State *of* Delaware

Water Pollution Control Revolving Fund

Revised Fiscal Year 2017 Intended Use Plan

Prepared by the

Department of Natural Resources and Environmental Control

Office of the Secretary

Environmental Finance

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Delaware Water Pollution Control Revolving Fund

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I. Introduction

This Revised Intended Use Plan (IUP) is required by Section 606(c) of the Clean Water Act (CWA), and will be submitted to the U.S. Environmental Protection Agency (EPA) as part of the State of Delaware's FFY 2017 Federal Capitalization Grant (FFY 2017 Grant) Application. Two IUPs are prepared annually to ensure that all potential loan applicants have an opportunity to submit project needs for funding consideration. This is the first IUP, which will be submitted to EPA in June 2017.

The IUP identifies the intended use of the funds requested, and how the additional financial assistance will support the goals of the Delaware Water Pollution Control Revolving Fund (WPCRF). The mission of the WPCRF is to provide a continuing source of financing for environmental infrastructure capital needs to maintain and improve water quality. Financial assistance is provided by the WPCRF to public and private entities for planning, design, and construction of wastewater collection, treatment and disposal facilities, stormwater infrastructure improvements, non-point source, and estuary water pollution control projects. The terms "WPCRF" and Clean Water State Revolving Fund "CWSRF" are used interchangeably in this document and have the same meaning.

Although previously approved and awarded by EPA, this IUP also describes the transfer of federal funds between the Department of Health and Social Service's (DHSS) Drinking Water State Revolving Fund (DWSRF) and the WPCRF. It identifies how the additional financial assistance was used to support the goals of the WPCRF; and the amount of the transfer.

All eligible applicants submitting Project Notices-of-Intent (NOIs) are listed on the FFY 2017 Project Priority List (FFY 2017 PPL) in priority order. However, no funds are committed or reserved for individual projects until financial assistance applications are solicited, received and approved; indicating the project's readiness to proceed. Projects that are ready to proceed are then funded in priority order.

II. WPCRF Program Goals

The State of Delaware is committed to using federal capitalization grants to provide financial assistance for eligible projects that will proceed quickly to construction, and further the water quality mission of the WPCRF. The following are the WPCRF short-term and long-term goals.

<u>Short-Term Goals</u>
To enter into binding commitments for projects that will proceed to construction or award of construction contracts within eight (8) quarters of the FFY 2017 Grant award.

To achieve a CWSRF program "PACE" that exceeds 95 percent utilization of available funds for project binding loan commitments.

To expand the loan portfolio of the WPCRF to include other innovative uses such as loans for land conservation, stormwater, water conservation, energy efficiency, as well as green and sustainable water infrastructure projects consistent with CWSRF program rules, requirements, and regulations.

To enhance the collaboration between DNREC and DHSS relative to the operation of the CWSRF and DWSRF programs. These enhancements will focus on adding increased program value to applicants and borrowers, such as:

- Combined CWSRF and DWSRF Semi-Annual Workshops
- On-line CWSRF and DWSRF document submittal capability
- Offering Planning and Design Loans for Projects that are not Ready to Proceed
- Combined CWSRF and DWSRF Loan Closings (where applicable)
- Eliminate need for Interim Construction Project Financing from other funding sources (bank financing for project construction is not needed; CWSRF and DWSRF funds can be used for project planning, design, and construction); loan reimbursement requests based on incurred eligible project costs are normally processed with 30 days
- Processing Loan Reimbursement Requests within 30 days or less

To analyze financial leveraging as a tool that may be needed to help meet the growing demand for loans provided by the WPCRF.

To comply with all federal capitalization grant and project reporting requirements. Including updating all WPCRF documents that reference 40 CRF Parts 30 & 31 with 2 CFR 200 for the following administrative program requirements.

- A-133 with 2 CFR 200 Subpart F (Audit Requirements)
- A-87 with 2 CFR 300 Subpart E (Cost Principles)

Long-Term Goals

To ensure the long-term viability of the WPCRF program, while providing necessary project subsidization when needed.

To optimize the WPCRF program to address changing loan demand for Non-Point Source concerns and other difficult to finance water quality improvement issues.

To identify and fund projects associated with the Water Resources Reform and Development Act (WRRDA) – Expanded Project Eligibilities.

To periodically evaluate additional funding opportunities to meet emerging water quality and public health needs.

III. Fund Sources, Uses, and Program Requirement

DNREC will apply for the full amount of the FFY 2017 Federal Capitalization Grant totaling $6,474,000 for which a twenty percent (20%) state match $1,294,000 is required. The required (20%) state match will provided from a state appropriation and/or the CWSRF Non Federal Administrative Account. EPA previously awarded DNREC a FFY 2012 Federal Capitalization Grant that included converted DWSRF transferred funds totaling $27,050,176 for which a twenty percent state match appropriation totaling $5,410,035 was provided by DHSS.

Water Resources Reform and Development Act (WRRDA) amendment changes to the CWSRF program allow 1/5% of the WPCRF's FY 2016 Net Fund Position to be used for program administration, a total of $551,642 is authorized and will be used. Up to (30%) $1,942,200 of the FFY 2017 Grant may be used for principal loan forgiveness based on project affordability. At least ten percent (10%) $647,400 of the FFY 2017 Grant must be used for principal loan forgiveness for any borrower; and (10%) $647,400 must be used for projects funded under a Green Project Reserve (GPR) - green infrastructure, water or energy efficiency, and innovative uses.

Table 1 – Fund Sources, Uses, and Program Requirement

Sources:	FFY 2017	FFY 2012
Federal Capitalization Grant	$6,474,000	$27,050,176
State Match – 20%	$1,294,800	$ 5,410,035
Total Sources	$7,768,800	$32,460,211
Uses:		
WPCRF Administration (4%)		$ 1,082,007
WPCRF Administration (1/5 of 1%)	$ 551,642	
Program Loans	$7,768,800	$31,378,204
Up to 30% Principal Loan Forgiveness (max)	$1,942,200	
Requirement:		
10% Principal Loan Forgiveness	$ 647,400	
10% Green Project Reserve	$ 647,400	

Cross Collateralization between SRF programs

$27,050,178 in Federal and $5,410,035 in State funds transferred from the DWSRF program to the CWSRF program will be repaid by meeting DWSRF loan disbursement needs. It is the understanding between both DNREC and DHSS that up to $32,460,213 will be made available for DWSRF loan disbursements after the following funding sources have been exhausted: first Federal Capitalization Grants; and second DWSRF loan repayments. After these funding sources have been exhausted, DNREC will provide loan disbursements for existing and/or new DWSRF loans on a cash flow basis as needed up to the amount of the previously transferred DWSRF funds stated above. To date, no funds have been transferred back to the DWSRF program. An accounting of DWSRF

repayments will be included in this document, and the Annual Reports for the CWSRF and DWSRF programs.

IV. Project Selection Funding Process

On May 9, 2013, the City of Wilmington's CWSRF loan for its Renewable Energy Biosolids Facility (REBF) project was closed. The loan was used for the long-term financing of the REBF project; the City obtained another source of financing for project construction. FFY 2012 Transferred Grant Funds were be used in part to fund the loan to the City.

On December 16, 2016 a Workshop was held to provide a detailed overview of the CWSRF and DWSRF programs; and to inform municipalities, private businesses, consulting engineering firms, non-profits, and other interested parties of the need to submit NOIs for the Revised FFY 2017 PPL process by January 31, 2017. Eleven (11) NOIs were received totaling $23,216,539 from three (4) municipalities during the first solicitation.

The selection process for funding projects in part with FFY 2017 Grant funds is based on their respective Revised FFY 2017 PPL ranking, and readiness to proceed. The following projects totaling $139,964,731 may receive CWSRF funding; thirty-two (32) Wastewater Projects totaling $122,525,731; and two (2) Green Project Reserve (GPR) projects totaling $17,439,000. Prior year projects remain on the funding list until the associated loans are closed or withdrawn by applicants.

Table 2 - Wastewater Projects Selected for Funding

Applicant / Project Name	**Project Cost**	**CWSRF**
City of Rehoboth Beach		
• WWTP Upgrade 1 – FY 2012 PPL	$10,488,000	$10,488,000
• Ocean Outfall Project – FY 2010 PPL	$32,500,000	$25,000,000
• WWTP Biosolids Project – FY 2015 PPL	$12,500,000	$12,500,000
Sussex County		
• Herring Creek – Phase 1	$16,664,000	$16,664,000
• Chapel Branch	$ 3,744,323	$ 3,744,323
• Mallard Creek	$ 2,000,000	$ 2,000,000
• Oak Acres	$ 2,500,000	$ 2,500,000
• Route 54 Extension	$ 2,048,682	$ 2,048,682
• Tanglewood	$ 1,400,000	$ 1,400,000
• Bethany Forest	$ 2,452,154	$ 2,452,154
• Mulberry Knoll	$ 2,813,062	$ 2,813,062
Kent County Levy Court		
• Air System (Blower) Optimization Project	$ 4,513,700	$ 1,354,110
• Plant Wide Backup (Emergency) Power	$ 3,747,400	$ 1,237,400
• US Route 13 Forcemain Rehabilitation	$ 3,980,000	$ 3,980,000

City of Dover		
• Walker Woods Pump Station Replacement	$ 460,000	$ 408,000
• Delaware Tech Pump Station Replacement	$ 436,000	$ 384,000
• Lepore Road Sanitary Sewer Upgrade	$ 300,000	$ 250,000
• Silver Lake Pump Station Replacement	$ 448,000	$ 396,000
• Tar Ditch Interceptor	$ 250,000	$ 250,000
• Meeting House Branch Env. Restoration	$ 8,203,542	$ 7,600,000
New Castle County Special Services		
• Hunter's Ridge	$ 350,000	$ 350,000
• White Clay Sewer Interceptor Project	$ 2,000,000	$ 2,000,000
• Morningside Stormwater Pond Rehab.	$ 250,000	$ 250,000
• Perch Creek Stormwater Pond Rehab.	$ 265,000	$ 265,000
• Delaware City WWTP Upgrade	$ 4,675,000	$ 4,675,000
• Muddy 6 Sewer Capacity Improvement	$ 2,000,000	$ 2,000,000
Town of Smyrna		
• Kent Way Pump Station Rehab. Project	$ 890,000	$ 890,000
• South Main Street Utility Replacement	$ 1,269,380	$ 1,264,000
City of Newark		
• Western Area Drainage Flood Mitigation	$ 10,000,000	$ 10,000,000
Fort Dupont Redevelopment Corporation		
• Stormwater Management Improvements	$ 927,000	$ 927,000
• Sewer Improvements	$ 520,000	$ 520,000
• Floodproofing Improvements (Dike)	$ 2,180,000	$ 2,180,000
Sub-Total Municipal Wastewater Projects	**$136,510,243**	**$122,525,731**

Loans for two (2) GPR projects are anticipated to close during the year.

Table 3 - GPR Projects Selected for Funding

Applicant / Project Name	Project Cost	CWSRF Funding
City of Wilmington		
• South Wilmington Wetlands Park	$ 16,739,000	$ 16,739,000
City of Wilmington		
• 15th and Walnut CSO Separation Green Infrastructure and Bike Track	$ 820,000	$ 700,000
Total Municipal Wastewater & GPR Project Funding	**$137,152,132**	**$139,964,731**

V. Interest Rates and Loan Terms

2% loans are currently offered under the CWSRF – DWSRF Interim Interest Rate Policy; the policy was scheduled to sunset on December 31, 2016. However, the Water Infrastructure Advisory Council (WIAC) on December 7, 2016 recommended extending the Interim Interest Rate Policy to December 31, 2017. Borrowers can receive a lower interest rate and/or other project subsidies based on project affordability. Sewer user charge affordability review criteria are based on one and a half percent (1.5%) of Median Household Income (MHI) for residential wastewater or drinking water service; and 2.0% of MHI for combined services.

VI. New Affordability Criteria

June 10, 2014 President Obama signed into law the WRRDA. The amendment changes under Title VI of the Clean Water Act apply to Federal Water Pollution Control Act that created the CWSRF Program. In addition to income criteria for project affordability, the State was required by WRRDA to develop additional measures associated with unemployment data, and population trends by September 30, 2015. Affordability criteria for the additional measures are the following:

Unemployment Data – Nonpayment of residential wastewater and drinking water utility bills are normally directly associated with insufficient income and unemployment. Residential utility bill delinquency rates are used as a proxy measure for unemployment. 5% residential utility delinquency rate will be assumed for both wastewater and drinking water when evaluating CWSRF loan applications for assistance. CWSRF loan applicants will be required to provide additional documentation to support a residential delinquency rate above 5%;

Population Trends – Wastewater utilities can be negatively impacted by decreasing population in relation to fixed assets and expenses that were designed/sized to service a larger customer base. The estimated number of Equivalent Dwelling Units (EDUs; 1 household = 1 EDU) served by a wastewater utility is used as a proxy measure for population trends. CWSRF loan applicants negatively impacted by decreasing number of EDUs served in relation to their proposed project(s) will be required to provide documentation to receive a systems revenue credit that cannot exceed the difference in the number of EDUs served over the past 5 years.

VII. Authority to Provide Additional Subsidization

The DNREC has the authority to implement the WPCRF under 29 Del. C. Ch. 80, §8003. The authority includes any other allowable purposes under the CWA as amended.

VIII. Expanded Use Programs

Septic Rehabilitation Loan Program

Environmental Finance and the Groundwater Discharge Section jointly manage the Septic Rehabilitation Loan Program (SRLP) within DNREC. The SRLP provides financial assistance low to moderate income homeowners to replace failing septic systems. Mobile home park owners are also eligible to receive assistance to replace

failing decentralized community wastewater systems, limited to $250,000 or less. Based on historical trends, the budget for funding the SRLP is $500,000.

Agricultural Non-Point Source Loan Program

DNREC and State Conservation Districts have established a loan program to provide financial assistance to poultry and dairy producers to help manage Non-Point Source Pollution. Agricultural Non-Point Source Loan (AgNPSLP) funds are leveraged with Federal and State Cost Share assistance from Conservation Districts, to provide low interest loans to producers for manure storage/management and dead bird composters. AgNPSLP loans are made available for up to ninety percent (90%) of a producer's share of the cost for manure storage structures, dead bird composting structures, and structures to effectively utilize and manage manure from dairy cattle. Based on historical trends, the budget for funding the AgNPSLP is $500,000.

Expanded Uses Non-Point Source Loan Program

The purpose of the Expanded Uses NPS Loan Program (EUNPSLP) is to provide financial assistance to private landowners, homeowners associations, corporations, municipalities, state government, non-profit organizations, and Estuary Programs to implement NPS initiatives identified in Delaware's NPS Management Plan. Loans for eligible practices may range from $1,000 up to $250,000 and will be subject to approval based on the availability of funds.

Projects eligible under the EUNPSLP program are the following:

- Sediment and stormwater management practices that are not being installed as a required component for compliance with the State Sediment and Stormwater Program.
- Eligible best management practices (BMPs) include retrofits to stormwater management ponds, stormwater management facilities, inlet devices, pollutant removal devices, catch basin retrofits, and equipment such as street sweepers and catch basin vacuum vehicles.
- Nutrient management BMPs and equipment such as composting equipment, transport equipment, storage structures, and manure spreaders.
- Waterbody restoration BMPs such as streambank stabilization, wetland restoration/creation, and restoration of riparian vegetation.
- Implementation of Estuary Conservation and Management Plans excluding education and outreach (project must be consistent with EPA approved estuary plan).

Based on estimated demand for the program, the annual budget for the EUNPSLP is $500,000.

Leaking Storage Tank Remediation Loan Program (LSTRLP)

DNREC's Underground Storage Tank Branch (USTB) administers the Leaking Storage Tank Remediation Loan Program, through an operating agreement with the Environmental Finance. The LSTRLP provides loans to assist with the removal, retrofit, clean up of contaminated sites, and corrosion protection for leaking underground storage tanks in Delaware's priority watersheds. Most loans are made to commercial businesses (petroleum service stations) that have a documented contaminated site within a priority

watershed as a result of normal aging and/or corrosion of an underground storage tank. Any site found to be contaminated must comply with reporting requirements established by Delaware's Regulation Governing Underground Storage Tank Systems. Based on historical trends, the budget for funding the LSTRLP is $240,000.

IX. Loans for Private Businesses, Private Land Owners, Privately-Owned Projects

WRRDA created new funding eligibilities, the most significant is the ability to make direct loans to private businesses, and land-owners to implement stormwater improvements on private property throughout the State. Private businesses, private land owners, and privately-owned centralized wastewater treatment projects are still eligible under the Clean Water Act Section 320 Estuary Program as long as the project is within a national estuary and consistent with the Comprehensive Conservation Management Plans (CCMPs), consistency to be determined by Environmental Finance staff.

X. Project Eligibilities

Thirty percent or more of an annual federal capitalization grants can be allocated to a Green Project Reserve. The intended use of the reserve is to help facilitate the implementation of projects that conserve or reuse water; conserve or reduce energy use; improved water quality with green infrastructure, and/or promote environmentally innovative activities and sustainability. The following is an overview of CWSRF project eligibility categories that includes Water Efficiency; Energy Efficiency; Green Infrastructure; and Environmentally Innovative/Sustainability Projects. The Land Conservation Loan Sponsorship and Water Quality Improvement Loan Sponsorship Programs are designed to help to facilitate project financing.

Entities eligible for CWSRF assistance include: municipalities, and state agencies for the construction of publicly owned treatment works defined in Section 212 of the Clean Water Act (CWA); public or private entities that implement projects under Delaware's Nonpoint Source Management Plans defined in Section 319 of the CWA; and public or private entities that implement projects under Delaware's Estuary Comprehensive Conservation Management Plans as defined in Section 320 of the CWA. Eligible assistance activities include:

1. Planning and design activities that are reasonably expected to result in a capital project;
2. Building activities that implement capital projects; and
3. Water Efficiency, Energy Efficiency, Green Infrastructure, and Environmentally Innovative/Sustainable stand-alone projects are eligible; they do not need to be part of a larger capital improvement project.

<u>Water Efficiency</u>

Water efficiency is the use of improved technologies and practices to deliver equal or better services with less water. Examples of water efficiency projects include:

1. Installation of water meters;
2. Retrofit or replacement of water using fixtures, fittings, equipment or appliances;

3. Efficient landscape or agricultural irrigation equipment;
4. Systems to recycle gray water;
5. Reclamation, recycling, and reuse of existing rainwater, condensate, degraded water, stormwater, and/or wastewater streams;
6. Collection system leak detection equipment; and
7. Development and initial distribution of public education materials

Energy Efficiency

Energy efficiency includes capital projects that reduce the energy consumption of eligible water quality projects or produce clean energy used by a treatment works defined in Selection 212 of the CWA. Clean energy includes wind, solar, geothermal, hydroelectric, and biogas combined heat and power systems. Examples of energy efficiency projects include:

1. Energy efficient retrofits and upgrades to pumps and treatment processes;
2. Leak detection equipment for treatment works;
3. Producing clean power for 212 treatment works on site (wind, solar, hydroelectric, geothermal, biogas powered combined heat and power); and
4. Pro-rata share of capital costs for offsite publicly owned clean energy facilities that provide power to a treatment works.

Green Infrastructure

Green Infrastructure includes a wide array of practices at multiple scales that manage wet weather to maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, porous pavements and cisterns. In addition to managing rainfall, these green infrastructure technologies can simultaneously provide other benefits such as helping filter air pollutants, reducing energy demands, mitigating urban heat islands, and sequestering carbon while also providing communities with aesthetic, recreational and natural resource benefits.

Examples of green infrastructure projects include:

1. Implementation of comprehensive street tree or urban forestry programs, including expansion of tree box sizes to manage additional stormwater and enhance tree health;
2. Implementation of green streets (combinations of green infrastructure practices in transportation rights-of-ways), for either new development, redevelopment or retrofits;
3. Implementation of water harvesting and reuse programs or projects, where consistent with state and local laws and policies;
4. Implementation of wet weather management systems for parking areas which include: the incremental cost of porous pavement, bioretention, trees, green roofs,

and other practices that mimic natural hydrology and reduce effective imperviousness at one or more scales;
5. Establishment and restoration of riparian buffers, floodplains, wetlands and other natural features; Downspout disconnection to remove stormwater from combined sewers and storm sewers; and
6. Comprehensive retrofit programs designed to keep wet weather out of all types of sewer systems using green infrastructure technologies and approaches.

Environmentally Innovative / Sustainability Projects

Environmentally innovative may include projects that demonstrate new and/or innovative approaches to managing water resources in a more sustainable way, including projects that achieve pollution prevention or pollutant removal at the least life-cycle costs, subject to environmental review results. Projects may include approaches that incorporate green infrastructure into drinking water, stormwater, and wastewater utility infrastructure and management.

Examples of environmentally innovative projects include:

1. Green Infrastructure/Low Impact development stormwater projects;
2. Wetland restoration;
3. Decentralized wastewater treatment solutions to existing deficient or failing on site systems;
4. Water reuse projects that reduce energy consumption, recharge aquifers and reduce water withdrawals and treatment costs; The water quality portion of projects that employ development and redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design;
5. Projects that use water balance approaches (water budgets) at the project, local or state level that preserve site, local or regional hydrology. Such an effort could show-case efforts to plan and manage in a concerted manner, surface and groundwater withdrawals, stream flow (aquatic species protection), wetland and floodplain storage, groundwater recharge and regional or local reuse and harvesting strategies using a quantified methodology;
6. The water quality portion of projects that demonstrate the energy savings and climate change implications of sustainable site design practices and the use of green stormwater infrastructure;
7. Projects that demonstrate the differential uses of water based on the level of treatment and potential uses as a means to reducing the costs of treating all water to potable water standards; and
8. Projects that identify and quantify the benefits of using integrated water resources management approaches.

Land Conservation Loan Sponsorship Program

Delaware has developed an innovative approach to help maintain and improve water quality. Forestlands, Open Space, and Wetlands conservation easements and fee simple land parcels can be purchased using traditional CWSRF municipal wastewater loans under the Land Conservation Loan Sponsorship Program (LCLP). Communities in targeted watersheds such as the Chesapeake, Inland Bays, and Delaware Bay that have

municipal wastewater projects selected for funding may be offered the opportunity to borrow additional funds for land conservation easements and land purchases. Up to $5 million per year (subject to the availability) may be used to fund the purchase of perpetual conservations land easements and fee simple land purchases that can help to maintain or improve water quality with environmental structural enhancements and/or use restrictions.

Select communities will be encouraged to enter into partnership agreements with the Delaware Department of Agriculture's Forestland Conservation Program (DDA), and DNREC (Divisions of Parks and Recreation, and/or Fish and Wildlife). After a partnership agreement has been established, communities will be able to borrow funds for land conservation projects in addition to their wastewater project loans. The CWSRF interest rate for wastewater loans will be reduced to ensure that communities will not pay any additional loan debt service for both loans combined, annually or over the life of the loans.

Memorandums of Agreement have been signed between DNREC and DDA, and Environmental Finance and the Division of Parks and Recreation, and the Division of Fish and Wildlife for the implementation of the LCLP.

Borrowers can select to waive their eligibility to use the additional borrowing capacity under the LCLP and still receive a lower interest rate for their wastewater loan; however, the original wastewater loan cannot be prepaid. At DNREC discretion, the additional borrowing capacity may be offered to other potential borrowers at a zero percent (0%) interest rate, however, the loan term cannot exceed the loan term for the original wastewater loan. The original wastewater loan must be closed first before the LCLP loan can be closed.

Water Quality Improvement Loan Sponsorship Program

Similar to the LCLP, the Water Quality Improvement Loan Sponsorship Program (WQILP) is designed to fund water quality improvements with CWSRF wastewater loans. Proposed projects will improve water quality using Green Infrastructure and/or Environmentally Innovative approaches. Environmental Finance and the Division of Watershed Stewardship will implement the program.

- Wastewater and proposed WQILP projects must be on the CWSRF Project Priority List (PPL)
- Loan debt service payments for both wastewater and WQILP projects will be equal to the wastewater project by itself for the term of the loan
- WQILP project must have demonstrated water quality improvement benefits and be managed for the life of the improvement
- WQILP project applicants must enter into a Water Quality Improvement Agreement with the DNREC's Division of Watershed Stewardship. Some projects will require a Conservation Easement with DNREC's, Division of Parks and Recreation, or Division of Fish and Wildlife

- DNREC's Division of Parks and Recreation and Division of Fish and Wildlife are authorized to acquire open space and conservation easements under the Delaware Land Protection Act, pursuant to 7 Del C. Ch. 75, §7503

Water Quality Improvement Loan Program – How Does It Work?

Environmental Finance

Project Solicitation and Review:

- Notice-of-Intent solicitation from municipalities including WQILP project interest
- CWSRF Project Priority List (PPL) and Intended Use Plan (IUP) developed
- Municipal and WQILP project loan applications solicited from approved PPL

Financial Review and Interest Rate Determination:

- Environmental and Financial Reviews of loan applications conducted
- Evaluation of Interest Rate for proposed Wastewater and WQILP loans are conducted to ensure annual combine loan debt service will be equal to the municipal wastewater project separately
- Coordinates Internal Processing and Approvals, Loan Closings with Applicants, the Division of Watershed Stewardship, and Other Partners as Necessary

Division of Watershed Stewardship

WQILP Marketing, and Project Loan Application Review

- Assist with Marketing of WQILP to Potential Applicants
- Review WQILP Project Loan Applications relative to Program Criteria, and Ranking of Water Improvement Potential
- Work with Loan Applicants to develop WQILP Project Contractual Agreements

WQILP Criteria

There must be demonstrated water quality benefits associated with proposed projects.

Proposed projects must exhibit at least one or more of the following:

- Project must incorporate green infrastructure and /or be environmentally innovative;

  Examples of eligible projects include:

  - Implementation of green streets (combination of infrastructure practices in transportation rights-of-way) for new development, redevelopment, or retrofits;
  - Implementation of wet weather management systems for parking areas which include: the incremental cost of porous pavement, bioretention,

trees, green roofs and other practices that mimic natural hydrology and reduce effective imperviousness at one or more scales;

- Equipment to maintain green streets, vactor trucks and other equipment (Will be contingent upon contractual arrangement with Environmental Finance and the Division of Watershed Stewardship);
- Implementation of water harvesting and reuse programs or projects, including reuses that reduce energy consumption, recharge aquifers and reduce water withdrawals and treatment costs;
- Downspout disconnection to remove stormwater from combined sewers and storm sewers;
- Comprehensive retrofit programs designed to keep wet weather out of all types of sewer systems using green infrastructure technologies and approaches;
- Implementation of comprehensive street tree or urban forestry programs, including expansion of tree box sizes to manage additional stormwater and enhance tree health;
- Establishment and restoration of riparian buffers, floodplains, wetlands, living shorelines, and other natural features (will require a conservation easement on the project area);
- Purchase or easement of conservation areas (existing wetlands or forested areas, or agricultural lands, or previously developed areas to be restored to natural habitat, or improved with green infrastructure;
- Decentralized wastewater treatment solutions to existing deficient or failing on site systems;
- The water quality portion of projects that employ development and redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design;
- Projects that use water balance approaches (water budgets) at the project, local or state level that preserve site, local or regional hydrology;
- Projects that retrofit or replace irrigation systems with more efficient systems and/or those that include water reuse or harvesting;
- The water quality portion of a LEED certified building.

Examples of ineligible projects include:

- Stormwater conveyance systems that are not soil/vegetation based;
- Stormwater pipes and concrete channels;
- Hardening, channelizing or straightening streams and/or stream banks;
- In-line or end-of-pipe treatment systems that only filter or detain stormwater;
- Stormwater ponds with extended detention and /or filtration;
- Stormwater controls with impervious or semi-impervious liners with no evapotranspiration or harvesting functions;
- Underwater stormwater control (swirl concentrators, hydrodynamic separators, baffle system for grit, trash/floatables removal, oil and grease, dams for in-line underground storage and flow diversion);
- Street sweepers, sewer cleaners and vactor trucks (unless they support green infrastructure projects).

Borrowers can select to waive their eligibility to use the additional borrowing capacity under the WQILP and still receive a lower interest rate for their wastewater loan; however, the original wastewater loan cannot be prepaid. At DNREC discretion, the additional borrowing capacity may be offered to other potential borrowers at a zero percent (0%) interest rate, however, the loan term cannot exceed the loan term for the original wastewater loan. The original wastewater loan must be closed first before the WQILP loan can be closed.

XI. Minority Business Enterprises/Women's Business Enterprises

The WPCRF will use the EPA approved Minority Business Enterprises and Women-owned Business Enterprises (referred to as Disadvantage Business Enterprise) (M/WBE/DBE) utilization objectives for the FY 2017 Grant unless revised objectives are promulgated. These objectives are as follows:

	MBE	WBE
Construction	9.44%	8.86%
Good/Equipment Combined	7.84%	17.65%
Services	3.80%	5.67%
Supplies	1.79%	3.41%

The M/WBE/DBE program requires borrowers to provide adequate opportunity for M/WBE participation in contracts. Borrowers/contractors must show a good faith effort, consistent with the six affirmative steps outlined in 2 CFR Part 200.321, even if the objectives cannot be met in obtaining M/WBE participation.

Environmental Finance provides borrowers with a statement for inclusion in procurement/bid documents, which outlines the M/WBE/DBE objective and the affirmative steps necessary to show a good faith effort. Failure to meet the M/WBE/DBE objective does not preclude the use of the WPCRF, as long as the good faith effort can be demonstrated. Environmental Finance may modify its program implementation policies to comply with the above fair share objective after discussion with EPA. While compliance with M/WBE/DBE is mandatory in the CWSRF program for equivalency projects, it is not for non-equivalency projects or sub-projects. In order to comply with the M/WBE/DBE requirements, the State will limit identification of equivalency projects to an amount equal to the federal SRF capitalization grants – rather than apply the M/WBE/DBE requirements to all projects. The State will limit equivalency funds to a small number of large SRF projects, funding only the construction phase(s) of those projects.

Equivalency Project:

The proposed City of Rehoboth Beach Ocean Outfall Project ($25.0m) or WWTP Upgrade Project ($10.48m) or WWTP Biosolids Project ($12.5m) will be used as the equivalency project if loan closing occurs before June 30, 2017. Back up equivalency projects will be based estimated project costs that are closed before the end of the state fiscal year.

XII. WPCRF Financial Status

The U.S. EPA Program Evaluation Report (PER) for FY 2016 was not issued by EPA at the time this draft was prepared. This section of the draft IUP will be updated after EPA's FY 2016 PER is received.

XIII. Public Review and Comment

Newspaper notices were posted in the Delaware News Journal and Delaware State News on April 9 and 16, 2017 informing the public of a Public Hearing on April 19, 2017 to receive public comment on the Draft FY 2017 Project Priority List and Intended Use Plan. A Press Release was posted to DNREC's web site on April 4, 2017 informing the public of the Public Hearing. The Water Infrastructure Advisory Council met on April 17, 2017 to review, approve, and recommend the Draft FY 2017 PPL and IUP; subject to no adverse public comments received by the close of the public record on May 22, 2017.

XIV. Assurances

Required Reporting
Delaware will enter all projects funded into the CWSRF Benefits Reporting System on an ongoing basis.

Environmental and Financial Reviews
Delaware will meet environmental review requirements by complying with Section IV, paragraph G, of the Operating Agreement between the State of Delaware and the EPA, and Section V of the Regulations Governing the Administration of the WPCRF.

Binding Commitments
Delaware will enter into binding commitments equal to at least one hundred twenty percent (120%) of each quarterly payment within one (1) year of receipt of that payment.

Expeditious and Timely Expenditures
The Sources and Uses Chart C identifies an estimated negative ($22.9 million) if the CWSRF loans for all projects listed in this FY 2017 IUP close by June 30, 2018. Historically, Delaware has experienced uneven annual loan demand. To help ensure that more loans close on time and projects are completed as soon as possible, assistance has been made available to communities from the CWSRF Non-Federal Administrative Account. The following is an overview of the various incentive grants to facilitate CWSRF loan demand. To help Delaware expend all CWSRF funds in an expeditious and timely manner consistent with the rules and regulations governing the program, an open solicitation NOI process is also being considered.

- Wastewater Match Planning Grants – $50k per project is available for feasibility studies to identify and evaluate wastewater needs, requires a cash match;
- Surfacewater Matching Planning Grants – $50k per project is available for feasibility studies to identify and evaluate surface water management needs, requires a cash match;

- Project Planning Advances – $100k per project is available for the development of required PERs and EIDs necessary to apply for a CWSRF loan; $50k is forgiven and $50k is applied to the CWSRF loan when closed. If a CWSRF does not close, the entire $100k is forgiven;
- Asset Management Plan Development Incentives – $100k grant is available to assist with the development of an asset management plan. After the plan has been completed ½ of the interest charged on new CWSRF loan is rebated back annually for up to 5 years;
- Additional Subsidization for Low-Income Subgroups – $200k over a period of 5 years is available to assist low-income residents with paying sewer bills up to $200 per household (based on closed CWSRF loans) and can be combined with other available subsidies;
- WIAC Subcommittee – this Subcommittee was formed to discuss and facilitate a path forward for helping CWSRF loans close on time, and to help ensure that closed projects are completed on time. Subcommittee recommendations will be made to the full WIAC for consideration and implementation.

First Use for Enforceable Requirements Certification

Delaware certifies that all of its municipal facilities are in substantial compliance with their current NPDES permits.

Loan Defaults

Delaware will make every effort to assure that loan recipients repay their loans. In the event of any defaults, DNREC will review the borrower's user charges and budget and make recommendations for assuring continued loan repayment. DNREC will continue its loan default program agreement with the Delaware Division of Revenue.

Program Pace Requirement

The indicator for program pace, "Loans as a Percentage of Funds Available," is calculated by dividing the total amount of executed loans by the total amount of funds available for projects. This indicator shows whether a state is using its available funds in an expeditious and timely manner. It compares the amount of closed loans to the total amount of funds available. One of the WPCRF's short-term goals is to maintain a cumulative program pace that exceeds 95 percent for signed binding loan commitments.

XV. CWSRF and DWSRF Federal Fund Transferability

Delaware reserves the right to transfer Capitalization Grant and loan repayment monies between the State's WPCRF and Safe Drinking Water Revolving Loan Fund programs as necessary to ensure the full utilization of the federal assistance.

XVI. CWSRF Municipal and Green Projects - Funding List

Attachment A provides a list of wastewater and green projects that will be funded with CWSRF funds. The list includes the FFY 2017 PPL Rank Order, PPL Year, PPL Score, Applicant Name, Project Name, Population Served, Waterbody/NPDES Permit, Total Project Cost, CWSRF Financing, and Type of Assistance.

XVII. Non – Federal Administration Account

Delaware has established a Non-Federal Administration Account (NFAA) funded by 1/2 administrative fee charged on WPCRF municipal loans. The fee is collected from the interest portion of municipal loan repayments over the term of each loan. The NFAA is accounted for and managed separately from the corpus of the WPCRF. Funds in the NFAA are not considered WPCRF program income due to the fact that federal capitalization grants that originally funded the loans are closed-out prior to receiving fees from completed projects.

Historically, the NFAA has been used to supplement the program administration allowance associated with each federal capitalization grant, and to fund the salary for a contractual position within the Division of Water Holding Tank Enforcement program. The NFAA is now used for a number of innovative water quality programs that in part help to facilitate new CWSRF loan demand. The planned uses are consistent with EPA's Guidance on Fees Charged by States to Recipients of CWSRF Program Assistance, 40 CRF Part 35. Attachment B lists the revenue sources and proposed program uses of the NFAA for SFY 2012 through SFY 2016 (Actual), SRF 2017 through SFY 2020 (Projected).

The NFAA ended SFY 2017 with an Available Balance of $3,115,797; projected Total Annual Revenues for SFY 2018 are $2,416,782; and Total CWSRF NFAA Expenses are $4,985,800. The projected Annual Available Fund Balance for SRF 2018 is $730,000. The following is a list of the SFY 2017 current and planned uses for the NFAA. A conservative estimate of the NFAA revenue and planned uses are listed in Attachment B.

- Environmental Finance Administrative Expenses
- Contractual Groundwater Position
- Contractual Stormwater Position
- 6 Division of Water Positions
- CWSRF 20% State Match (if necessary)
- SEFO Program (Due-On-Transfer Septic Extended Funding Option Program)
- Community Water Quality Improvement Grants
- Wastewater Matching Planning Grants
- Stormwater Matching Planning Grants
- Wastewater Asset Management Incentive Program Grants
- Asset Management Planning Grants

The NFAA is reviewed annually to ensure its sustainability before additional uses are considered. The WPCRF's Annual Report includes a description of the NFAA, fees charged, actual use, and the remaining balance in the account.

XVIII. APPENDIX

Draft Revised FY 2017 CWSRF Municipal Wastewater and GPR Projects – Funding List	Attachment A
Non – Federal Administration Account – Current and Planned Uses	Attachment B
Source and Use of Funds - FY 2017 WPCRF Intended Use Plan	Attachment C

Attachment A - FY 2017 CWSRF Wastewater and GPR Projects - Funding List

FY 2017 CWSRF Wastewater Projects

IUP Rank Order	PPL Year	PPL Score	Applicant	Project Name	Population Served	Waterbody / NPDES Permit	Total Project Cost	GPR Category	GPR Eligibility	CWRF Financing	Type of Assistance
1	2010	87.3	City of Rehoboth Beach	Rehoboth Beach Ocean Outfall Project	1,495	Inland Bays - Rehoboth Bay DE 0020028	$32,500,000	N/A	N/A	$25,000,000	Loan / Subsidies TBD
Description of Project and Problem: The City of Rehoboth Beach Wastewater Treatment Plant discharges to the Lewes and Rehoboth Canal which flows into the Inland Bays (Rehoboth Bay and Indian River Bay). The Inland Bays have been the subject of considerable concern and study because of the stress from various pollutant loadings, both point and non-point, which have resulted in the failure to meet water quality criteria established for the Inland Bays. The City of Rehoboth Beach had undertaken two capital projects to their WWTP to improve the quality of their effluent. Since 1992 they have upgraded the plant for Biological Nitrogen Removal, chemical phosphorus removal and improved process control. As a result they have significantly reduced the load of nitrogen and phosphorus that they discharge. In 1998 DNREC proposed and then adopted Total Maximum Daily Loads (TMDL's) for the watershed as required by Section 303(d) of the Clean Water Act. The TMDL was based on a model developed by the US Army Corps of Engineers. The TMDL required, among other things, that all point sources discharging to the Indian River, Indian River Bay, Rehoboth Bay and their tributaries be systematically eliminated. The City then undertook a series of studies, both independently and in cooperation with Sussex County, to evaluate the technical, financial and environmental issues associated with various alternatives to eliminate the discharge. Land application, rapid infiltration beds, shallow and deep well injection and ocean outfall alternatives were considered. The ocean outfall alternative was accepted by the City as the recommended approach after numerous workshops and public meetings.										
2	2012	60	City of Rehoboth Beach	Wastewater Treatment Plant Upgrade I	1,495	Inland Bays - Rehoboth Bay DE 0020028	$10,488,000	N/A	N/A	$10,488,000	Loan / Subsidies TBD
Description of Project and Problem: The project includes upgrading the wastewater treatment plant to a new facility except the biosolids treatment section. The biosolids treatment upgrade will be included under a separate project. The upgrade does not include construction of the proposed Rehoboth Beach Ocean Outfall or the associated pumping station, however, it is a part of the overall goal of eliminating discharge into the Rehoboth Bay.											
3	2015	74	City of Newark	Western Area Drainage Ditch Flood Mitigation	30,000	Piedmont - Christina River N/A	$10,000,000	N/A	N/A	$10,000,000	Loan / Subsidies TBD
Description of Project and Problem: The areas draining to and along the Western Area Drainage Ditch and the surrounding areas suffer from repetitive small stream flooding during high intensity rain events. The University of Delaware has indicated they intend to vacate and sell the Rodney Dormitories at the end of the 2015 school year. It is ideally located in the drainage area and if retrofitted with a stormwater detention basin, will significantly reduce the amount of water entering the areas that flood. The City is looking at purchasing the property, demolishing the buildings and creating a stormwater management pond and other recreational features. Additionally, the City owns several park properties in this drainage area that can be converted to stormwater features to further reduce flooding and improve water quality.										
4	2015	52	Sussex County Council	Route 54 Extension	137	Inland Bays - Little Assawoman NPDES-0050008 (SCRWF)	$2,048,682	N/A	N/A	$2,048,682	Loan / Subsidies TBD
Description of Project and Problem: Based on a petition sent from area property owners requesting that the County consider the extension of sewer infrastructures to serve parcels along Route 54 from Zion Church Road to Williamsville Road. This project will eliminate 39 septic systems and prevent 15 from being installed. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing developments/homes and eliminate existing septic systems.											
5	2015	40	City of Rehoboth Beach	Rehoboth Beach Biosolids Upgrade Project	1,495	Inland Bays - Lewes-Rehoboth Canal WPCC - 3084D/74	$12,500,000	N/A	N/A	$12,500,000	Loan / Subsidies TBD
Description of Project and Problem: WWTP upgrades required to restore the facility to the operating condition of a new plant, including a solids drying system. The project will require a new building approximately 100 ft. by 70 ft. to house the sludge drying equipment.											

6	2016	87.5	City of Dover	Meeting House Branch Environmental Restoration	37,540	Delaware Bay & Estuary - St. Jones Rive NPDES Permit No. DE00051161	$8,203,542	N/A	N/A	$7,600,000	Loan / Subsidies TBD
Description of Project and Problem: Due to environmental concerns, the PWll site will be redeveloped to increase stormwater quality entering the St. Jones River. The improvements include demolishing the existing greenhouse, grounds office, and equipment garage (including small engine repair), and improving the existing Tar Ditch stormwater system from South Governors Avenue down to the St. Jones River. The existing water production well will remain on the old PWll site, but the rest of the City-owned land will be converted to a constructed wetland. The existing stormwater system located in downtown Dover, known as the tar ditch stormwater system, is undersized and negatively impacting the surface water quality of the St. Jones River. The stormwater system was constructed in downtown Dover in the early 1930s with an approximate drainage area of 63 acres. The stormwater system varies in material and size, but is typically comprised of 48-inch RCP and a 4 foot by 4 foot box culvert. The primary drainage area consists of urbanized landscape without stormwater quality management devices. In the St. Jones River Watershed Study, published in 2012 by the Department of Natural Resources Environmental Control (DNREC), the watershed was examined and recommendations were made on reducing pollutants into the St. Jones River. The results of the study found that nitrogen, phosphorous, and bacteria loads were still above the acceptable limits. The surface water runoff, aging stormwater infrastructure, and the need for increased water quality have made improvement to the stormwater system a priority for the City of Dover Department of Public Works (DPW). In coordination with engineer consultant AECOM, a design had been developed for the demolition of old PWll and the construction of a upgraded stormwater piping system, open channel, and a 3.52 acre constructed wetland with diversion structure. The design phase of the project was supplemented by a surface water matching planning grant through DNREC. This design includes construction drawings and bid specifications, permitting, and site investigations to determine existing subsurface conditions. At project completion there will be a land conservation sponsorship of the wetlands area by obtaining a Wetlands Conservation Easement by the City of Dover.										
7	2016	78	Sussex County Council	Herring Creek - Phase I	2,496	Inland Bays - Rehoboth Bay WPCC-3042C-90 (Spray Irrigation)	$16,664,000	N/A	N/A	$16,664,000	Loan / Subsidies TBD
Description of Project and Problem: The project consists of a wastewater collection and conveyance system that will serve the Herring Creek area within the Inland Bays Watershed. The area is located south of the Angola District between Burton Prong and Guinea Creek. Wastewater will be pumped to the Inland Bays Regional Wastewater Facility (IBRWF). Project is contingent on a successful referendum or district expansion action by County Council. This project will eliminate 713 septic systems. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing developments/homes and to eliminate existing septic systems.										
8	2016	60	New Castle County Department of Special Services	Hunter's Ridge	600,000	Piedmont - White Clay Creek 0	$350,000	N/A	N/A	$350,000	Loan / Subsidies TBD
Description of Project and Problem: The existing basin, located in the private open space of the Hunter's Ridge subdivision, was originally constructed in approximately 1997. The upstream drainage area is approximately 35 acres of runoff from the the residential community which consists of homes, turf lawns, and subdivision streets. This project was identified for modification due to the major amount of sediment accumulation repairs needed. The modifications will include retrofit the existing basin to establish more volume though sediment removal and enhance pollutant removal. The upstream portion from Haystack Drive leading to the pond will include stream bank stabilization and the transition from the stilling basin back to the existing stream channel to protect the stream and reduce sediment loss. The stilling basin extending rock slope toe protection which will be integrated with green/natural slope stabilization methods.										
9	2016	60	New Castle County Department of Special Services	Perch Creek Pond #1	600,000	Piedmont - Christina River 0	$265,000	N/A	N/A	$265,000	Loan / Subsidies TBD
Description of Project and Problem: The existing wet pond was originally constructed in 1995 and receives approximately 12 acres of runoff from the residential community which consists of homes, turf lawns, and subdivision streets located in Perch Creek on the south side of Pulaski Highway (U.S. Rt. 40). This project was identified for modification due to the major list of repairs. The modifications will include the construction of a new concrete outlet structure for extended detention, construction of a new rock forebay for sediment collection, and the enhancement of water quality through the creation of a bioretention / rain garden that will collect and treat portions of the drainage area for TMDL's.										

10	2016	43.8	New Castle County Department of Special Services	Delaware City Wastewater Treatment Plant Upgrade	2,621	Delaware Bay & Estuary - Delaware Rive NPDES DE0021555	$4,675,000	N/A	N/A	$4,675,000	Loan / Subsidies TBD

Description of Project and Problem: This project includes the design and construction associated with the final phase of the Delaware City Wastewater Treatment Plant (DCWWTP) upgrade. DCWWTP was constructed in 1975 to 1980 as an extended aeration, activated sludge treatment facility with tertiary treatment sand filters. As originally designed and currently permitted, the plant has a capacity of 0.55 million gallons per day (MGD). Since 2006, several improvements and upgrades designed to replace existing equipment and provide increased treatment capacity have been implemented. The proposed design treatment capacity at the completion of all proposed improvements is 1.2 MGD average and 2.4 MGD peak. The NPDES permit for this facility does not include requirements for nutrient removal or limits on nutrient discharge. However, the process design for the upgraded wastewater plant and associated improvements will include provisions for nutrient reduction. Provisions for biological reduction of nitrogen are built into the process design, tank sizing and equipment specifications. Provisions for reduction of phosphorus will be included in the design as well, but may be installed at a later date. The final improvements include replacement of the existing activated sludge biological system and tankage. The new treatment system proposed is a sequencing batch reactor (SBR) process similar to that used at other New Castle County facilities. County staff are familiar with the design and operation of SBR systems. New tankage is required to increase plant treatment capacity to 1.2 MGD average. Existing tankage will be renovated and reused. New Castle County desires to complete the remaining improvements as one (1) construction contract which will include the following general scope of work:
1. Install pile foundation for new SBR tanks; 2. Install yard piping; 3. Install SBR tanks and accessory structures (stairs, walkways, pipe bridges); 4. Install equipment and piping in SBR tanks; 5. Install temporary pumping station from SBR tanks to UV Building; 6. Install SBR control panel, power and control wiring to SBR tanks, control wiring to UV building, and power and control wiring to temporary pumping station; 7. Modify the existing SCADA system to provide monitoring and recording of SBR operating data and alarms; 8. Startup and test SBR system operation; 9. Complete demolition in old tanks; 10. Make structural repairs and modifications to old tanks; 11. Install equipment and piping in new tanks for conversion to a digester and post equalization tank; 12. Complete yard piping connections to digester and post-equalization tanks; 13. Install power and control wiring to and in digester and post-equalization tanks; 14. Startup and test digester and post equalization tank operation; and 15. Complete site work and restoration.

11	2016	40	New Castle County Department of Special Services	Morningside	600,000	Piedmont - White Clay Creek N/A	$250,000	N/A	N/A	$250,000	Loan / Subsidies TBD

Description of Project and Problem: The existing dry pond was originally constructed in 1988 and receives approximately 144.95 acres of runoff. The Morningside basin discharges into a creek which flows through private property to the east (and not within Morningside) before flowing into a culvert under Upper Pike Creek Road and then into Pike Creek. The creek, tributary to Pike Creek, receiving the runoff from the Morningside basin is experiencing significant erosion potentially due to the basin not detaining peak flows adequately. It is anticipated that retrofitting of the Morningside basin will improve current functionality. Additionally, the modifications will include construction of a new outlet structure and outlet pipes, modifying the basin to include additional storage capacity, and utilization of an energy dissipater at the discharge point into the stream.

12	2016	35	Town of Smyrna	South Main Street Utility Replacement Project	2,120	Delaware Bay & Estuary - Smyrna River N/A	$1,269,380	N/A	N/A	$1,264,000	Loan / Subsidies TBD

Description of Project and Problem: The Town of Smyrna is continuing its long term plan of replacing its aging utility network. The South Main Street project mainly consists of replacing undersized and failing sewer mains. The Town has continued its ongoing asset management plan by maintaining and updating a hydraulic model for the entire sewer system. The sewer system has been mapped and is updated as new infrastructure is built or existing infrastructure is replaced. Using the model, the Town has created a prioritized list of projects as part of the Capital Improvement Program. The projects are determined by analyzing anticipated capacity and failure issues. Capital needs are also estimated once a project is identified by using the model to determine the extent of the upgrades or replacement. The Town has also recently implemented best practices according to EPA's "Asset Management: A Best Practices Guide" document by addressing the 5 major questions framework. The Town acquired an Asset Management Incentive Program grant from DNREC to aid in the implementation. Both the Town's sewer rates and connection and impact fee policies have been established to build, maintain, and operate the sewer system. The sewer rates continue to provide the necessary funds for maintenance and operation of the existing system, including the rehabilitation and replacement of aging infrastructure. The connection and impact fees are utilized for extending the sewer system and future upgrades that will be needed as capacity demands increase. The South Main Street Utility Replacement Project will encompass the replacement of the existing sewer main within South Main Street between South Street and the bridge at Lake Como. The existing 8" gravity sewer main (approximately 1600 linear feet) will be replaced with new 10" PVC pipe, including the replacement of all associated manholes, cleanouts, and laterals. The sewer main is being replaced due to a history of failure and capacity issues.

13	2016	30	New Castle County Department of Special Services	White Clay Sanitary Sewer Interceptor Capacity Restoration Project	134,737	Piedmont - White Clay Creek N/A	$2,000,000	N/A	N/A	$2,000,000	Loan / Subsidies TBD

Description of Project and Problem: New Castle County (owner) is requesting a loan for the White Clay Sewer Interceptor Capacity Restoration Project. The White Clay Interceptor (Interceptor) serves a vast portion of New Castle County. The Interceptor runs contiguous with the White Clay Creek, a registered Wild and Scenic River System, extending as far west to serve Newark, Delaware; along Route #4, Chestnut Hill Road which acts as the southerly border of the White Clay Basin; and north into the County serving the areas of Pike Creek, Hockessin and the Red Clay Creek corridor. Primarily constructed in the 1950's, the capacity of the Interceptor has been negatively impacted over time due to flooding and storm related damage. The most recent occurrence was in the spring of 2014 when storm related damage sheared off one of the interceptor manholes adjacent to White Clay Creek causing inflow of stream sediment into the Interceptor. Similar events in addition to more than a half of century service life have led to reduced capacity in the Interceptor. The White Clay Sanitary Sewer Interceptor Capacity Restoration Project is a key step in New Castle County's integrated management of our sanitary sewer infrastructure. Through the elimination of sedimentation in the Interceptor, New Castle County can re-establish sewer capacity and achieve extended service life of the existing asset. This project aids in minimizing infrastructure costs; both operationally, by restoring the asset to design conditions which reduces the risk of overstressing the infrastructure to the level of impairment and increasing operational maintenance costs; and, in reducing capital related pipe replacement costs by avoiding unnecessary capacity improvements and expansions to the Interceptor. This project also permits New Castle County to promote clean water through the reduction of overflows within the Interceptor system into the local waterway which is of vital importance not only due to the vicinity of a public water intake to the Interceptor, but also to help preserve and enhance the environmental, ecological balance of the White Clay Creek natural resource. The White Clay Sanitary Sewer Interceptor Capacity Restoration Project is a product of New Castle County's developing Sanitary Sewer Asset Management Plan and is an essential effort to deliver a reliable level of service to our customers, meeting performance expectations in a safe and environmentally sound manner.

14	2016	30	Kent County Levy Court	PLANT WIDE BACKUP (EMERGENCY) POWER	130,000	Delaware Bay & Estuary - Murderkill Riv NPDES DE 0020338	$3,747,400	N/A	N/A	$1,237,400	Loan / Subsidies TBD

Description of Project and Problem: The Kent County Regional Resource Recovery Facility (KCRRRF), owned by Kent County Levy Court, is an advanced wastewater treatment facility located in Milford, DE. It serves every major municipality within the County, multiple districts within the County, and also portions of New Castle and Sussex Counties through contract users. Kent County works closely with the municipalities within the service area to provide an organized and coordinated approach to wastewater collection, conveyance and treatment. This coordinated effort encourages growth and development near existing infrastructure in accordance with the State Strategies for Policies and Spending. The KCRRRF operates under a Sustainability Management System (SMS), which is a set of management processes and procedures that allow an organization to analyze, control and reduce the environmental impacts and employee health and safety risks of its activities, products and services and operate with greater overall efficiency and control. Under this system, the County has already identified and implemented several energy efficiency modifications to the facility in order to reduce its environmental impact and improve the sustainability of the operations. The WTF Capacity Expansion & Nutrient Removal Upgrade Project which is currently under construction has multiple components: a) Capacity Expansion and Nutrient Removal and b) Air Blower System Optimization. The Air Blower System Optimization component addresses the efficiency of the blowers used in the treatment process. During the evaluation of the air (blower) system, an opportunity was identified to eliminate individual power back-up systems and replace them with a plant-wide power back-up system. The plant-wide single backup system would replace individual power back-up systems. This change would significantly reduce ipeation and maintenance costs as well as air pollution. Thus, the plant-wide power back-up was added to the Air Blower System Optimization component in 2014. Under the Capacity Expansion Project, a strategy was employed where SRF loan funding would pay for the equipment procurement and the USDA/RD funding would pay for all construction activities. An estimated $1,402,600 in SRF funds remaining after the procurement component for the Capacity Expansion and Nutrient Removal component. Additional funds are required for the purchase of blowers and the plant wide generator. A separate Notice of Intent has been completed for the Air (Blower) System Optimization Project. This application is for the Plant-wide Power Backup Project and associated electrical upgrades.

15	2016	30	Town of Smyrna	Kent Way Pump Station Rehabilitation Project	430	Delaware Bay & Estuary - Smyrna River N/A	$890,000	N/A	N/A	$890,000	Loan / Subsidies TBD

Description of Project and Problem: The Town of Smyrna is continuing its long term plan of replacing its aging utility network. The project mainly consist of replacing the piping, valves, pumps, controls, and other mechanical and electrical components of the pump station. The upgrades will resolve ongoing maintenance issues and allow for improved response and performance during emergencies. The pump station is 40 years old and experiences pipe and valve failures and inefficient pump operation which causes increased wear on the pumps. The Town has continued its ongoing asset management plan by maintaining and updating a hydraulic model for the entire sewer system. The sewer system has been mapped and is updated as new infrastructure is built or existing infrastructure is replaced. Using the model, the Town has created a prioritized list of projects as part of the Capital Improvement Program. The projects are determined by analyzing anticipated capacity and failure issues. Capital needs are also estimated once a project is identified by using the model to determine the extent of the upgrades or replacement. The Town has also recently implemented best practices according to EPA's "Asset Management: A Best Practices Guide" document by addressing the 5 major questions framework. The Town acquired an Asset Management Incentive Program grant from DNREC to aid in the implementation. Both the Town's sewer rates and connection and impact fee policies have been established to build, maintain, and operate the sewer system. The sewer rates continue to provide the necessary funds for maintenance and operation of the existing system, including the rehabilitation and replacement of aging infrastructure. The connection and impact fees are utilized for extending the sewer system and future upgrades that will be needed as capacity demands increase.

16	2016	25	New Castle County Department of Special Services	The Muddy 6 Sanitary Sewer Capacity Improvements	4,700	Chesapeake Bay - C & D Canal West N.A.	$2,000,000	N/A	N/A	$2,000,000	Loan / Subsidies TBD

Description of Project and Problem: New Castle County {owner) is submitting a Notice of Intent for a loan request for the project known as the Muddy 6 Sanitary Sewer Capacity Improvements. Based on results submitted by our engineer in 2011, Johnson, Mirmiran & Thompson (JMT), a portion of the Muddy 6 sewers have been identified as having limited capacity during minor storm events. Since 2011, JMT has further evaluated the trunkline and identified capacity constraints in the system that require improvements to allow future development; improve the level of service to our customers; and reduce the risk of violating the Clean Water Act. This evaluation included temporary flow monitoring, hydraulic model, and alternatives evaluation. In addition to the study performed by our consultant, the County Capacity Planning Tool (CPT) also shows capacity restrictions in this portion of the sub-basin. For future development to occur within the sub-basin these upgrades to the trunkline are necessary. JMT has developed preliminary plans {30%) under an existing task that illustrates the capacity requirements to meet the specified level of service for the basin. The County is now seeking full design phase for bid documents and construction to alleviate the capacity restraints. We estimate our planning for this project will be completed by December 2016. Full design will be completed within 6 months or by July 2017 and is estimated to be approximately$ 280,000. Funding for this construction project is part of the FY 2018 County budget, which is estimated at approximately $1,720,000. Therefore, the County is requesting a loan for approximately$ 2,000,000 for design fees and construction fees to complete this project.

17	2016	55	City of Dover	Walker Woods Pump Station Replacement	286	Delaware Bay & Estuary - St. Jones Rive DE00051161	$460,000	N/A	N/A	$408,000	Loan / Subsidies TBD

Description of Project and Problem: The City of Dover Department of Public Works (DPW) has developed a Wastewater Master Plan (2009) and mapped its wastewater collection system utilizing the program Arc Geographic Information Systems (ArcGIS). The City placed wastewater infrastructure on a replacement schedule based on useful life and vulnerability to failure. The Walker Woods Pump Station #30 Replacement Project was budgeted to begin FY 2017 and to be completed in FY 2020, having met City Council approval. The DPW created a five (5) year Capital Investments Plan (CIP) to allocate funds to projects requiring rehabilitation and/or replacement. This project calls for replacement of the Smith & Loveless package pumping station installed in 1989 in order to handle development in the area, as well as a complete rehabilitation of the wet well inside the pump station using a poly-triplex system liner. Replacing the aged station with a completely new station will prevent the need for costly unbudgeted repairs to maintain operation, thus reducing the possibility of a sewage spill into waterway or backup in a residence due to pump failure. The station has exceeded its life expectancy of 20-25 years and will need a capacity upgrade to handle anticipated growth in the basin. The City of Dover believes there is currently inflow and infiltration entering the wetwell due to the age of the system. The degree of infiltration is unknown until an inspection of the wetwell is performed. The City believes that the new station will achieve a 20% reduction in energy consumption through use of new technologies such as variable frequency drives and more efficient motors to meet EPA's definition of Energy Efficiency as outline in the "2010 Clean Water and Drinking Water State Revolving Fund Green Project Reserve: Guidance for Determining Eligibility-April 21, 2010".

18	2016	50	Kent County Levy Court	Air System (Blower) Optimization Project	130,000	Delaware Bay & Estuary - Murderkill Riv NPDES DE 0020338	$4,513,700	N/A	N/A	$1,354,110	Loan / Subsidies TBD

Description of Project and Problem: Feasibility Study/Preliminary Design Phase: The County commissioned Hazen and Sawyer, P.C. to prepare a Preliminary Engineering Report (PER) to the study of the existing blower system and to identify potential upgrades that could result in significant energy savings. The scope of work for implementing the aeration system optimizations included: (1) a detailed study of the existing system and (2) identification of potential upgrade options. Operational data was reviewed to develop annual and seasonal aeration needs for both the current and future flows at the facility. Blower technologies were reviewed and compared to identify advantages and disadvantages of each. Control system options and electrical system options were also evaluated. Alternatives were developed for aeration system optimization. The results of this study by Hazen and Sawyer, P.C. indicate that a significant energy savings (20-25%) can be realized by replacing two of the existing multistage blowers with similarly sized turbo blowers. The project improvements require replacement of two existing blowers with two turbo blowers, piping modifications, electrical/control improvements, and minor improvements to the existing blower building. Design documents (up to 80% completion level) were then developed. The planning and design for this project was implemented using a DNREC Wastewater Matching Planning Grant to reach 80% design level as initial funding. Once appropriate funding sources are secured, the project may proceed through design completion and construction.

19	2016	50	City of Dover	Delaware Tech Pump Station Replacement	185	Delaware Bay & Estuary - St. Jones Rive DE0051161	$436,000	N/A	N/A	$384,000	Loan / Subsidies TBD

Description of Project and Problem: The City of Dover Department of Public Works (DPW) has developed a Wastewater Master Plan (2009) and mapped its wastewater collection system utilizing the program Arc Geographic Information Systems (ArcGIS). The City placed wastewater infrastructure on a replacement schedule based on useful life and vulnerability to failure. The Delaware Tech Pump Station Replacement Project has been budgeted to begin FY 2017 and to be completed in FY 2018, having met City Council approval. This project calls for replacement of the Smith & Loveless package pumping station installed in 1975 in order to handle the increased flows from the area. The station has exceeded its anticipated life expectancy of 20-25 years and is in need of a capacity upgrade due to anticipated flow increases. The DPW has created a five (5) year Capital Investments Plan (CIP) to allocate funds to projects requiring rehabilitation and/or replacement. Replacing the aged station with a completely new station will prevent the need for costly unbudgeted repairs to maintain operation, thus reducing pump failure resulting in a sewage spill into waterway or backup in a residence. In addition, due to the age of the pump station, certain parts are no longer obtainable and replacement of equipment is costly. The original station built in 1975 has exceeded its original life expectancy. The City believes that the new station will achieve a 20% reduction in energy consumption through use of new technologies such as variable frequency drives to meet EPA's definition of Energy Efficiency as outline in the "2010 Clean Water and Drinking Water State Revolving Fund Green Project Reserve: Guidance for Determining Eligibility - April 21, 2010".

20	2016	40	City of Dover	Lepore Road Sanitary Sewer Upgrade	400	Delaware Bay & Estuary - St. Jones Rive NPDES DE00051161	$300,000	N/A	N/A	$250,000	Loan / Subsidies TBD

Description of Project and Problem: The City of Dover Department of Public Works (DPW) has developed a Wastewater Master Plan (2009) and mapped its wastewater collection system utilizing the program Arc Geographic Information Systems (ArcGIS). The City placed wastewater infrastructure on a replacement schedule based on useful life and vulnerability to failure. The Lepore Road Sanitary Sewer Upgrade Project has been budgeted to begin FY 2017 and to be completed in FY 2018, having met City Council approval. The DPW has created a five (5) year Capital Investments Plan (CIP} to allocate funds to projects requiring rehabilitation and/or replacement. This project calls for the replacement of approximately 374 linear feet of 8 inch gravity sewer main. Currently, the sewer main operates in a reverse slope condition, which overloads the pipe. The proposed upgrade will provide proper slope and adequate capacity for current flow to be carried to discharge. Delaying this project will leave the City of Dover vulnerable to environmental issues with sewage surcharging onto the ground. Additionally, not addressing this issue could result in sewage backups to residences.

21	2016	50	City of Dover	Silver Lake Pump Station Replacement	193	Delaware Bay & Estuary - St. Jones Rive DE0051161	$448,000	N/A	N/A	$396,000	Loan / Subsidies TBD

Description of Project and Problem: The City of Dover Department of Public Works (DPW) has developed a Wastewater Master Plan (2009) and mapped its wastewater collection system utilizing the program Arc Geographic Information Systems (ArcGIS). The City placed wastewater infrastructure on a replacement schedule based on useful life and vulnerability to failure. The Silver Lake Pump Station Replacement Project has been budgeted to begin FY 2018 and to be completed in Fiscal Year 2019, having met City Council approval. This project calls for replacement of the Smith & Loveless package pumping station installed in 1982 in order to handle development in the area, as well as completely rehabilitate the wet well side of the pump station using a poly-triplex system liner. The station has exceeded its anticipated life expectancy of 20-25 years and is in need of a capacity upgrade to handle anticipated growth in the basin. The DPW has created a five (5) year Capital Investments Plan (CIP) to allocate funds to projects requiring rehabilitation and/or replacement. Replacing the aged station with a completely new station will prevent the need for costly unbudgeted repairs to maintain operation, thus reducing pump failure resulting in a sewage spill into waterway or backup in a residence. In addition, due to the age of the pump station, certain parts are no longer obtainable and replacement of equipment is costly. The original station built in 1982 has exceeded its original life expectancy. The City believes that the new station will achieve a 20% reduction in energy consumption through use of new technologies such as variable frequency drives to meet EPA's definition of Energy Efficiency as outline in the "2010 Clean Water and Drinking Water State Revolving Fund Green Project Reserve: Guidance for Determining Eligibility-April 21, 2010".

22	2016	40	City of Dover	Tar Ditch Interceptor	11,621	Delaware Bay & Estuary - St. Jones Rive NPDES Permit No. DE00051161	$250,000	N/A	N/A	$250,000	Loan / Subsidies TBD

Description of Project and Problem: The City of Dover Department of Public Works (DPW) has developed a Wastewater Master Plan (2009) and mapped its wastewater collection system utilizing the program Arc Geographic Information Systems (ArcGIS). The City placed wastewater infrastructure on a replacement schedule based on useful life and vulnerability to failure. The Tar Ditch Interceptor Project has been budgeted to be completed in FY 2018, pending City Council approval. This project, identified in the 2009 Wastewater Master Plan, requires approximately 300 linear feet (300') of fifteen inch (15") gravity sanitary sewer to be replaced. It has been identified that the subject pipe is flowing with a reverse slope, which can cause a surcharge during peak flow periods. The DPW has created a five (5) year Capital Investments Plan (CIP) to allocate funds to projects requiring rehabilitation and/or replacement. Delaying this project will result in preventing growth, as well as leave the City of Dover vulnerable to environmental issues with sewage surcharging onto the ground. Additionally, not addressing this issue could result in sewage backups to residences.

23	2017	60	Fort DuPont Redevelopment and Preservation Corporation	Fort DuPont Canal District and Officers Row Stormwater Management Improvements	350	Delaware Bay & Estuary - C & D Canal Not applicable (N/A)	$927,000	N/A	N/A	$927,000	Loan / Subsidies TBD

Description of Project and Problem: The project includes the installation of new storm sewer inlets, storm sewer piping and storm water management best management practices (BMPs) for an approximate 22 acre drainage area. Planned BMPs include green infrastructure practices including bioretention, gravel wetlands, dry wells and infiltrations designed and constructed in accordance with State of Delaware Sediment and Stormwater Regulations. Pollutant removal efficiencies for total nitrogen, total phosphorus, and total suspended solids range from 20% to 100% when designed in accordance with Delaware's Post Construction Stormwater BMP standards and Specifications. Subsequent to treatment, stormwater will be discharged to the Branch Canal. The Canal District and Officer's Row phase of the project in being constructed so that properties are located above and outside the areas affected by flooding and sea level rise. Therefore upland portions of new storm water management infrastructure in this phase will be protected as well.
As part of the overall development project for this site, FDRPC is also planning multiple improvements to enhance site ecology including the following:
1. Creation and restoration of wetlands along the Delaware River and on the southern areas of the site. These efforts will restore the natural tidal hydrology of the existing wetlands and remove and replace invasive species. 2. Creation of a wetland conservation easement to protect new and restored wetlands from development. 3. Investigation of the feasibility of shoreline improvements along the Delaware River including the removal of invasive species and installation of living shoreline components to supplement and replace hard shoreline elements. 4. Extension of the Michael Castle Trail from its current termination point north of the Brach Canal to and around the site.

24	2017	55	Sussex County Council	Chapel Branch	1,365	Inland Bays - Rehoboth Bay WPCC-3042C-90 (Spray Irrigation)	$3,744,323	N/A	N/A	$3,744,323	Loan / Subsidies TBD

Description of Project and Problem: This project will upgrade existing pump stations in the (2) communities of Chapel Green and Oak Crest Fanns and install a FM to the County's Inland Bays Regional Wastewater Facility (IBRWF). The existing on-site privately owned systems for these two communities and the individual septic systems for the connecting parcels will be taken offline and abandoned. Wastewater will be pumped to IBRWF for treatment and disposal. The County held a Public Hearing and Referendum to establish the district and the results were positive for connecting to the County run system. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing developments/homes and eliminate existing septic systems. This project will eliminate (2) privately owned on-site systems as well as multiple on-site septic systems for the connecting properties. Both communities would have been required to perform significant upgrades if this project did not proceed.

25	2017	55	Redevelopment and Preservation Corporation	Fort DuPont Canal District and Officers Row Sewer Improvements	350	Delaware Bay & Estuary - C & D Canal NPDES DE 0021555	$520,000	N/A	N/A	$520,000	Loan / Subsidies TBD

Description of Project and Problem: The project includes demolition of existing gravity sewer infrastructure, installation of approximately 4,200 LF of new 8-inch gravity main, 25 new manholes, and 99 new sewer services (wyes, laterals, cleanouts). New sewer infrastructure will be connected to existing infrastructure serving the Fort DuPont site. Demolition and replacement of old sewer infrastructure is expected to reduce existing rainfall induced infiltration and inflow within the existing system. The Canal District and Officer's Row phase of the project in being constructed so that properties are located above and outside the areas affected by flooding and sea level rise. Therefore sewer infrastructure in this phase will be protected as well.

26	2017	45	Redevelopment and Preservation Corporation	Fort DuPont Floodproofing Improvements	1,500	Delaware Bay & Estuary - C & D Canal Not applicable (N/A)	$2,180,000	N/A	N/A	$2,180,000	Loan / Subsidies TBD

Description of Project and Problem: The project includes the installation of two (2) new earthen dikes. The two dikes are proposed to provide protection from storm surges from both the Delaware River side and the west side of the property. The longer of the two dikes is located along the Delaware River shoreline, and is approximately 4,000 feet in length. It will be located 100 to 500 feet landward from the current Delaware River shoreline, outside the designated limit of moderate wave action (the limit of damaging wave action as mapped by FEMA). The riverside face of the dike will be partially lined with riprap revetment. FDRPC is also investigating the feasibility of shoreline improvements along the Delaware River including the removal of invasive species and installation of living shoreline components to supplement and replace hard shoreline elements. The second dike is located on the west side of the property, and runs generally parallel to the Reedy Point Bridge and Route 9. The "bridgeside" dike is approximately 2,500 feet in length. Both dikes will be approximately seven to nine feet above existing ground elevation and have side slopes of 3:1 to 4:1 (horizontal to vertical). A future extension of the Castle Trail is planned to be located on top of the dikes. Both dikes will be keyed into the existing North Reedy Point stockpile, which is owned and maintained by the Army Corps of Engineers on the south side of Fort DuPont. The dikes will taper into proposed fill in the Canal and Marina Districts on the north side of the site. A short section of Route 9 will be raised in elevation to provide flood protection and act as the northwest terminus of the bridge-side dike. A storm drain pump station will be necessary to pump storm water collected within the bowl created by the dikes through the river-side dike. Impacts to tidal and non-tidal wetlands areas will be minimized and disturbances mitigated. Mitigation will include creation and restoration of wetlands along the Delaware River and on the southern areas of the site. These efforts will restore the natural tidal hydrology of the existing wetlands and remove and replace invasive species. New and restored wetlands will be protected with a planned conservation easement. The dikes will serve to protect existing infrastructure, historical resources, and site amenities.

27	2017	44	Sussex County Council	Bethany Forest	326	Inland Bays - Indian River NPDES-005-0008	$2,452,154	N/A	N/A	$2,452,154	Loan / Subsidies TBD
Description of Project and Problem: Install a gravity collection and conveyance system to serve the existing Bethany Forest Subdivision, a community in the Millville Planning Area requesting a County run sewer system. This project will eliminate 93 septic systems. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing communities/homes and eliminate existing septic systems.											
28	2017	43	Sussex County Council	Mullberry Knoll	280	Inland Bays - Rehoboth Bay WPCC-3042C-90 (Spray Irrigation)	$2,813,062	N/A	N/A	$2,813,062	Loan / Subsidies TBD
Description of Project and Problem: This project consists of a gravity collection system, sub-regional pump station & force main to our regional pump station to serve the area known as Mulberry Knoll. The area is a peninsula in the Rehoboth Bay and the wastewater will be pumped to the County's Inland Bays Regional Wastewater Facility for treatment & disposal. The area will require annexation into the county sewer district. This project will eliminate 80 septic systems and prevent 8 from being installed. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing development/homes with a central sewer system and to eliminate existing septic systems.											
29	2017	42	Sussex County Council	Oak Acres	193	Inland Bays - Little Assawoman NPDES-005-0008	$2,500,000	N/A	N/A	$2,500,000	Loan / Subsidies TBD
Description of Project and Problem: Install a gravity collection & conveyance system to serve the existing subdivision of Oak Acres, a community in the Miller Creek Sanitary Sewer District with a history of failing septic systems. This project will eliminate 43 septic systems and prevent 12 from being installed. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing developments/homes and eliminate existing septic systems.											
30	2017	41	Sussex County Council	Mallard Creek	133	Inland Bays - Little Assawoman NPDES-005-0008	$2,000,000	N/A	N/A	$2,000,000	Loan / Subsidies TBD
Description of Project and Problem: Install a gravity collection and conveyance system including a new pumpstation and forcemain to serve the existing Mallard Creek Subdivision, a community in the Holt's Landing Planning Area that has been polled for their interest in being included in a County run sewer system. This will remove approximately 38 existing on-site septic systems. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing communities/homes and eliminate existing septic systems.											
31	2017	41	Sussex County Council	Tanglewood	70	Inland Bays - Little Assawoman NPDES-005-0008	$1,400,000	N/A	N/A	$1,400,000	Loan / Subsidies TBD
Description of Project and Problem: Install a gravity collection & conveyance system to serve a subdivision in the Miller Creek Sanitary Sewer District known as Tanglewood, per the request of property owners. This project will eliminate 9 septic systems and prevent 11 from being installed. Water Pollution Control Needs/Environmental Benefits: This is a septic elimination project to continue Sussex County's efforts to serve existing developments/homes and eliminate existing septic systems.											
32	2017	30	Kent County Levy Court Department of Public Works	US Route 13 Forcemain Rehabilitation	130,000	Delaware Bay & Estuary - Murderkill Riv NPDES DE 0020338	$3,980,000	N/A	N/A	$3,980,000	Loan / Subsidies TBD
Description of Project and Problem: The Department of Public Works is proposing a rehabilitation project for a sanitary sewer pipeline in the median of US Route 13 (US 13) in the north Dover area. See attached map. The 1970's era pipeline in need of rehabilitation is a 24" PCCP transmission line which conveys sanitary sewer flows from northern Kent County through the City of Dover to the Kent County Regional Resource Recovery Facility which is located north of Milford, DE. The portion of transmission line, located in the median of US 13 at the north end of Dover, has experienced two significant breaks within the past 3 years. Closed Circuit Television (CCTV) inspection of the pipe prior to the sliplining repair near US 13 and Rustic Lane revealed that much of the transmission line has deteriorated. The crown deterioration viewed in the inspection indicates pipe exposure to the sewer gases associated with the age of the pipe. After the sliplining was completed in 2016, a second break near KW Boulevard occurred just north of the repair. This forcemain represents a critical component of the overall sanitary sewer system. The long term sustainability of the overall system is dependent upon the continued use of this asset to convey flow from Pump Station 2 (Denneys Rd) and northern Kent County. To ensure this asset remains viable, a significant renewal or replacement project is required. In addition to providing reliable sanitary sewer service, maintaining the forcemain in good condition reduces the potential for future breaks. Breaks have significant negative impacts to nearby assets such as roadways, dry utilities, as well as potential environmental, health and safety impacts to the surrounding area.											
Sub-Total FY 2017 Wastewater Projects							**$136,510,243**			**$122,525,731**	

FY 2017 CWSRF GPR Projects (*The Percentage of the Project that is Energy Efficient will be determined after receipt of application)											
1	2016	90	City of Wilmington	South Wilmington Wetlands Park	70,000	Piedmont - Christina River DE0020320	$16,739,000	Green Infrastructure	Yes	$16,739,000	Loan / Subsidies TBD
Description of Project and Problem: The purpose of the South Wilmington Wetlands Park (SWWP) is to restore and enhance wetlands, create a stormwater management facility, and create a passive park open space destination. The objectives of the project are to: • Reduce flooding events and associated flood impacts in the historic Southbridge neighborhood; • Reduce Combined Sewer Overflow (CSO) discharges to the Christina River and unintended CSO discharges to the Southbridge neighborhood; • Increase resiliency to future storms and sea level rise; • Improve wetland ecological services and accessibility; • Improve water quality in the Christina River; and, • Stimulate economic development in South Wilmington. The SWWP was conceived and developed in cooperation with the Delaware Department of Natural Resources and Environmental Control (DNREC) and the surrounding community as part of the National Oceanic and Atmospheric Administration (NOAA) funded 2006 South Wilmington Special Area Management Plan (SAMP). The concept of the SWWP was later integrated into the South Walnut Urban Renewal Plan, a comprehensive land use planning document adopted by Wilmington City Council in 2009. Since that time, the City of Wilmington, DNREC and the Wilmington Area Planning Council have been working with the Southbridge community to develop a park that incorporates community feedback to address ongoing issues of flooding and contamination while increasing local walkability and recreational opportunities. The SWWP will provide flood relief to the Southbridge neighborhood, and ecological uplift through wetland enhancement and restoration. The project consists of invasive species control, soil grading, tidal connectivity modifications, and planting to enhance tidal exchange, improve wetland hydrology, and increase the waters-wetland edge and establish a desirable plant community throughout the site. The restoration of the site will also require the excavation and remediation of contaminated soil which date to the site's industrial past. Restoring the area to a high functioning tidal wetland system dominated by native species will dramatically increase the wildlife habitat potential and aesthetic value of the area. In addition, the restored wetland will accept, store and attenuate flood waters that presently flow to a combined stormwater/sanitary sewer system that frequently overflows and floods the Southbridge community. The separation of the storm and sanitary sewers in Southbridge and diversion of stormwater to the SWWP will directly benefit over 1,000 residents of the Southbridge community by reducing flooding frequency in addition to increasing available storm capacity. To meet the green project reserve definition, the project includes the green infrastructure features: • Management of wet weather conditions and maintenance and restoration of natural hydrology by infiltrating and evapotranspiring stormwater; and, • Preservation and restoration of natural landscape features, such as forests, floodplains and wetlands.										
2	2017	80	City of Wilmington	15th and Walnut CSO Separation, Green Infrastucture Installation, and Bicycle Pump Track	70,000	Piedmont - Christina River DE0020320	$820,000	N/A	N/A	$700,000	Loan / Subsidies TBD
Description of Project and Problem: The purpose of the 15th and Walnut Green Stormwater Infrastructure project is improve water quality in the Wilmington watershed by separating stormwater runoff from Combined Sewer Flow (CSO) in two recently built housing projects and one block of Walnut Street within the City of Wilmington. The project will then route the runoff through green infrastructure BMP's to capture the first 2 inches of precipitation using a combination of rain gardens, tree trenches, and bioswales to reduce the quantitiy and improve the quality of the stormwater prior to discharging into the nearby Brandywine Creek. In the current and previous condition, parcels stormwater flow was discharged by the City's combined sewer overflow collection system. The project will incorporate into the construction a park-like amenity in the form of a bicycle pump track that will reinforce the mission of the Non-profit organization, The Urban Bike Project. The overall project will allow for community outreach both in support of the an economically disadvantaged area. The objectives of the project are to: • Remove stormwater from the City's CSO system, reducing Combined Sewer Overflow (CSO) discharges into the Brandywine creek; • Mitigate both the quantity and quality of stormwater discharged to the Brandywine River; • Create a greenspace that will benefit the local community and the surrounding communities, and; • Reinforce the mission and outreach of The Urban Bike Project by creating a recreational opportunity that will draw users, volunteers and resources specific to the needs of the non-profit organization.										
Sub-Total FY 2017 GPR Projects							**$17,559,000**			**$17,439,000**	
Total CWSRF FY 2017 Project Funding							**$154,069,243**			**$139,964,731**	

Attachment B - Non-Federal Administrative Account, Current and Planned Uses

CWSRF Non Federal Administrative Account (NFAA), Current and Planned Uses

	Actual					Projections			
	FY12 Actual	FY13 Actual	FY14 Actual	FY15 Actual	FY16 Actual	FY17 Projected	FY18 Projected	FY19 Projected	FY20 Projected
1. Revenue Sources									
A. Investment Interest	$49,127	$40,214	$29,003	$30,568	$38,735	**$46,000**	**$35,000**	**$30,000**	**$25,000**
B. Administrative Fee	$2,035,148	$1,878,287	$1,819,648	$1,914,445	$1,834,011	**$1,450,000**	**$1,500,000**	**$1,600,000**	**$1,700,000**
C. 1/5% of Prior Year CWSRF Net Fund Position						**$518,159**	**$538,159**	**$548,922**	**$559,901**
D. DWSRF Program Support Reimbursement						**$331,092**	**$323,266**	**$329,731**	**$336,326**
E. SEFO Program Reimbursement						**$19,958**	**$20,357**	**$20,764**	**$21,180**
Total Annual Revenues	$2,084,275	$1,918,501	$1,848,651	$1,945,013	$1,872,746	**$2,365,209**	**$2,416,782**	**$2,529,418**	**$2,642,406**
2. Administrative Expenses and Uses									
A. Environmental Finance Salaries and Benefits	$395,364	$128,895	$317,639	$717,752	$397,370	**$735,000**	**$750,000**	**$765,000**	**$780,000**
B. Environmental Finance Travel	$9,525	$9,024	$12,041	$10,211	$11,228	**$7,000**	**$8,000**	**$9,000**	**$10,000**
C. Environmental Finance Contractual	$241,698	$143,720	$44,463	$193,426	$219,346	**$280,000**	**$286,000**	**$292,000**	**$298,000**
D. Environmental Finance Supplies	$13,935	$6,356	$4,609	$4,092	$2,839	**$3,000**	**$4,000**	**$5,000**	**$6,000**
Total Administrative Expenses and Uses	$660,522	$287,995	$378,752	$925,481	$630,782	**$1,025,000**	**$1,048,000**	**$1,071,000**	**$1,094,000**
Total Administrative Obligations To Be Paid	$40,264	$55,053	$11,935	$170,133	$72,322	**$100,000**	**$100,000**	**$100,000**	**$100,000**
3. CWSRF State Match									
A. CWSRF State Match	$29,114	$0	$0	$0	$0	**$578,000**	**$1,294,800**	**$0**	**$0**
4. Additional Program Expenses									
A. SEFO Funding	$150,000	$150,000	$250,000	$250,000	$561,362	**$300,000**	**$250,000**	**$250,000**	**$200,000**
B. Contractual Groundwater Position	$55,140	$59,780	$58,798	$60,157	$64,789	**$55,000**	**$56,000**	**$57,000**	**$58,000**
C. Contractual Stormwater Position	$60,902	$65,042	$58,551	$66,524	$72,266	**$70,000**	**$71,000**	**$72,000**	**$73,000**
D. Division of Water Resource Positions	$525,482	$501,663	$531,378	$512,174	$534,483	**$555,000**	**$566,000**	**$577,000**	**$589,000**
E. Wastewater Matching Planning Grants	$151,940	$171,558	$168,567	$169,478	$247,386	**$200,000**	**$300,000**	**$200,000**	**$150,000**
F. Wastewater Asset Management Grants	$0	$0	$0	$0	$37,378	**$85,000**	**$300,000**	**$200,000**	**$100,000**
G. Wastewater Planning Advance Grants	$0	$0	$0	$0	$0	**$25,000**	**$300,000**	**$200,000**	**$100,000**
H. Surface Water Matching Planning Grants	$356,741	$350,000	$475,000	$507,672	$317,991	**$212,481**	**$250,000**	**$150,000**	**$109,000**
I. Community Water Quality Grants	$171,655	$153,350	$402,213	$500,000	$174,894	**$217,696**	**$250,000**	**$150,000**	**$100,000**
J. Statewide Wastewater Facilities Needs Study	$318,563	$27,967	$0	$0	$0	**$0**	**$300,000**	**$0**	**$0**
Total Additional Program Expenses	$1,790,423	$1,479,360	$1,944,507	$2,066,005	$2,010,549	**$1,720,177**	**$2,643,000**	**$1,856,000**	**$1,479,000**
Total End of FY Program Obligations	$314,294	$281,631	$288,072	$607,022	$1,207,195	**$1,814,911**	**$1,632,000**	**$1,387,000**	**$2,033,000**
Total Combined Annual Expenses and Uses	$2,450,945	$1,767,355	$2,323,259	$2,991,486	$2,641,331	**$2,745,177**	**$3,691,000**	**$2,927,000**	**$2,573,000**
5. Total CWSRF NFAA Expenses									
CWSRF NFAA Expenses	$2,480,059	$1,767,355	$2,323,259	$2,991,486	$2,641,331	$3,323,177	$4,985,800	$2,927,000	$2,573,000
Total CWSRF NFAA End of FY Obligations	$354,558	$336,684	$300,008	$777,155	$1,279,517	$1,914,911	$1,732,000	$1,487,000	$2,133,000
6. Annual Fund Growth (Decrease)	($395,784)	$151,146	($474,608)	($1,046,473)	($768,585)	($957,968)	($2,569,018)	($397,582)	$69,406
7. Balances									
End of FY Available Fund Balance	$7,772,637	$7,941,657	$7,503,726	$5,980,106	$4,709,159	$3,115,797	**$730,000**	**$577,000**	**$0**
End of FY Accounting Fund Balance	$8,127,195	$8,278,341	$7,803,733	$6,757,261	$5,988,676	$5,030,708	**$2,462,000**	**$2,064,000**	**$2,133,000**
8. Grant Programs	Historical Annual Grant/Program Allocations Approved by WIAC					**Projected Annual Grant/Program Allocations**			
SEFO Program						**$300,000**	**$250,000**	**$250,000**	**$200,000**
Obligated	$150,000	$150,000	$150,000	$250,000	$561,362	$0		**$0**	**$0**
Wastewater Matching Grants						**$500,000**	**$300,000**	**$200,000**	**$150,000**
Obligated	$189,384	$137,686	$190,000	$352,967	$183,773	$375,972	$150,000	$100,000	$75,000
Asset Management Planning Grants						**$500,000**	**$300,000**	**$200,000**	**$100,000**
Obligated					$630,000	$908,762	$982,000	$937,000	$803,000
Project Planning Advances						**$500,000**	**$300,000**	**$200,000**	**$100,000**
Obligated					$90,000	$100,000	$150,000	$100,000	$50,000
Surface Water Matching Grants						**$300,000**	**$250,000**	**$150,000**	**$109,000**
Obligated	$235,100	$171,655	$208,563	$482,250	$267,607	$212,481	$125,000	$75,000	$55,000
Community Water Quality Grants						**$350,000**	**$250,000**	**$150,000**	**$100,000**
Obligated	$391,163	$500,000	$350,000	$525,000	$320,241	$217,696	$125,000	$75,000	$50,000
Special Study (U of D & Tetra Tech)									
Obligated	$400,000								
Statewide Wastewater Study						**$0**	**$300,000**	**$0**	**$0**
Obligated						$0	$100,000	$100,000	$1,000,000
Total Proposed Program Uses						$2,450,000	$1,950,000	$1,150,000	$759,000
Obligated	$1,365,647	$959,341	$898,563	$1,610,217	$2,052,983	**$1,814,911**	**$1,632,000**	**$1,387,000**	**$2,033,000**

ATTACHMENT C - Source and Use of Funds - FY 2017 WPCRF Intended Use Plan

(Updated through June 30, 2017

Cumulative Sources of Funds as of June 30, 2017

Capitalization Grants - Non ARRA		
Actual as of June 30, 2017		$213,460,410
State Match (20%) - Non ARRA		
Actual as of February 28, 2017		42,692,084
Capitalization Grants - ARRA		
Actual as of June 30, 2017		19,239,100
State Match (0%) - ARRA		
Actual as of June 30, 2017		0
Capitalization Grants - Combined		$232,699,510
State Match - Combined		42,692,084
Cumulative Capitalization Grants and State Match		$275,391,594
Repayments - Cap Grant Loans		
Actual as of June 30, 2017		151,359,210
Repayments - NPS Loans		
Actual as of June 30, 2017		14,612,027
Cumulative Repayments		$165,971,237
Investment Earnings		
Actual as of June 30, 2017		12,215,604
Cumulative Investment Earnings		$12,215,604
Sources subtotal (a)		**$453,578,435**

Cumulative Uses as of June 30, 2017

Section 212 loans closed		
Actual as of June 30, 2017		$310,229,677
Section 319 loans closed		
Actual as of June 30, 2017		16,421,354
Land Conservation Loans Closed		
Actual as of June 30, 2017		1,200,000
Green Projects Loans Closed		
Actual as of June 30, 2017		27,468,733
Administrative		
Actual as of June 30, 2017		8,631,025
Uses subtotal (b)		**$363,950,789**
FY 2017 End of Year Balance Available for FY 2017 (a - b)		$89,627,646

FY 2018 Sources

Available Funds from prior IUP's (a-b)		$89,627,646
Capitalization Grant (FFY17)		6,474,000
State Match - (20%)		1,294,800
Transfer of Federal Grant Funds from DWSRF		0
Transfer of State Match from DWSRF		0
Repayments	(Projected July 1, 2017 - June 30, 2018)	$16,468,000
Investment Interest	(Projected July 1, 2017 - June 30, 2018)	$268,000
Total FY 2018 Sources of Funds		**$114,132,446**

FY 2018 Uses

From IUP's		
Section 212 Projects	(Projected July 1, 2017 - June 30, 2018)	$119,163,731
Section 319 Projects	(Projected July 1, 2017 - June 30, 2018)	500,000
Section 320 Projects	(Projected July 1, 2017 - June 30, 2018)	0
Land Conservation Loan Program	(Projected July 1, 2017 - June 30, 2018)	0
Green Projects	(Projected July 1, 2017 - June 30, 2018)	17,439,000
Proposed Administration - Capitalization Gra	(Projected July 1, 2017 - June 30, 2018)	0
Reserved for Transfer of Funds back to DWSRF (as needed)		As Needed
Total FY 2018 Uses (e)		**$137,102,731**
FY 2018 End of Year Balance Available (d - e)		($22,970,285)

ATTACHMENT D - Cumulative Binding Commitments and Disbursements

Federal Fiscal Year 2018 Delaware Water Pollution Control Revolving Fund
Attachment D: Binding Commitment and Disbursements by Project

				9/1/17 - 12/31/17	1/1/18 - 3/31/18	4/1/18 - 6/30/18	7/1/18 - 9/30/18
				FFY Disbursements Ending 9/30/18			
Project	Cost	Binding Commitment Date	Construction Start Date	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Wastewater Projects							
City of Rehoboth Beach							
WWTP Upgrade I	$10,488,000	Jul-16	Sep-17	$1,000,000	$2,500,000	$2,500,000	$2,500,000
Ocean Outfall Project	$25,000,000	May-15	Sep-17	$1,000,000	$9,000,000	$9,000,000	$6,000,000
Biosolids Upgrade Project	$12,500,000	Jul-16	Sep-17	$1,000,000	$3,000,000	$3,000,000	$3,000,000
Sussex County Council							
Herring Creek - Phase I	$16,664,000	Jun-17	Aug-17	$500,000	$2,000,000	$3,000,000	$3,000,000
Chapel Branch	$3,744,323	Aug-17	Oct-17	$200,000	$500,000	$700,000	$700,000
Mallard Creek	$2,000,000	Oct-17	Dec-17	$100,000	$500,000	$500,000	$500,000
Oak Acres	$2,500,000	May-18	Jul-18			$150,000	$600,000
Route 54 Expansion	$2,048,682	Jun-17	Aug-17	$200,000	$1,000,000	$848,682	
Tanglewood	$1,400,000	Feb-18	Apr-18		$100,000	$700,000	$600,000
Bethany Forest	$2,452,154	Apr-18	Jun-18			$200,000	$500,000
Mulberry Knoll	$2,813,062	Jun-18	Aug-18				$200,000
Kent County Levy Court							
Air System (Blower) Optimization Project	$1,354,110	Jun-17	Aug-17	$200,000	$450,000	$450,000	$254,110
Plant Wide Backup (Emergency) Power	$1,237,400	Jun-17	Aug-17	$200,000	$400,000	$400,000	$237,400
US Route 13 Forcemain Rehabilitation	$3,980,000	Oct-17	Dec-17	$2,000,000	$1,980,000		
City of Dover							
Walker Woods Pump Station Replacement	$408,000	Apr-18	Jun-18			$50,000	$150,000
Delaware Tech Pump Station Replacement	$384,000	Apr-18	Jun-18			$50,000	$150,000
Lepore Road Sanitary Sewer Upgrade	$250,000	Aug-17	Oct-17	$50,000	$150,000	$50,000	
Silver Lake Pump Station Replacement	$396,000	Apr-18	Jun-18			$50,000	$100,000
Tar Ditch Interceptor	$250,000	Apr-18	Jun-18			$50,000	$100,000
Meeting House Branch Env, Restoration	$7,600,000	Sep-17	Nov-17	$500,000	$1,500,000	$1,500,000	$1,500,000
New Castle County Special Services							
Hunter's Ridge	$350,000	Jul-17	Sep-17	$100,000	$250,000		
Whie Clay Sewer Interceptor Project	$2,000,000	Jul-17	Sep-17	$200,000	$700,000	$700,000	$400,000
Morningside Stormwater Pond Rehab.	$250,000	Jul-17	Sep-17	$100,000	$150,000		
Perch Creek Stormwater Pond Rehab.	$265,000	Jul-17	Sep-17	$100,000	$165,000		
Delaware City WWTP Upgrade	$4,675,000	Jul-17	Sep-17	$200,000	$800,000	$800,000	$800,000
Muddy 6 Sewer Capacity Improvement	$2,000,000	Jul-17	Sep-17	$200,000	$700,000	$700,000	$400,000
Town of Smyrna							
Kent Way Pump Station Rehab. Project	$890,000	Jul-17	Sep-17	$250,000	$640,000		
South Main Street Utility Replacement Project	$1,264,000	Jul-17	Sep-17	$500,000	$764,000		
City of Newark							
Westen Area Drainage Flood Mitigation	$10,000,000	Mar-18	May-18			$1,500,000	$3,000,000
Fort Dupont Redevelopment Corporation							
Stormwater Management Improvements	$927,000	Jul-17	Sep-17	$200,000	$500,000	$227,000	
Sewer Improvements	$520,000	Jul-17	Sep-17	$150,000	$250,000	$120,000	
Floodproofing Improvements (Dike)	$2,180,000	May-18	Jul-18			$200,000	$500,000
Green Project Reserve Projects							
City of Wilmington							
South Wilmington Wetlands Project	$16,739,000	Aug-17	Oct-17	$2,000,000	$3,000,000	$3,000,000	$3,000,000
15th and Walnut CSO Separation Green Infra. & Bike Track	$700,000	Aug-17	Oct-17	$150,000	$200,000	$200,000	$150,000
Transfer of Funds back to DWSRF	As Needed	N/A		As Needed	As Needed	As Needed	As Needed
NPS Expanded Use Programs							
Septic Rehabilitation Loan Program	$400,000	Continuous	Continuous	$100,000	$100,000	$100,000	$100,000
Agricultural NPS Loan Program	$50,000	Continuous	Continuous	$13,000	$13,000	$13,000	$11,000
Expanded Uses NPS Loan Prog.	$25,000	Continuous	Continuous	$6,000	$6,000	$6,000	$7,000
Leaking Storage Tank Remediation Loan Program	$25,000	Continuous	Continuous	$6,000	$6,000	$6,000	$7,000
Administrative Expenses	$0			$0	$0	$0	$0
Totals	**$140,729,731**			**$11,225,000**	**$31,324,000**	**$30,770,682**	**$28,466,510**
Grant Award - Federal Share	**$6,474,000**			**$6,474,000**	**$0**	**$0**	**$0**
Grant Award - State Match	**$1,294,800**			**$1,294,800**	**$0**	**$0**	**$0**
Repayment Funds	**$132,960,931**			**$3,456,200**	**$31,324,000**	**$30,770,682**	**$28,466,510**
Federal %	**83.33%**			**83.33%**	**0.00%**	**0.00%**	**0.00%**
State Match %	**16.67%**			**16.67%**	**0.00%**	**0.00%**	**0.00%**

ATTACHMENT E - FY 2017 ASAP Payment Schedule – To Be Provided to EPA

Year/Fed QTR	Payment Date	ASAP Payment Schedule	ASAP Cummulative Amount
18/1	1st Quarter	$6,474,000	$6,474,000
18/2	2nd Quarter	$0	$6,474,000
18/3	3rd Quarter	$0	$6,474,000
18/4	4th Quarter	$0	$6,474,000