 21st Century	$ -		$ -			11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2016-N-9	205 Union Church Road	RC&D 21st Century	$ 25,900		$ -			9	Kevin S. Hensley	14	Bruce C. Ennis
2017-N-10	3323 Silverside Road	RC&D 21st Century	$ 36,500		$ -			10	Sean Matthews	5	Catherine Cloutier
2016-N-11	466 Valley Road	RC&D 21st Century	$ 25,575		$ -			22	Joseph E. Miro	8	David P. Sokola
2016-N-12	Becks Woods - 26 Yosemite Drive	RC&D 21st Century	$ 16,700		$ 284			15	Valerie Longhurst	12	Nicole Poore
2017-N-13	Brandywine Park Improvements	RC&D 21st Century	$ 1,000		$ -			4	Gerald L. Brady	3	Robert I. Marshall
2016-N-14	Caravel Farms - Debra Drive	RC&D 21st Century	$ 29,000		$ 1,955			27	Earl G. Jaques Jr	12	Nicole Poore
2016-N-15	Centennial - Centennial Circle	RC&D 21st Century	$ 15,000		$ 932			4	Gerald L. Brady	4	Gregory F. Lavelle
2016-N-16	Chapel Hill - 9 St. Regis Drive	RC&D 21st Century	$ 12,900		$ 1,250			23	Paul S. Baumbach	8	David P. Sokola
2017-N-17	City of Wilmington Drainage Improvements	RC&D 21st Century	$ 1,000		$ -				Wilmington Represenatives		Wilmington Senators
2017-N-18	Delaplane Manor - 231 Delaplane Avenue	RC&D 21st Century	$ 12,000		$ -			21	Michael Ramone	9	john J. Walsh, III
2017-N-19	Devonshire - Rockfield Drive	RC&D 21st Century	$ 37,500		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-20	Drexel - 3210 Drexel Drive	RC&D 21st Century	$ 12,800		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-21	Dunleith Community Drainage	RC&D 21st Century	$ 96,500		$ 26,018			16	James Johnson	2	Margaret Rose Henry
2017-N-22	Edgemoor Gardens - Rysing Drive	RC&D 21st Century	$ 5,000		$ -			6	Debra J. Heffernan	1	Harris B McDowell III

Project ID	Project	Project Category	State Costs	Matching Funds	FY2016 21CF Projected	FY17 21CF Planned	FY18 21CF Planned	Representative District	Represenative	Senatorial District	Senator
2017-N-23	Estates of Corner Ketch - Drainage Improvements	RC&D 21st Century	$ 47,800		$ -			23	Paul S. Baumbach	8	David P. Sokola
2017-N-24	Fairways at Vandegrift - Bluebird Haven	RC&D 21st Century	$ 6,000		$ -			9	Kevin S. Hensley	14	Bruce C. Ennis
2017-N-25	Fox Fire - Foxfire Drive	RC&D 21st Century	$ 5,800		$ -			22	Joseph E. Miro	4	Gregory F. Lavelle
2017-N-26	Huntington - 125 Torington Way	RC&D 21st Century	$ 23,300		$ -			26	John J. Viola	11	Bryan Townsend
2016-N-27	Meadow Glen - 326 Meadow Glen Drive	RC&D 21st Century	$ 14,200		$ -			27	Earl G. Jaques Jr	12	Nicole Poore
2017-N-28	Roseville Park - 107 Chestnut Ave.	RC&D 21st Century	$ 5,500		$ -			21	Michael Ramone	9	John J. Walsh, III
2017-N-29	Roseville Park - 129 & 131 Rose Circle	RC&D 21st Century	$ 26,800		$ -			21	Michael Ramone	9	John J. Walsh, III
2016-N-30	Rutherford - 123 Greenfield Road	RC&D 21st Century	$ 9,000		$ 5,903			18	David Bentz	9	John J. Walsh, III
2016-N-31	Scottfield - 1216 Pinefield Road	RC&D 21st Century	$ 21,800		$ -			24	Edward S. Osienski	11	Bryan Townsend
2017-N-32	Timber Farms - 618 Timber Wood Blvd.	RC&D 21st Century	$ 9,500		$ -			26	John J. Viola	11	Bryan Townsend
2017-N-33	West Chestnut Hill Road - Maple Square Mobile Home Park	RC&D 21st Century	$ 28,800		$ -			25	John A. Kowalko Jr.	10	Stephanie L. Hansen
2017-N-34	Westwoods SWMP	RC&D 21st Century	$ 175,000		$ -			12	Deborah Hudson	4	Gregory F. Lavelle
2017-N-35	Whites Village - 2601 Beech Avenue	RC&D 21st Century	$ 24,500		$ -			10	Sean Matthews	1	Harris B. McDowell III
2017-N-36	Woodshade - 124 Woodshade Drive	RC&D 21st Century	$ 10,700		$ -			26	John J. Viola	11	Bryan Townsend
2017-N-37	Ballymeade Drainage	RC&D 21st Century	$ 1,000		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-38	Afton - Fairhope Road	RC&D 21st Century	$ 1,000		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-39	Northgate	RC&D 21st Century	$ 1,000		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-40	Chapelcroft - Austin Road	RC&D 21st Century	$ 1,000		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-41	Barretts Run Ponds	RC&D 21st Century	$ 1,000		$ -			26	John J. Viola	11	Bryan Townsend
2017-N-42	Becks Pond	RC&D 21st Century	$ 1,000		$ -			26	John J. Viola	11	Bryan Townsend
2017-N-43	Black Diamond Road Drainage	RC&D 21st Century	$ 1,000		$ -			11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2017-N-44	Bristol Place Drainage	RC&D 21st Century	$ 1,000		$ -			27	Earl G. Jaques Jr	12	Nicole Poore
2017-N-45	Castleshire - Dandenog Drive	RC&D 21st Century	$ 1,000		$ -			21	Michael Ramone	7	Anthony Delcollo
2017-N-46	Cotswold Hills	RC&D 21st Century	$ 15,000		$ -			22	Joseph E. Miro	8	David P. Sokola
2017-N-47	Drummond Ridge - Emery Court	RC&D 21st Century	$ 1,000		$ -			21	Michael Ramone	9	John J. Walsh, III
2017-N-48	Elmwood Pond	RC&D 21st Century	$ 1,000		$ -			24	Edward S. Osienski	9	John J. Walsh, III
2017-N-49	Gender Woods - Cypress Drive	RC&D 21st Century	$ 1,000		$ -			24	Edward S. Osienski	11	Bryan Townsend

Project ID	Project	Project Category	State Costs	Matching Funds	FY2016 21CF Projected	FY17 21CF Planned	FY18 21CF Planned	Representative District	Represenative	Senatorial District	Senator
2017-N-50	Grantchester Ponds	RC&D 21st Century	$ 1,000		$ -			22	Joseph E. Miro	8	David P. Sokola
2017-N-51	Little Falls Village	RC&D 21st Century	$ 96,000		$ -			4	Gerald L. Brady	7	Anthony Delcollo
2017-N-52	Owls Ridge Pond	RC&D 21st Century	$ 1,000		$ -			12	Deborah Hudson	4	Gregory F. Lavelle
2017-N-53	Perch Creek Ponds	RC&D 21st Century	$ 1,000		$ -			27	Earl G. Jaques Jr	10	Stephanie L. Hansen
2017-N-54	Sherwood Forest - Stature Drive	RC&D 21st Century	$ 1,000		$ -			24	Edward S. Osienski	11	Bryan Townsend
2017-N-55	Timber Farms - 623 Timber Wood Blvd.	RC&D 21st Century	$ 1,000		$ -			26	John J. Viola	11	Bryan Townsend
2017-N-56	Westbrite - Westbrite Court	RC&D 21st Century	$ 1,000		$ -			10	Sean Matthews	5	Catherine Cloutier
2017-N-57	Windy Hills - Dillwyn Road	RC&D 21st Century	$ 1,000		$ -			24	Edward S. Osienski	9	John J. Walsh, III
2015-N-58	Boxwood Road	RC&D 21st Century	$ 10,000	$ 10,000	$ -			13	John L. Mitchell Jr.	7	Anthony Delcollo
2015-N-59	Elsmere - Sycamore Avenue	RC&D 21st Century	$ 7,500	$ 7,500	$ -			13	John L. Mitchell Jr.	7	Anthony Delcollo
2015-N-60	798 Blackbird Station Road	RC&D 21st Century	$ 186,000	$ 26,500	$ -			11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2015-N-61	White Clay Creek Sate Park - Dr. mp.	RC&D 21st Century	$ 68,700	$ 61,830	$ 39,869			21	Michael Ramone	9	John J. Walsh, III
2016-N-62	Guthie Tax Ditch	RC&D 21st Century	$ 55,000	$ 20,000	$ 35,000			27	Earl G. Jaques Jr	10,12	Stephanie L. Hansen, Nichole Poore
2016-N-63	Countryside Farms Tax Ditch	RC&D 21st Century	$ 30,000	$ 5,000	$ 25,000			27	Earl G. Jaques Jr	12	Nicole Poore
2016-N-64	David's Corner Tax Ditch	RC&D 21st Century	$ 102,000	$ 2,000	$ 100,000			9	Kevin S. Hensley	14	Bruce C. Ennis
2016-N-65	130 Upper Pike Creek Road	RC&D 21st Century	$ 120,000	$ 30,000	$ 30,000			21	Michael Ramone	9	John J. Walsh, III
2016-N-66	600 N. DuPont Parkway	RC&D 21st Century	$ 12,500	$ 3,125	$ 3,125			17	Michael P. Mulrooney	12	Nicole Poore
2016-N-67	765 Paddock Road	RC&D 21st Century	$ 37,200	$ 9,300	$ 9,300			9	Kevin S. Hensley	14	Bruce C. Ennis
2016-N-68	Beacon Hill - East Court	RC&D 21st Century	$ 38,500	$ 9,625	$ 9,625			10	Sean Matthews	5	Catherine Cloutier
2016-N-69	Carrcroft Drainage Improvements	RC&D 21st Century	$ 210,000	$ 52,500	$ 52,500			1	Charles Potter Jr.	1	Harris B. McDowell III
2016-N-70	Channin - 2501 Ruthwell Road	RC&D 21st Century	$ 5,000	$ 1,250	$ 1,250			10	Sean Matthews	5	Catherine Cloutier
2016-N-71	Chestnut Hill Estates - 62 East Stephen Drive	RC&D 21st Century	$ 38,250	$ 9,563	$ 10,524			24	Edward S. Osienski	11	Bryan Townsend
2016-N-72	Christina River - Christiana Flood Study	RC&D 21st Century	$ 42,000	$ 10,500	$ 10,500			18	David Bentz	13	David B. McBride
2016-N-73	Country Creek - 444 Barley Drive	RC&D 21st Century	$ 8,100	$ 2,025	$ 2,025			26	John J. Viola	11	Bryan Townsend
2016-N-74	Coventry - Dunsinane Drive	RC&D 21st Century	$ 25,400	$ 6,350	$ 6,350			18	David Bentz	13	David B. McBride
2016-N-75	Governor Printz & Rolling Road	RC&D 21st Century	$ 39,000	$ 9,750	$ 9,750			6	Debra J. Heffernan	1	Harris B. McDowell III
2016-N-76	Harmony Hills - Kingsley Drive	RC&D 21st Century	$ 44,000	$ 11,000	$ 11,000			21	Michael Ramone	9	John J. Walsh, III

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2016-N-77	Liftwood - 4657 Norwood Drive	RC&D 21st Century	$ 20,200	$ 5,050	$ 5,050			6	Debra J. Heffernan	5	Catherine Cloutier
2016-N-78	Melody Meadows - Melody Drive and Nola Lane	RC&D 21st Century	$ 62,850	$ 15,713	$ 15,713			27	Earl G. Jaques Jr	10	Stephanie L. Hansen
2016-N-79	Norwegian Woods - Penney Lane	RC&D 21st Century	$ 13,000	$ 3,250	$ 3,250			26	John J. Viola	11	Bryan Townsend
2016-N-80	Robscott Manor - 8 Aldershot Drive	RC&D 21st Century	$ 22,600	$ 5,650	$ 5,650			25	John A. Kowalko Jr.	10	Stephanie L. Hansen
2016-N-81	Rolling Meadows - 900 & 902 Clydesdale Drive	RC&D 21st Century	$ 24,800	$ 6,200	$ 6,200			15	Valerie Longhurst	12	Nicole Poore
2016-N-82	Rolling Meadows - 908 Clydesdale Drive	RC&D 21st Century	$ 5,500	$ 1,375	$ 1,375			15	Valerie Longhurst	12	Nicole Poore
2016-N-83	Rutherford - 4 Rolling Drive	RC&D 21st Century	$ 74,000	$ 18,500	$ 18,500			18	David Bentz	9	John J. Walsh, III
2016-N-84	Shelley Farms - Ballad Drive	RC&D 21st Century	$ 16,300	$ 4,075	$ 4,075			27	Earl G. Jaques Jr	10	Stephanie L. Hansen
2016-N-85	Talleybrook - 3145 Summerset Road	RC&D 21st Century	$ 7,500	$ 1,875	$ 1,875			10	Sean Matthews	5	Catherine Cloutier
2017-N-86	Massey's Church Tax Ditch	RC&D 21st Century	$ 24,000	$ 4,000	$ -	$ 20,000		11	Jeffrey N. Spiegelman	14	Bruce C. Ennis
2017-N-87	Drawyer's Branch Tax Ditch	RC&D 21st Century	$ 60,000	$ 10,000	$ -	$ 50,000		8	S. Quinton Johnson	10	Stephanie L. Hansen
2017-N-88	Jefferson Farms Tax Ditch	RC&D 21st Century	$ 20,000	$ 5,000	$ -	$ 15,000		16	James Johnson	2	Margaret Rose Henry
2009-N-89	Branch Canal Pedestrian Path	RC&D 21st Century	$ 1,474,000	$ 265,000	$ 232,742			9	Kevin S. Hensley	14	Bruce C. Ennis
2014-N-90	Dragon Run Tide Gate	RC&D 21st Century	$ 500,000	$ 100,000	$ 100,000			15	Valerie Longhurst	12	Nicole Poore
2006-N-91	Rosemont-Dumont Road	RC&D 21st Century	$ 90,000		$ 196,215			13	John L. Mitchell Jr.	7	Anthony Delcollo
2016-N-92	Melody Meadows - 70 Stardust Drive	RC&D 21st Century	$ 14,350	$ 3,588	$ 3,952			27	Earl G. Jaques Jr	10	Stephanie L. Hansen
2006-N-93	Green Valley - 2nd Street	RC&D 21st Century	$ 220,000	$ 55,000	$ 288,633			21	Michael Ramone	9	John J. Walsh, III
2014-N-94	Breezewood II - Ditch Cleanout/Sanitary Sewer Crossing	RC&D 21st Century	$ 209,000	$ 154,000	$ 92,734			11	Jeffrey N. Spiegelman	24	Bryant L. Richardson
2006-N-95	Rosell-Washington Avenue	RC&D 21st Century	$ 53,200	$ 53,200	$ -			13	John L. Mitchell Jr.	7	Anthony Delcollo
2015-N-96	Porter Road Stormwater Management Pond	RC&D 21st Century	$ 57,400	$ 57,400	$ 3,979			27	Earl G. Jaques Jr	12	Nicole Poore
2013-N-97	WCC State Park - Drainage Improvement	RC&D 21st Century	$ 68,700	$ 61,830	$ -			21	Michael Ramone	9	John J. Walsh, III
2014-N-98	Valley Run - Thistle Court	RC&D 21st Century	$ 30,500	$ 22,750	$ 13,821			10	Sean Matthews	5	Catherine Cloutier
2015-N-99	Green Valley - Upper Valley Lane	RC&D 21st Century	$ 22,000	$ 22,000	$ 10,340			21	Michael Ramone	9	John J. Walsh, III
2006-N-100	Roselle - Washington Avenue	RC&D 21st Century	$ 53,200	$ 53,200	$ 4,004			12	Deborah Hudson	7	Anthony Delcollo
2015-N-101	Norwegian Woods - Savoy Road	RC&D 21st Century	$ 17,200	$ 12,200	$ 9,869			26	John J. Viola	11	Bryan Townsend
2016-N-102	Caravel Woods - 106 Wortham Lane	RC&D 21st Century	$ 5,500	$ 1,375	$ 15,607			27	Earl G. Jaques Jr	12	Nicole Poore
2016-N-103	Chalfonte - 2522 Eaton Road	RC&D 21st Century	$ 5,000	$ 1,250	$ 6,727			10	Sean Matthews	5	Catherine Cloutier

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2016-N-104	Delaware City - Reybold Drive	RC&D 21st Century	$ 39,350	$ 9,838	$ 27,173			15	Valerie Longhurst	12	Nicole Poore
2016-N-105	Kingsridge - Empire Drive	RC&D 21st Century	$ 35,950	$ 8,988	$ 8,988			7	Bryon H. Short	5	Catherine Cloutier
2016-N-106	Montchanin - Carpenters Row	RC&D 21st Century	$ 38,600	$ 9,650	$ 31,016			4	Gerald L. Brady	4	Gregory F. Lavelle
2016-N-107	Rambleton Acres - 38 Holden Drive	RC&D 21st Century	$ 18,100	$ 4,525	$ 4,525			5	Melanie George Smith	13	David B. McBride
2016-N-108	Red Bud Court Drainage Improvements	RC&D 21st Century	$ 31,100	$ 7,775	$ 7,775			13	John L. Mitchell Jr.	7	Anthony Delcollo
2016-N-109	Roselle - Brighton Avenue	RC&D 21st Century	$ 16,000	$ 4,000	$ 21,833			13	John L. Mitchell Jr.	7	Anthony Delcollo
2011-K-1	Walnut Street, Felton / Crisco	RC&D 21st Century	$ 5,400	$ 540	$ 4,860			30	William R. "Bobby" Outten	15	David G. Lawson
1999-K-2	Long Pointe Road / Whiteoak Road / Simpson Phase II	RC&D 21st Century	$ 48,000	$ 4,800	$ 43,200			28	William J. Carson	16, 17	Colin R. J. Bonini, Brian J. Bushweller
2004-K-3	Kentwoods Mobile Home Park	RC&D 21st Century	$ 88,575	$ 8,858	$ 79,719			28	William J. Carson	17	Brian J. Bushweller
2014-K-4	South Mill Creek Tax Ditch / Alley	RC&D 21st Century	$ 89,702	$ 8,970	$ 80,732			29	W. Charles Paradee	14	Bruce C. Ennis
2003-K-5	Hawkey Branch Road / Gormley	RC&D 21st Century	$ 54,000	$ 5,400	$ 48,600			28	William J. Carson	14	Bruce C. Ennis
2004-K-6	Judith Road / Parsons Phase II	RC&D 21st Century	$ 100,000	$ 10,000	$ 90,000			11	Jeffrey N. Spiegelman	15	David G. Lawson
2010-K-7	College Road / Marvel	RC&D 21st Century	$ 20,000	$ 2,000	$ 20,430	$ 20,430		31	Sean M. Lynn	17	Brian J. Bushweller
-K-8	Gravelly Run Tax Ditch /Gray	RC&D 21st Century	$ 14,170	$ 1,417	$ 12,753			11	Jeffrey N. Spiegelman	15	David G. Lawson
2016-K-9	Petersburg Tax Ditch Bank Stabilization	RC&D 21st Century	$ 35,000	$ 20,000	$ 15,000			30	William R. "Bobby" Outten	15	David G. Lawson
2016-K-10	Bright Haines Tax Ditch Prong 7 / Kauffman	RC&D 21st Century	$ 6,000			$ 5,400		30	William R. "Bobby" Outten	18	F. Gary Simpson
2008-K-11	Irish Hill Road / Miller	RC&D 21st Century	$ 50,000	$ 5,000		$ 45,000		33	Charles S Postles	16	Colin R. J. Bonini
2004-K-12	Surrey Drive / McMahan	RC&D 21st Century	$ 24,000	$ 2,400		$ 21,600		29	W. Charles Paradee	15	David G. Lawson
2006-K-13	Wheatleys Pond Road / Ortiz	RC&D 21st Century	$ 2,400		$ 2,160			11	Jeffrey N. Spiegelman	15	David G. Lawson
2002-K-14	Hidden Acres	RC&D 21st Century	$ 40,000	$ 4,000		$ 36,000		29	W. Charles Paradee	15	David G. Lawson
2010-K-15	Drake Ct., Wild Quail / Susan Cook	RC&D 21st Century	$ 20,000	$ 2,000		$ 18,000		29	W. Charles Paradee	15	David G. Lawson
1998-K-16	Star Hill / Headstart Road - Briar Park Phase	RC&D 21st Century	$ 200,000	$ 20,000		$ 180,000		34	Lyndon D. Yearick	17, 16	Colin R. J. Bonini, Brian J. Bushweller
2014-K-17	Viola Phase II drainage improvements	RC&D 21st Century	$ 60,000	$ 6,000		$ 54,000		30, 34	William R. "Bobby" Outten, Lyndon D. Yearick	15, 16	David G. Lawson, Colin R.J. Bonini
1998-K-18	Bowers Beach, Town of	RC&D 21st Century	$ 200,000	$ 20,000		$ 100,000	$ 100,000	33	Charles S. Postles	16	Colin R. J. Bonini
2007-K-19	Tarr Ditch, City of Dover	RC&D 21st Century	$ 4,000,000	$ 400,000		$ 100,000		32, 31	Andria L. Bennett, Sean M. Lynn	17	Brian J. Bushweller
2011-K-20	Persimmon Park Place	RC&D 21st Century	$ 200,000	$ 20,000	$ 24,525			28	William J. Carson	17, 14	Brian J. Bushweller Bruce C. Ennis

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2011-K-21	Wild Quail Drainage Improvements Phase II	RC&D 21st Century	$ 150,000	$ 15,000		$ 125,000		29	W. Charles Paradee	15	David G. Lawson
2012-K-22	Kent County Bay Beach Communities Drainage Studies / Improvements Phase II - Pickering Beach	RC&D 21st Century	$ 50,318	$ 5,032	$ 4,907	$ 9,813		32	Andria L. Bennett	16	Colin R. J. Bonini
2012-K-23	Kent County Bay Beach Communities Drainage Studies / Improvements Phase III - Kitts Hummock	RC&D 21st Century	$ 53,044	$ 5,304	$ 4,907	$ 9,813		32	Andria L. Bennett	16	Colin R. J. Bonini
2012-K-24	Kent County Bay Beach Communities Drainage Studies / Improvements Phase IV - Kitts Hummock	RC&D 21st Century	$ 18,500	$ 1,850	$ 2,944	$ 5,888		32	Andria L. Bennett	16	Colin R. J. Bonini
2012-K-25	Kent County Bay Beach Communities Drainage Studies / Improvements Phase V - Kitts Hummock	RC&D 21st Century	$ 83,280	$ 8,328	$ 7,360	$ 14,720		32	Andria L. Bennett	16	Colin R. J. Bonini
2012-K-26	Kent County Bay Beach Communities Drainage Studies / Improvements Phase VI - South Bowers	RC&D 21st Century	$ 8,080	$ 808	$ 2,424	$ 4,848		33	Charles S. Postles	16	Colin R. J. Bonini
1999-K-27	Peach Basket Road / Rt. 12	RC&D 21st Century	$ 30,000	$ 3,000		$ 27,000		30	William R. "Bobby" Outten	15	David G. Lawson
2000-K-28	Silver Lake Water Management Project - DelTech Terry Campus	RC&D 21st Century	$ 350,000	$ 35,000		$ 315,000		31	Sean M. Lynn	17	Brian J. Bushweller
1998-K-29	Lockwood Chapel Road / Krupka Phase 2 (Main)	RC&D 21st Century	$ 200,000	$ 20,000		$ 115,000		11	Jeffrey N. Spiegelman	15	David G. Lawson
2003-K-30	Pearsons Corner Road / Detweiler	RC&D 21st Century	$ 75,000	$ 7,500		$ 67,500		11, 29	Jeffrey N. Spiegelman, W. Charles Paradee	15	David G. Lawson
2003-K-31	Willow Grove Road / Blackwell	RC&D 21st Century	$ 36,000	$ 3,600		$ 32,400		29	W. Charles Paradee	15	David G. Lawson
2004-K-32	Sandbox Road / Jackson	RC&D 21st Century	$ 60,000	$ 6,000		$ 54,000		33	Charles S. Postles	18	F. Gary Simpson
2004-K-33	Rt. 44 / Altemus	RC&D 21st Century	$ 15,000	$ 1,500		$ 13,500		11	Jeffrey N. Spiegelman	15	David G. Lawson
2004-K-34	Barbara Blvd., Breezewood / Cerbone	RC&D 21st Century	$ 37,800	$ 3,780		$ 34,020		34	Lyndon D. Yearick	16	Colin R. J. Bonini
2004-K-35	Seven Hickories Road / Peachey	RC&D 21st Century	$ 24,000	$ 2,400		$ 21,600		29	W. Charles Paradee	15	David G. Lawson
2010-K-36	Houston, Town of, drainage improvements Phase I	RC&D 21st Century	$ 90,000	$ 9,000			$ 81,000	33	Charles S. Postles	18	F. Gary Simpson
1999-K-37	Bowers Beach Road / Mallek Phase I	RC&D 21st Century	$ 60,000	$ 6,000		$ 24,000	$ 30,000	33	Charles S. Postles	16	Colin R. J. Bonini
2002-K-38	Pearsons Corner Road / Sbriglia Phase I	RC&D 21st Century	$ 10,000	$ 1,000	$ 9,000			11, 29	Jeffrey N. Spiegelman, W. Charles Paradee	15	David G. Lawson
2004-K-39	Raughley Hill Road / Faircloth	RC&D 21st Century	$ 25,000	$ 2,500			$ 22,500	30	William R. "Bobby" Outten	18	F. Gary Simpson
2008-K-40	Bryn Zion Road / Timber Mills / Kreiger	RC&D 21st Century	$ 200,000	$ 20,000			$ 180,000	11	Jeffrey N. Spiegelman	15	David G. Lawson
1999-K-41	Bowers Beach Road / Mallek Phase II	RC&D 21st Century	$ 60,000	$ 6,000			$ 54,000	33	Charles S. Postles	16	Colin R. J. Bonini
2006-K-42	Greenbriar Road / Penneypacker	RC&D 21st Century	$ 15,000	$ 1,500			$ 13,500	11	Jeffrey N. Spiegelman	15	David G. Lawson
2013-K-43	Hopewell Drive / Gadaingan	RC&D 21st Century	$ 10,000	$ 1,000			$ 9,000	11	Jeffrey N. Spiegelman	15	David G. Lawson
2015-K-44	1778 Peachtree Run / Walsh	RC&D 21st Century	$ 40,000	$ 4,000			$ 36,000	34	Lyndon D. Yearick	16	Colin R. J. Bonini

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2007-K-45	W. Denneys Road, near Maidstone Branch Road / Blose / Foltz	RC&D 21st Century	$ 80,000	$ 8,000			$ 72,000	29	W. Charles Paradee	15	David G. Lawson
2013-K-46	Abbotts Pond Road / Gallagher	RC&D 21st Century	$ 20,000	$ 2,000			$ 18,000	30	William R. "Bobby" Outten	18	F. Gary Simpson
2010-K-47	Hazelwood Subdivision drainage improvmemts	RC&D 21st Century	$ 40,000	$ 4,000			$ 36,000	28	William J. Carson	14	Bruce C. Ennis
2012-K-48	Voshells Cove, Richard Blvd. / Gibson	RC&D 21st Century	$ 30,000	$ 3,000			$ 27,000	29	W. Charles Paradee	15	David G. Lawson
2011-K-49	Pearsons Corner Road / Durham	RC&D 21st Century	$ 20,000	$ 2,000			$ 18,000	29, 11	Jeffrey N. Spiegelman, W. Charles Paradee	15	David G. Lawson
2011-K-50	Plymouth Road / Langley drainage improvements	RC&D 21st Century	$ 8,000	$ 800			$ 7,200	30	William R. "Bobby" Outten	15	David G. Lawson
2009-S-1	VOP Projects (CB,IB, DB)	RC&D 21st Century			$ 31,920	$ 36,000		County Wide - Sussex	County Wide - Sussex	County Wide - Sussex	County Wide - Sussex
2015-S-2	Nanticoke Watershed Parrot Feather Eradication	RC&D 21st Century	$ 60,000	$ 40,000	$ 9,244	$ 3,900		30, 35	William R. "Bobby" Outten, David L. Wilson	18, 19	F. Gary Simpson, Brian Pettyjohn
2005-S-3	Hudson Rd (Rd 258) / Chris & Leah Hoenen (Hudson Road Tax Ditch) Phase 1	RC&D 21st Century	$ 201,034	$ 18,132	$ 129,052			20	Stephen T. Smyk	6	Ernesto B. Lopez
2006-S-4	Bucks Branch Tax Ditch Maintenance Dipout Phase II (Prong 1)	RC&D 21st Century	$ 62,303	$ -	$ 20,000			39	Daniel B. Short	19	Brian Pettyjohn
2003-S-5	Meadow Branch TD (George Beauchamp)	RC&D 21st Century	$ 30,000	$ 3,000	$ 25,839			40	Timothy D. Dukes	21	Bryant L. Richardson
2003-S-6	Road 352 Connie O'Neal	RC&D 21st Century	$ 27,000	$ 2,700	$ 29,999			38	Ronald E. Gray	20	Gerald W. Hocker
2008-S-7	Nanticoke River Tax Ditch Maintenance Dipout Phase II	RC&D 21st Century	$ 880,417	$ 475,000	$ 405,852			35, 30	William R. "Bobby" Outten, David L. Wilson	18, 19	F. Gary Simpson, Brian Pettyjohn
2010-S-8	Airport Rd / Zoch / Drainage Improvements	RC&D 21st Century	$ 23,509	$ 2,400		$ 21,109		39	Daniel B. Short	21	Bryant L. Richardson
2011-S-9	Captiva Sands Stormwater Pond improvements	RC&D 21st Century	$ 70,000	$ 30,000	$ 40,000			14	Peter C. Schwartzkopf	20	Gerald W. Hocker
2009-S-10	Zoar Rd / Baxter Drainage Improvements	RC&D 21st Century	$ 50,000	$ 5,000	$ 50,000			41	Richard G. Collins	19	Brian Pettyjohn
1997-S-11	Johnson Development Phase II	RC&D 21st Century	$ 500,000	$ 50,000		$ 450,000		39	Daniel B. Short	21	Bryant L. Richardson
2014-S-12	Guinea Creek TD	RC&D 21st Century	$ 600,000				$ 100,000	37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-13	Derrickson Canal T.D. Prong 3 Drainage Improvements *Phase I Church*	RC&D 21st Century	$ 100,000	$ 10,000	$ 45,000			38	Ronald E. Gray	20	Gerald W. Hocker
2006-S-14	Agricultural Tax Ditch / Baull Bank Stabilization	RC&D 21st Century	$ 70,000	$ 7,000		$ 63,000		38	Ronald E. Gray	20	Gerald W. Hocker
2011-S-15	Cart Branch Tax Ditch Culvert Replacements	RC&D 21st Century	$ 50,000	$ 5,000		$ 45,000		35	David L. Wilson	18	F. Gary Simpson
2016-S-16	Harts Landing - Love Creek Pines Lane - Pizzadili Drainage Improvements	RC&D 21st Century	$ 70,000			$ 63,000		14	Peter C. Schwartzkopf	6	Ernesto B. Lopez
2013-S-17	Banks Bennett Tax Ditch P3 Phase 2	RC&D 21st Century	$ 16,650	$ 1,665	$ 2,160			38	Ronald E. Gray	20	Gerald W. Hocker
2007-S-18	Deep Hole Tax Ditch Maintenance Dipout Phase 1 Prong 4	RC&D 21st Century	$ 25,000			$ 22,500		38	Ronald E. Gray	20	Gerald W. Hocker
2012-S-19	Silver Lake / Rehoboth	RC&D 21st Century	$ 50,000	$ 8,963		$ 25,000		14	Peter C. Schwartzkopf	6	Ernesto B. Lopez
2012-S-20	Silver Lake / Rehoboth, Phase 2	RC&D 21st Century	$ 225,000		$ 51,806	$ 150,000		14	Peter C. Schwartzkopf	6	Ernesto B. Lopez

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2004-S-21	Holly Carmack Clendaniel Ave Selbyville	RC&D 21st Century	$ 105,000	$ 10,500	$ 10,000	$ 94,500		41	Richard G. Collins	20	Gerald W. Hocker
2008-S-22	Delaware Avenue / Ellis Stream Restoration	RC&D 21st Century	$ 85,000	$ 8,500		$ 72,500		40	Timothy D. Dukes	21	Bryant L. Richardson
2012-S-23	Broadkill Beach Drainage Improvements Phase 1	RC&D 21st Century	$ 37,000		$ 3,460	$ 6,921	$ 23,000	36	Harvey R. Kenton	18	F. Gary Simpson
2012-S-24	Broadkill Beach Drainage Improvements Phase 2	RC&D 21st Century	$ 27,000		$ 3,460	$ 6,921	$ 13,000	36	Harvey R. Kenton	18	F. Gary Simpson
2012-S-25	Broadkill Beach Drainage Improvements Phase 3	RC&D 21st Century	$ 40,000		$ 4,449	$ 8,897	$ 22,000	36	Harvey R. Kenton	18	F. Gary Simpson
2012-S-26	Primehook / Fowlers Beach Drainage Improvements Phase 1	RC&D 21st Century	$ 94,000		$ 8,650	$ 17,301	$ 59,000	36	Harvey R. Kenton	18	F. Gary Simpson
2012-S-27	Slaughter Beach Drainage Improvements Phase 1	RC&D 21st Century	$ 147,000		$ 11,122	$ 22,244	$ 102,000	36	Harvey R. Kenton	18	F. Gary Simpson
2004-S-28	Lewes Beach Drainage Improvements Phase 1	RC&D 21st Century	$ 66,000		$ 1,997	$ 3,994	$ 40,000	20	Stephen T. Smyk	6	Ernesto B. Lopez
2014-S-29	Oak Orchard Drainage Improvements - Phase 1	RC&D 21st Century	$ 218,000		$ 10,436	$ 20,872		37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-30	Oak Orchard Drainage Improvements - Phase 2	RC&D 21st Century	$ 945,000		$ 25,047	$ 50,094		37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-31	Oak Orchard Drainage Improvements - Phase 3	RC&D 21st Century	$ 951,000		$ 25,047	$ 50,094		37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-32	Oak Orchard Drainage Improvements - Phase 4	RC&D 21st Century	$ 76,000		$ 4,174	$ 8,349		37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-33	Oak Orchard Drainage Improvements - Phase 5	RC&D 21st Century	$ 918,000		$ 15,654	$ 31,309		37	Ruth Briggs King	20	Gerald W. Hocker
2014-S-34	Little Bay T.D. / Oceanside Pkwy Culvert Replacement	RC&D 21st Century	$ 250,000	$ 25,000	$ 40,208	$ 175,000		38	Ronald E. Gray	20	Gerald W. Hocker
2014-S-35	Little Bay T.D. / Rose Marie Rosse Bank Stabilization **SEE PROJECT 50**	RC&D 21st Century	$ 50,000	$ 5,000		$ 35,000		38	Ronald E. Gray	20	Gerald W. Hocker
2014-S-36	Pine Valley MHP Drainage Improvements	RC&D 21st Century	$ 325,000	$ 32,500	$ 9,962			14	Peter C. Schwartzkopf	6	Ernesto B. Lopez
2015-S-37	Unity Branch/Holly Lake Campground Watershed Study- (SCD Agreement)	RC&D 21st Century	$ 105,600	$ 52,800	$ 7,300			20, 37	Stephen T. Smyk, Ruth Briggs King	6, 19	Ernesto B. Lopez, Brian Pettyjohn
2015-S-38	Unity Branch/Holly Lake Campground Watershed Study (RK&K Agreement)	RC&D 21st Century	$ 105,600	$ 52,800	$ 23,826			20, 37	Stephen T. Smyk, Ruth Briggs King	6, 19	Ernesto B. Lopez, Brian Pettyjohn
2009-S-39	Norman Eskridge Highway / Lowes	RC&D 21st Century	$ 70,000	$ 7,000		$ 48,000		39	Daniel B. Short	21	Bryant L. Richardson
2015-S-40	Long Neck Drainage Study	RC&D 21st Century	$ 1,000,000	$ 100,000		$ 45,000		37	Ruth Briggs King	6, 20	Ernesto B. Lopez, Gerald W. Hocker
2006-S-41	Highland Acres Tax Ditch Maintenance Dipout	RC&D 21st Century	$ 160,000	$ 110,000		$ 50,000		20	Stephen T. Smyk	6	Ernesto B. Lopez
1996-S-42	Selbyville Flood Drainage Project Phase II Railroad Avenue	RC&D 21st Century	$ 900,000	$ 90,000	$ 39,600			41	Richard G. Collins	20	Gerald W. Hocker
2011-S-43	Avalon Woods / Frank Jewell Drainage Improvements	RC&D 21st Century	$ 500,000	$ 25,000	$ 22,226	$ 386,406		37	Ruth Briggs King	19	Brian Pettyjohn
2007-S-44	Little Hill Rd / Leonard Drainage Improvements	RC&D 21st Century	$ 100,000	$ 10,000		$ 90,000		40	Timothy D. Dukes	21	Bryant L. Richardson
2014-S-45	Derrickson Canal T.D. Prong 3 Drainage Improvements *Phase II Garage & Dipout*	RC&D 21st Century	$ 83,300	$ 8,300		$ 75,000		38	Ronald E. Gray	20	Gerald W. Hocker
2005-S-46	Road 357 (Piney Point Dev.) / John Bauer	RC&D 21st Century	$ 35,000	$ 3,500		$ 31,500		38	Ronald E. Gray	20	Gerald W. Hocker
2004-S-47	Rd. 283 A / Kosinski Public Ditch	RC&D 21st Century	$ 75,000	$ 7,500		$ 67,500		14	Peter C. Schwartzkopf	6	Ernesto B. Lopez

Project ID	Project	Project Category	State Costs	Matching Funds	FY2016 21CF Projected	FY17 21CF Planned	FY18 21CF Planned	Representative District	Represenative	Senatorial District	Senator
2012-S-48	Revel Road / DelDOT Drainage Improvements	RC&D 21st Century	$ 100,000	$ 10,000		$ 90,000		41	Richard G. Collins	20, 21	Gerald W. Hocker, Bryany L. Richardson
2006-S-49	Progress School Rd / Evans Public Ditch	RC&D 21st Century	$ 75,000				$ 67,500	35	David L. Wilson	19	Brian Pettyjohn
2013-S-50	Town of Bethel / Snake Road Drainage Improvements	RC&D 21st Century	$ 160,000			$ 44,000	$ 100,000	40	Timothy D. Dukes	20	Gerald W. Hocker
2004-S-51	Baltimore Avenue / Cheeks Public Ditch	RC&D 21st Century	$ 30,000	$ 3,000		$ 27,000		38	Ronald E. Gray	20	Gerald W. Hocker
2015-S-52	Pepper Creek Tax Ditch Bank Stabilization	RC&D 21st Century						41	Richard G. Collins	20	Gerald W. Hocker
2011-S-53	Diamond Acres / Jones Drainage Improvements	RC&D 21st Century						41	Richard G. Collins	20	Gerald W. Hocker
2015-S-54	Cart Branch Tax Ditch Prong C Bank Stabilization	RC&D 21st Century	$ 50,000	$ 5,000		$ 45,000		35	David L. Wilson	18	F. Gary Simpson
2012-S-55	Bunting Tax Ditch Prong 2 Bank Stabilization	RC&D 21st Century	$ 50,000	$ 5,000		$ 45,000		38	Ronald E. Gray	20	Gerald W. Hocker
2006-S-56	Raccoon Branch Tax Ditch Bank Stabilization	RC&D 21st Century	$ 30,000	$ 3,000		$ 27,000		40	Timothy D. Dukes	21	Bryant L. Richardson
2010-S-57	Herring Branch Tax Ditch / Parson Bank Stabilization	RC&D 21st Century	$ 30,000	$ 3,000		$ 27,000		41	Richard G. Collins	20	Gerald W. Hocker
2004-S-58	Joe Dailey New Rd Lewes	RC&D 21st Century	$ 300,000	$ 30,000		$ 270,000		20	Stephen T. Smyk	6	Ernesto B. Lopez
2008-S-59	Walker Mill Rd / Country Glenn Drainage Improvement	RC&D 21st Century	$ 150,000	$ 15,000		$ 135,000		35	David L. Wilson	19	Brian Pettyjohn
2007-S-60	Rd 550 / Harry Simiomick Drainage Improvements	RC&D 21st Century	$ 140,000	$ 14,000		$ 126,000		39	Daniel B. Short	21	Bryant L. Richardson
2005-S-61	Road 442 / Jay Challman	RC&D 21st Century						40	Timothy D. Dukes	21	Bryant L. Richardson
2009-S-62	Trap Pond Rd / White Drainage Improvements	RC&D 21st Century						40	Timothy D. Dukes	21	Bryant L. Richardson
2004-S-63	Earnestine Hall Rd 569 nr Omar	RC&D 21st Century	$ 70,000	$ 7,000		$ 63,000		38	Ronald E. Gray	20	Gerald W. Hocker
2008-S-64	Bear Hole Tax Ditch / Johnson	RC&D 21st Century	$ 21,000				$ 18,900	38	Ronald E. Gray	20	Gerald W. Hocker
2004-S-65	Rt. 5 & Rd. 290 / Cook Public Ditch	RC&D 21st Century	$ 275,000				$ 247,500	20	Stephen T. Smyk	6, 19	Ernesto B. Lopez, Brian Pettyjohn
2012-S-66	RD 207/213 Drainage Improvements	RC&D 21st Century	$ 30,000				$ 27,000	35, 36	David L. Wilson, Harvey R. Kenton	18	F. Gary Simpson
2005-S-67	Road 436(Curley Dr) / Butch Raghunadan / Saunders Br.	RC&D 21st Century	$ 140,000				$ 126,000	40	Timothy D. Dukes	21	Bryant L. Richardson
2013-S-68	Carsyljan Acres / Jordan Drainage Improvements	RC&D 21st Century	$ 42,000				$ 37,800	20	Stephen T. Smyk	6	Ernesto B. Lopez
2011-S-69	Mirey Branch / Wan Yu Bank Stabilization	RC&D 21st Century	$ 32,000				$ 28,800	40	Timothy D. Dukes	21	Bryant L. Richardson
2014-S-70	Reservation Trail / Grzybowski Drainage Improvements	RC&D 21st Century	$ 26,000				$ 23,400	38	Ronald E. Gray	20	Gerald W. Hocker

Appendix No. 5:

Delaware Conservation Cost Share Program For Fiscal Year 2015

DELAWARE CONSERVATION COST SHARE PROGRAM FOR FISCAL YEAR 2015

The following represents the annualized average by Legislative District for the Delaware Conservation Cost Share Program as managed by each County Conservation District. Annually, the Conservation Districts accepted applications for cost-share assistance on conservation best management practices (BMPs). Eligible BMPs include cover crops, manure storage structures, poultry composters, heavy-use area protections, poultry windbreaks, agricultural waste systems, wildlife habitat ponds, water management, and more. These conservation practices have many positive environmental benefits such as reducing excess nutrients, improving ground water quality, and preventing soil erosion. However, the vast majority of the BMPs implemented are cover crops. Each County Conservation District manages the Cost Share Program independently for their respective County. As sign-ups continue until dedicated resources are fully obligated, future funding demands are difficult to estimate.

Sussex Conservation District
Conservation Cost-Share Fund (Cover
Legislative Breakdown
2015

Senate District	Annualized Average Cost-Share (Cover Crops) Dollars Spent
Ernesto B. Lopez (6)	$ 116,362.50
F. Gary Simpson (18)	$ 222,587.50
Brian Pettyjohn (19)	$ 163,675.00
Gerald W. Hocker (20)	$ 65,762.50
Bryant L. Richardson (21)	$ 239,470.00
Totals	**$ 807,857.50**

Representative Districts	Annualized Average Cost-Share (Cover Crops) Dollars Spent
Peter C. Schwartzkopf (14)	$ 70,980.00
Stephen T. Smyk (20)	$ 249,187.50
David L. Wilson (35)	$ 426,510.00
Harvey R. Kenton (36)	$ 438,480.00
Ruth Briggs King (37)	$ 144,895.00
Ronald E. Gray (38)	$ 42,595.00
Daniel B. Short (39)	$ 174,627.50
Timothy D. Dukes (40)	$ 499,792.50
Richard G. Collins (41)	$ 223,940.00
Totals	**$ 2,271,007.50**

Kent Conservation District
Conservation Cost-Share Fund (Cover
Legislative Breakdown
2015

Senate District	Annualized Average Cost-Share (Cover Crops) Dollars Spent
Bruce C. Ennis (14)	$ 47,563.05
David G. Lawson (15)	$ 356,808.45
Colin R. J. Bonini (16)	$ 352,208.40
Brian J. Bushweller (17)	$ 111,323.45
F. Gary Simpson (18)	$ 18,838.38
Totals	**$ 886,741.72**

Representative Districts	Annualized Average Cost-Share (Cover Crops) Dollars Spent
S. Quinton Johnson (8)	$ 1,656.60
Jeffrey N. Spiegelman (11)	$ 25,800.13
Earl G. Jaques Jr (27)	$ -
William J. Carson (28)	$ 52,195.55
W. Charles Paradee (29)	$ 104,356.87
William R. "Bobby" Outten (30)	$ 437,734.25
Sean M. Lynn (31)	$ 3,540.00
Andria L. Bennett (32)	$ 86,985.25
Charles S. Postles (33)	$ 110,449.05
Lyndon D. Yearick (34)	$ 64,024.03

New Castle Conservation District
Conservation Cost-Share Fund (Cover
Legislative Breakdown
2015

Senate District	Annualized Average Cost-Share (Cover Crops) Dollars Spent
Gregory F. Lavelle (4)	$ 240.00
David P. Sokola (8)	$ 2,050.00
John J. Walsh, III(9)	$ 6,250.00
Stephanie L. Hansen (10)	$ 52,984.15
Bryan Townsend (11)	$ 9,075.00
Nicole Poore (12)	$ 31,585.25
David B. McBride (13)	$ 137.50
Bruce C. Ennis (14)	$ 279,095.90
Totals	**$ 381,417.80**

Representative Districts	Annualized Average Cost-Share (Cover Crops) Dollars Spent
S. Quinton Johnson (8)	$ 36,979.90
Kevin S. Hensley (9)	$ 187,218.40
Jeffrey N. Spiegelman (11)	$ 110,795.25
Peter C. Schwartzkopf (14)	$ 9,075.00
Michael P. Mulrooney (17)	$ 7,665.00
Michael Ramone (21)	$ 6,250.00
Joseph E. Miro (22)	$ 240.00
Paul S. Baumbach (23)	$ 2,050.00
John A. Kowalko Jr. (25)	$ 1,225.00
Earl G. Jaques Jr. (27)	$ 19,919.25

Appendix No. 6:

Clean Water Fact Sheet

CLEAN WATER IS ESSENTIAL TO EVERYONE.

Contaminated water doesn't just affect fish and wildlife living in our local streams -- it affects our everyday lives. The health of our water impacts the food we eat, the streams and waterways near our homes, and the trips we take to the beach with our families.

CHALLENGES

86% of Delaware rivers/streams are not recommended for swimming due to high levels of bacteria[1]

100 miles of Delaware's waters have fish-consumption advisories from high PCBs, metals, and pesticides[1]

$650-700 million worth of investments in wastewater infrastructure will be needed in Delaware over the next six years[2]

1 acre of tidal wetlands are collectively being lost every day in the Delaware region[3]

OPPORTUNITIES

Additional investments in innovative clean water programs could result in:

- Decreased contamination in our waterways
- Improved protection of our drinking water sources
- Reduced pipeline breakage and sewage overflows
- less flooding in our coastal and inland communities

cleanwaterdelaware.org

Visit our website to:

Sign our pledge of support

Get the latest updates about the campaign and water quality issues in the state

THE CLEAN WATER CAMPAIGN: DELAWARE'S CLEAR CHOICE

Our campaign is a statewide education and outreach effort focused on securing additional funding for clean water.

1 http://www.ipa.udel.edu/publications/EconomicValueDelawareWatersheds.pdf
2 http://www.dnrec.delaware.gov/fab/Pages/Statewide-Needs-Assessment-2011-2016.aspx
3 https://s3.amazonaws.com/delawareestuary/pdf/TREB/PDF-Report-12-01_Technical%20Report%20for%20the%20Delaware%20Estuary%20and%20Basin.pdf

TIPS FOR IMPROVING WATER QUALITY IN EVERYDAY WAYS

Tips for Your Home

- [ ] Get your home certified as Wildlife Habitat. (Hint: If you take many of the below steps, it will be easy to get certified. Ask us for more information!)
- [ ] Plant more native trees around your home to help prevent water pollution and slow the speed of stormwater flow. Many local conservation organizations can provide guidance. Contact us and we can get you in touch with one!
- [ ] Install a rain barrel to collect water from roofs and downspouts and use the collected water for washing your vehicles, gardening or watering your lawn. We can help you with instructions on how to make/purchase a rain barrel and install it!
- [ ] Create a rain garden using native plants and landscaping to help soak up storm water coming from nearby downspouts and driveways, which reduces the pollution going to nearby rivers, streams and waterways. We can help you choose the best native plants for your property!
- [ ] Add planters filled with native plants and flowers to your sidewalks and other hard services like driveways and cement pads. Planters can also be placed under downspouts to collect storm water from your roof! This container garden will help soak up storm water that would otherwise be swept away into our waterways via storm drains.
- [ ] Sweep your sidewalks and driveways instead of hosing them off. The water from the hose carries excess lawn clippings and fertilizer into nearby storm drains.
- [ ] Pick up your pet's waste. A measureable amount of bacteria in our waterways comes from pet waste that has been washed into our storm drains, creeks and streams from rain and snow melt.
- [ ] Instead of bagging grass clippings, recycle them by leaving them on your lawn. Those clippings act as a natural fertilizer and save our landfills from bagged clippings and help reduce the amount of fertilizer applied to grass!
- [ ] Compost your yard waste and kitchen scraps.
- [ ] Use your own, or commercially available, compost as an alternative to fertilizer on your property.
- [ ] In the winter, when de-icing your property's walkways and streets, consider adding sand for traction so de-icing agents don't end up in our waterways or sweep up any unused de-icing agents and recycle for the next storm.
- [ ] If you have a septic tank, have it inspected and maintained regularly. Your local health department can provide guidance.
- [ ] Dispose medications and pharmaceuticals properly, do not flush them down the toilet. We can provide you with guidance.
- [ ] Participate in Delaware's Livable Lawns program. Go to delawarelivablelawns.org for more.
- [ ] Contact the Delaware Solid Waste Authority to ensure proper disposal of household chemicals.

Tips For Your Cars and Boats

- [ ] Check your cars and boats for oil leaks and regularly maintain your vehicles to reduce oil use.
- [ ] Wash your vehicles on gravel, grass or other permeable surfaces that can help filter harmful soaps from reaching our waterways.
- [ ] If you hold charity car washes, block nearby storm drains or invest in a vacuum pump so you can empty the water in a sink, where it will be treated at a wastewater facility, instead of down a storm drain, which goes directly into our waterways.
- [ ] Use oil absorbent pads in your boat's bilge to reduce oil leaking into our waterways.
- [ ] Use environmentally safe paint to when protecting the bottom of your boat from fouling.
- [ ] Always carry your trash ashore after a day on the water and secure trash while it is on the boat.

Tips For Water Conservation

- [ ] Inspect and fix leaky faucets and showerheads.
- [ ] Use low-flow or WaterSense devices on faucets and showerheads.
- [ ] Turn off the tap when brushing your teeth.
- [ ] Wash only full loads of laundry and dishes in both your home and business.
- [ ] Purchase EnergyStar® appliances going forward.
- [ ] Use sprinklers on your lawn or property minimally, and when you do, run your sprinklers before 8am.

www.cleanwaterdelaware.org

Appendix No. 7:

Water Infrastructure Investment in Delaware

ACEC DELAWARE

Advocacy | Leadership | Education | Professional Development | Ethics

Water Infrastructure Investment in Delaware

FACTS

- Clean water is essential to the health and vibrancy of Delaware's population, economy, and environment
- More than 85 percent of Delaware's waterways do not meet one or more water quality standards and are considered too polluted for their intended uses
- Many Delaware communities are plagued by flooding that are anticipated to worsen as climate patterns change
- Much of Delaware's water infrastructure is nearing the end of its useful life and approaching the age at which it needs to be replaced
- Water infrastructure is critical for long-term economic growth, increasing GDP and employment
- Water infrastructure funding continues to decline while costs and inflation increase

The Delaware Clean Water Task Force estimates an initial annual investment of

$100 Million

is needed for water infrastructure capital improvements to address existing water quality concerns

Delaware Water Infrastructure Investment Benefits

- Improved Water Quality. – Resulting in enhanced enjoyment of our surface waters
- Restored water infrastructure resulting in upgraded and reliable service, decreasing disruptions, and decreasing expenditures for emergency repairs
- Flood Mitigation – Resulting in reduction of property and critical infrastructure damage

Investment in Water Infrastructure is an Investment in Delaware's Long-Term Economic Growth

$1 million in direct spending by water/wastewater utilities supports 16 jobs throughout all sectors of the economy[1]

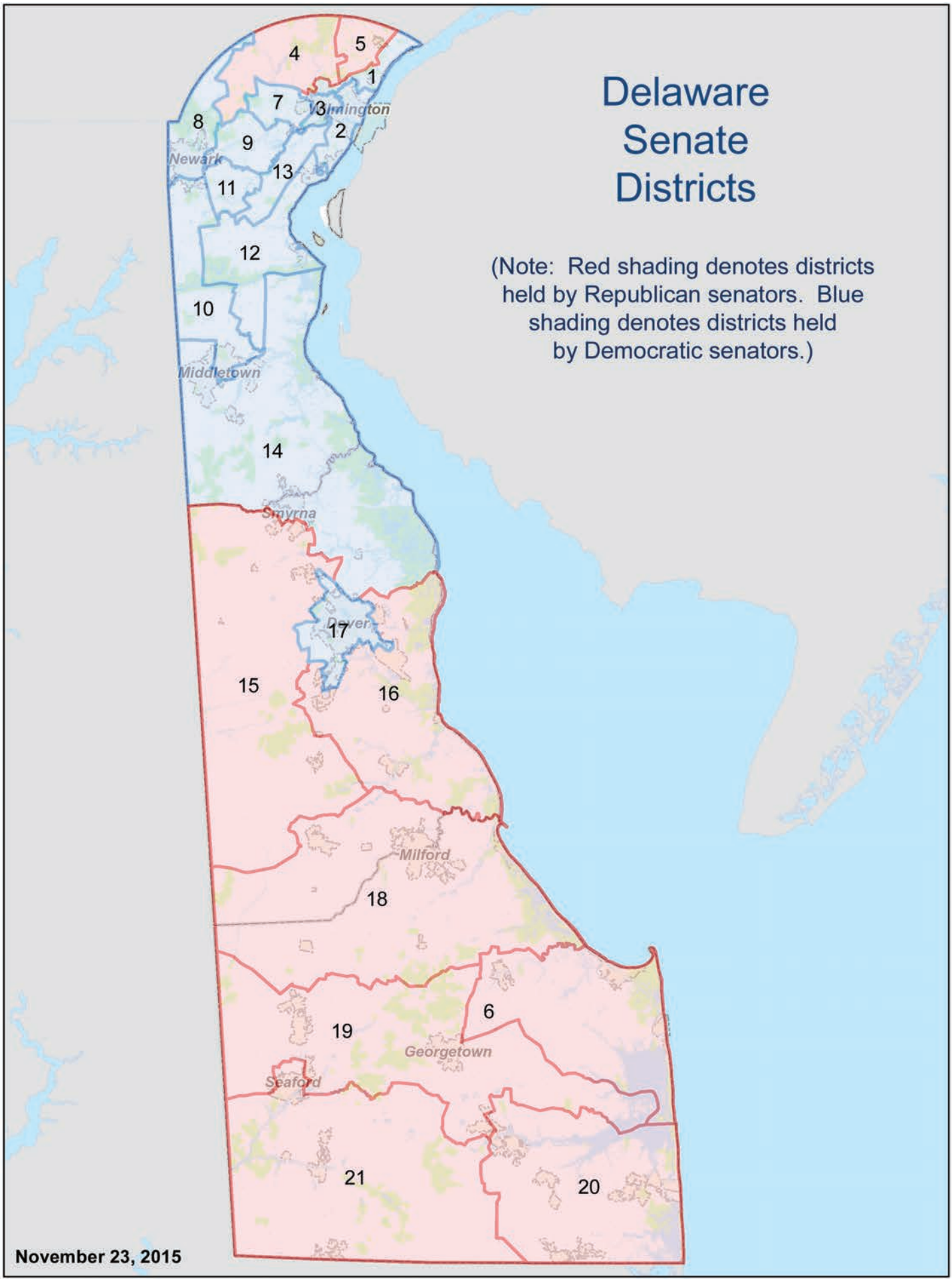
$1 Million	=	5 Jobs	+	11 Jobs	=	16 Jobs
Investment		*Direct Impact*[2]		*Indirect Impact*[3]		*Total*

1 – National Economic and Labor Impacts of the Water Utility Sector – 2014 – Water Environment Research Foundation
2 – Employment provided by water sector
3- Employment provided by other industries that are supported by water infrastructure expenditures

To address these long term needs, Delaware's Clean Water Task Force, Water Infrastructure Advisory Council and ACEC – Delaware recommend that a statewide dedicated source of water infrastructure funding be established and maintained

Appendix No. 8:

Senate and House District Maps


Delaware
Senate
Districts
(Note: Red shading denotes districts held by Republican senators. Blue shading denotes districts held by Democratic senators.)
Wilmington
Newark
Middletown
Smyrna
Dover
Milford
Georgetown
Seaford
1
2
3
4
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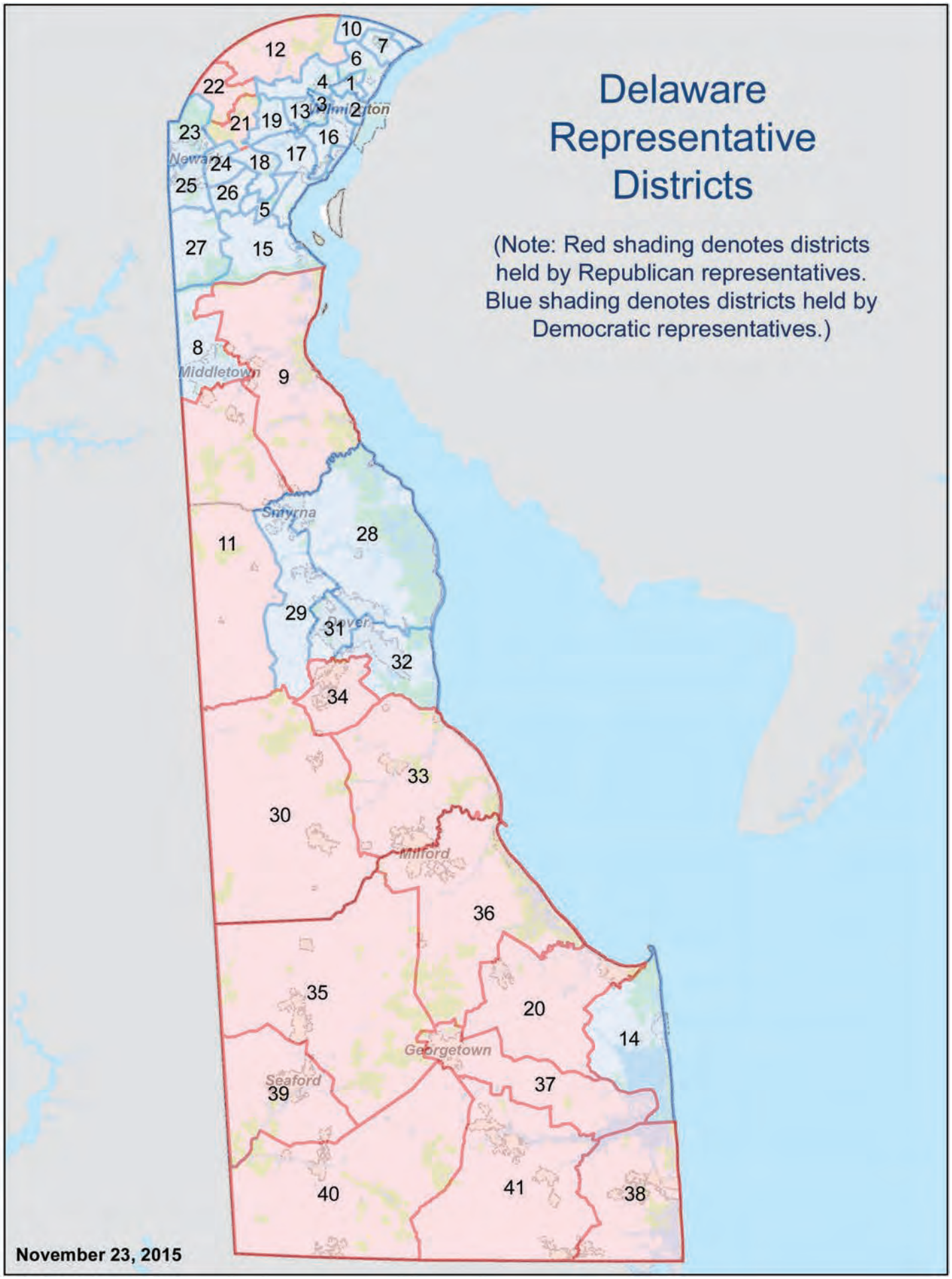
November 23, 2015


Delaware
Representative
Districts
(Note: Red shading denotes districts held by Republican representatives. Blue shading denotes districts held by Democratic representatives.)
10
7
12
6
4
1
22
3
2
13
21
19
23
16
17
18
24
25
26
5
27
15
8
Middletown
9
Smyrna
28
11
29
31
32
34
33
30
Milford
36
35
20
14
Georgetown
37
Seaford
39
40
41
38
November 23, 2015