



**NEW JERSEY DEPARTMENT OF  
ENVIRONMENTAL PROTECTION**

**DRINKING WATER  
STATE REVOLVING FUND**

**PROPOSED SUPERSTORM SANDY FUNDING  
FFY2016 PRIORITY SYSTEM  
INTENDED USE PLAN, AND  
PROJECT PRIORITY LIST**

**AUGUST 2015**

Chris Christie  
Governor



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Commissioner





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## **OVERVIEW OF SUPERSTORM SANDY PRIORITY SYSTEM, INTENDED USE PLAN AND PROJECT PRIORITY LIST**

On October 29, 2012, Superstorm Sandy made landfall in New Jersey which resulted in extensive flooding, power outages and other adverse impacts to infrastructure systems (including wastewater and stormwater conveyance and treatment facilities) throughout the State. Superstorm Sandy was the largest storm to hit the northeast U.S. in recorded history, knocking out power to millions and causing \$70 billion in damage to eight states. In a continued effort to assist municipalities recover and rebuild, the Department of Environmental Protection (Department) in concert with the New Jersey Environmental Infrastructure Trust (Trust) has been working with other federal and State agencies to develop financial assistance programs to benefit those impacted by Superstorm Sandy and to finance other infrastructure improvements needed to help protect, maintain and improve water quality.

On January 23, 2013, the Disaster Relief Appropriations Act (DRAA) was approved by Congress and included in P.L. 113-2 which was signed by the President of the United States on January 29, 2013. The purpose of the DRAA was to provide additional funding to the State's Clean Water and Drinking Water State Revolving Fund Programs to provide financial assistance to communities impacted by the Superstorm Sandy and for projects whose purpose is to reduce flood damage risk and vulnerability or to enhance resiliency to rapid hydrologic change or a natural disaster.

On May 1, 2013, the United States Environmental Protection Agency (USEPA) issued guidance regarding the types of projects eligible to receive the funding authorized by the DRAA. This guidance is included in Section G of the Intended Use Plan (IUP) Chapter of this document.

This document serves as the Department's DRAA Drinking Water State Revolving Fund (DWSRF) Priority System and IUP for FFY2016 since all DRAA funding is not expected to be expended in FFY2015. The document has several purposes regarding the use of the above anticipated federal funds, including:

- 1- the establishment of the ranking criteria under which projects will be ranked and placed on the Priority List;
- 2- the establishment of program requirements and document submittal deadlines for award of loans; and
- 3- the establishment of loan terms for projects financed through the Environmental Infrastructure Financing Program.

This IUP details how the State of New Jersey will finance projects in New Jersey's DRAA DWSRF program and which projects will be managed by the Department with respect to the capitalization grant. The FFY2016 DWSRF base program is covered under a separate IUP.

The DWSRF is administered as a component of the Environmental Infrastructure Financing Program (EIFP) which also administers the state's Clean Water State Revolving Fund (CWSRF). The Clean Water component of New Jersey's EIFP provides low interest loans to publicly owned

systems for planning, design and construction of wastewater treatment facilities and other water quality improvement projects under the federal Clean Water Act and state law. The CWSRF program is covered under a separate IUP which includes the financing program for the DRAA. Prospective project sponsors must complete a ranking form for each program to be included in the respective Priority Lists and to be eligible for financing under each program. The Superstorm Sandy DWSRF money will also be administered through the EIFP.

The Department's Bureau of Safe Drinking Water and the Municipal Finance and Construction Element jointly manage the DWSRF program along with the Trust. Through the sale of revenue bonds the Trust is able to leverage Federal grants and provide more capital, through low interest loans to more project sponsors. It should be noted that the 1981 Water Supply Bond Act authorized financing only to publicly owned systems, and the 1996 SDWA amendments did not change this. Federal funds can be used to fund both privately owned and publicly owned water systems.

## **PRIORITY SYSTEM**

### **I. Priority List - General**

The New Jersey Department of Environmental Protection (Department) issued a Call for Projects dated May 15, 2013 as part of its efforts to develop the Sandy DWSRF Intended Use Plan. The Call for Projects helped determine if a) the demand for financing was in line with the types and amount of funding available, b) a modified ranking methodology (potentially prioritizing flood-prone areas) was needed, c) SRF-related funding set asides were appropriate and d) other considerations were needed. Each year since the DRAA, a Superstorm Sandy IUP was proposed and adopted which included a list of Hurricane-related projects. Sponsors could submit a Letter of Intent for either the Base DWSRF Program Funding (described in a separate IUP proposal) and/or the Superstorm Sandy DWSRF Program Funding.

### **II. Ranking Methodology**

The Letters of Intent and accompanying documentation were used by the Department to assign points to each project using the Project Priority System and the Department ranked all eligible projects according to the total number of points each project received. All projects were subsequently placed on the Project Priority Comprehensive List according to their ranking. Projects with more points were ranked above those with fewer points. The Department intends to follow this procedure for Sandy DWSRF projects that meet the October 2015 deadline.

The principal elements of the Priority System are: A) Superstorm Sandy resiliency related projects, B) Affordability, and C) Population.

A project must be assigned points from Category A to be eligible for ranking; points assigned from the remaining categories are added to the points received in Category A.

The prospective applicant must notify the Department of any changes to project scope or any other circumstance that may affect the calculation of priority points. The Department shall then recalculate, if appropriate, the prospective applicant’s ranking utilizing the new information submitted and revise the priority ranking accordingly.

Points will be assigned for each of the three priority categories discussed below, as applicable:

**Category A. Superstorm Sandy DWSRF-related project needs**

Table 1 describes the project elements that are eligible for funds:

**Table 1.  
Project Elements Eligible for Project Priority Ranking in the Drinking Water State  
Revolving Fund DRAA Program**

1. Projects for water supply systems, which the State classified as <b>vulnerable</b> , as a result of a 2007 Department Interconnection Study.	300 points
2. Projects for water supply systems that prevent floodwaters from entering a treatment plant or well house, including but not limited to relocating facilities to less flood prone areas and installation of physical barriers around a facility.	250 points
3. Projects for other interconnections that increase water systems resiliency during time of emergency.	200 points
4. Projects for water supply systems with inadequate primary and secondary source capacity	150 points
5. Projects for water systems with auxiliary power projects.	125 points
6. Projects for cleaning and lining water mains and other distribution system improvements for those municipally owned coastal water systems experiencing post Sandy water quality problems.	110 points
7. Projects for water supply systems with inadequate storage to meet those requirements of the New Jersey Water Supply Management Act (7:19-6.8).	100 points
8. Other projects elements, not including in the above items that can be Superstorm Sandy related.	50 points

**Category B. Affordability**

The purpose of the affordability criteria is to determine which project sponsors’ water systems were eligible for additional points under the Affordability Category.

Affordability is the degree of need for financial assistance based upon the New Jersey median household income compared to the municipal median household income (MHI). Affordability is determined by the following formula:

$$(\text{Municipal MHI} / \text{Statewide MHI}) \times 100 = \text{Affordability Factor}$$

Points were assigned as shown in Table 2.

**Table 2.**  
**Point values assigned based on Affordability Factor calculation**

1. Affordability factor of 100 or greater	0 Points
2. Affordability factor from 85 through 99	15 Points
3. Affordability factor from 66 through 84	30 Points
4. Affordability factor less than or equal to 65	80 Points

The median household income of the municipality which the water system serves and the statewide median household income were determined from income data in the most recent United States census, which is currently the 2010 census.

The Department determined that for the purposes of the DWSRF Program, a municipality whose median household income was 35 percent or more below the State’s MHI was considered a Disadvantaged Community, and received 80 priority points, which is proportionately greater than the other affordability factor points. (New Jersey’s MHI is \$68,444 from the 2010 Census.)

A weighted MHI was calculated for a project sponsor whose water system serves more than one municipality, as shown in the example below.

Example:

Municipalities Served	MHI	Populations Served	Fraction of total population served	Weighted municipal MHI
Lancaster	30,000	5,000	0.167	5,000
Mayberry	20,000	10,000	0.333	6,660
Holmeville	25,000	15,000	0.500	12,500
<b>Total</b>		<b>30,000</b>	<b>1.00</b>	<b>24,160</b>

Please note for water systems that service more than ten municipalities, the ten municipalities that have the highest populations served are considered in the above table for the affordability factor.

**Category C. Population**

As a tiebreaker, projects were assigned points based on the permanent population of the water system service area. For a resort community where the summer and winter populations vary greatly, the permanent population was calculated by taking the sum of twice the winter population and once the summer population and dividing by three (see below). For water systems that service more than one municipality, the total all the permanent population served in the multiple service areas was used. Priority points were calculated as the permanent population

served by the water system divided by 100,000, expressed as a decimal. In the event that projects were tied, the project which serves a greater proportionate population in the water system's area was given higher priority.

Population served for resort communities was calculated by the following equation:

$$[(2 \times \text{Winter Population}) + \text{Summer Population}] / 3 = \text{Weighted Permanent Population}$$



## INTENDED USE PLAN

This IUP provides information on funds available through the Drinking Water SRF Program to provide financial assistance for projects using Superstorm Sandy funding, capitalization grants, state match, and Trust bond proceeds. Placement on the Project Priority List is a prerequisite to be considered eligible for financial assistance. Projects are certified for funding based on the Project Priority List rank, amount of available funds, and compliance with the DWSRF Program's requirements and deadlines for completion of planning, design, and loan application.

Note that the total amount of Superstorm Sandy DWSRF project financing loans received by any project sponsor shall not exceed \$15,000,000, and no more than a total of \$4,500,000 may be a principal forgiveness loan. The loan cap is included so that all project sponsors have access to this Superstorm Sandy funding.

If a project sponsor submits multiple drinking water project loan applications that are eligible for Superstorm Sandy DWSRF financing and exceed the Superstorm Sandy DWSRF \$15,000,000 loan cap, the project sponsor has the option to select which projects to finance through the Superstorm Sandy DWSRF financing program and which projects it will seek funding through the DWSRF Base financing loan. In the event that additional Superstorm Sandy funding becomes available because either project sponsors do not close on loans or project sponsor loan requests are less than that of the original application, the loan 'not-to-exceed' amount may be increased to the extent needed to assure full utilization of Superstorm Sandy DWSRF funding for drinking water projects.

### **I. Eligible Systems and Projects**

#### **A. Eligible Systems**

Public community water systems (as defined by the National Primary Drinking Water Regulations), both privately and publicly owned, and nonprofit noncommunity water systems are eligible for DWSRF assistance. Eligibility is limited to these types of water systems that are currently active and are therefore required to comply with the New Jersey State primary drinking water regulations. Facilities that are defined as water systems but are exempt from regulation under the SDWA are not eligible. Federally owned systems and State owned systems (State agencies, such as state police, parks and forestry, and corrections) are not eligible to receive DWSRF assistance. However, State authorized systems (water commissions, water supply authorities, and water districts) are eligible to receive DWSRF assistance.

**Note:** An Asset Management Plan is now a requirement for a project sponsor seeking a DWSRF loan.

## B. Eligible Projects and Program Schedule

The Superstorm Sandy DWSRF assistance must be provided to facilities that were impacted by the storm, including physical damage, loss of power, loss/interruption of mission essential services, etc. for projects that:

- Reduce the likelihood of physical damage to a treatment works or drinking water system;
- Reduce a treatment works' or water system's susceptibility to physical damage or ancillary impacts caused by floods;
- Facilitate preparation for, adaptation to, or recovery from a sudden, unplanned change in the amount of and movement of water in proximity to a treatment works or water system; or,
- Facilitate preparation for, adaptation to, or recovery from climate change or any other type of natural disaster.

A complete list of the types of projects eligible for DWSRF Sandy financing is included in Table I of the IUP Chapter of this document.

The Superstorm Sandy project document submittal schedule for DWSRF funding identified below is identical to the FFY2016/SFY2017 DWSRF Base and Track II Program schedule and can be found in Table 3:

**Table 3.**

<b>Superstorm Sandy DWSRF Program Schedule (FFY2016/SFY2017)</b>	
<b>Activity</b>	<b>Deadline</b>
Commitment Letter (Letter of Intent) and Planning Documents	October 9, 2015
Track II Letter of Intent Submittal	March 4, 2016
Design Documents and Loan Application	March 4, 2016

To ensure that all projects have an opportunity to access to NJEIFP funding, the Department is proposing to grant priority status to DWSRF ranked projects that are ready to proceed based on the date of project approval. As such, there is a strong incentive for applicants to submit necessary application related documents and secure approvals as soon as possible. The Department is committing resources for the timely approval of all applications. A list of active projects with target dates or actual completion dates for active drinking water projects will be on the website and the NJEIT website quarterly.

Moreover, short term funding of such projects will be available immediately upon approval through either the Interim Financing (Construction Loan) Program or the Statewide Assistance Infrastructure Loan (SAIL) Financing Program, further ensuring that such projects commence construction as soon as possible

### **C. Sandy DWSRF Loan Terms**

While the DRAA and USEPA allow up to 30% of the grant to be used for principal forgiveness loans, that percentage is diluted when the 20% State Match is added and when the Trust's 25% market-rate share is included. For the vast majority of the projects financed through the Sandy DWSRF program in FFY2015, the Trust will provide a 25% share of the loan amount and that the Department will provide financing for 75% of the allowable project cost, of which **18.75% will be in the form of the principal forgiveness loan.**

These loan terms will be the same in FFY2016.

### **D. Statewide Assistance Infrastructure Loan Program**

State Legislation was passed under the designations S2815 and A4185 that authorized the establishment of a Statewide Assistance Infrastructure Loan Program (SAIL). SAIL is capitalized with Trust funds and financed through bank lines-of-credit or similar short-term financial instruments to make financing available to eligible borrowers.

Projects eligible for financing through SAIL include a wide variety of water treatment, wastewater treatment, stormwater management and nonpoint source pollution abatement projects that were impacted by Superstorm Sandy. SAIL is designed to be a short-term bridge loan program to help facilitate the cash flow needs of municipalities and authorities for their project local match requirement and/or in anticipation of reimbursement through federal grant programs including but not limited to FEMA 406 and 404 grant programs, HUD-CDBG and NJEIFP to pay for construction costs related to the repair of infrastructure damaged during Sandy and projects to improve infrastructure resiliency in future disasters.

Eligible applicants include local government units, including municipalities, counties, sewerage authorities, municipal utilities authorities, county improvement authorities and other subdivisions of government.

SAIL significantly broadens the options available for financing such projects by providing funding opportunities to projects otherwise unable to secure financing and expanding funding sources through low interest loans for terms up to 3 fiscal years.

Projects are financed through SAIL on a first-approved, first-funded basis provided the project satisfies the requirements of the SAIL legislation and the Trust Board Resolution approved June 13, 2013, which include:

1. The Commissioner of the Department of Environmental Protection has determined and certified in writing that the Project is necessary and appropriate to (a) repair damage to a

wastewater treatment system or water supply facility directly arising from an act of terrorism, seismic activity or weather conditions that occurred within the prior three State Fiscal Years and that gave rise to a declaration by the Governor of the State (the “Governor”) of a state of emergency, provided that such wastewater treatment system or water supply facility is located in a county included in the Governor’s state of emergency declaration, or (b) mitigate the risk of future damage to a wastewater treatment system or water supply facility from an act of terrorism, seismic activity or weather conditions comparable in scope and severity to an act of terrorism, seismic activity or weather conditions that occurred within the prior three State Fiscal Years and that gave rise to a declaration by the Governor of a state of emergency, provided that such wastewater treatment system or water supply facility is located in a county included in the Governor’s state of emergency declaration;

2. The Project is listed on the SAIL Disaster Relief Emergency Financing Program Eligibility List for funding in the forthcoming State Fiscal Year submitted to the Legislature in a form provided by the Commissioner of the Department;
3. The proposed Borrower has submitted a complete application for the Project to the Trust; and
4. The Board of Directors of the Trust has certified the Project.

#### **E. Financial Relationship between DWSRF and CWSRF**

The Safe Drinking Water Act Amendments of 1996 offer states the flexibility to meet the funding needs for drinking water and wastewater facilities by transferring funds from one SRF program to the other. Annually, an amount up to 33% of the Drinking Water SRF Capitalization Grant may be transferred from the CWSRF program to the DWSRF program, or vice versa. The USEPA has issued guidance that would allow utilization of transfer credits and transfer of funds on a net basis (i.e., funds could be moved in both directions), provided that the final transferred amount does not exceed the authorized ceiling.

For the DWSRF Base Program, the DWSRF program evaluates funds available to determine if adequate monies are available to be utilized for drinking water projects in the current fiscal year. In addition, the type and number of CWSRF projects are reviewed and a determination is made on the need of the funds to be transferred from the DWSRF loan repayments to the CWSRF accounts or vice-versa. In addition, the DRAA allows for the transfer of funds between DWSRF and CWSRF programs, and this option will be evaluated after projects are ranked.

The Department fully supports efforts to enact legislation to continue to allow the transfer of funds and the transfer provision has been extended by the USEPA. If approved, the Department reserves the right to transfer funds from the CWSRF to the DWSRF (or vice-versa) each fiscal year to the extent allowed by law. The Department annually evaluates the monies available in each SRF program and whether there is a need to transfer funds. While all projects that meet the program requirements and are ready to proceed have been able to receive a CWSRF or DWSRF

loan in the past, the ability of the programs to finance all qualifying projects in the future is uncertain because of reduced funding.

In addition to the potential transfer of funds between the CWSRF and DWSRF, the Department is continuing its policy to cross-collateralize the DWSRF with the CWSRF. This feature results in significant savings to project sponsors and, in particular, the drinking water project sponsors since there is a large source of revenue available to cover possible loan defaults. Under the EPA-approved procedures associated with cross-collateralization, a temporary transfer of funds between the two SRFs may occur as may be necessary to cover the default of a loan repayment or other financial obligation. The Department and the Trust would take steps to collect any obligations resulting from a loan default and reimburse the appropriate drinking water or clean water account.

#### **F. DRAA and USEPA Requirements**

The DRAA and the USEPA Guidance dated May 1, 2013 contains the following provisions that impact the development of Sandy SRF Programs in New Jersey:

1. USEPA allotted \$191,105,958 to New Jersey's Clean Water SRF and \$38,221,192 [\$38,189,086 as per USEPA Region 2 on 6/19/14] to the Drinking Water SRF.
2. The State must provide a 20% match to the Sandy SRF monies. A minimum of 20% and no more than 30%, of the SRF grant can be used for additional subsidization (or principal forgiveness loans (PFLs)).
3. The Sandy SRF monies must be expended within 3 to 5 years of obligation to the State (i.e, the award of the SRF capitalization grant) unless a waiver is granted by the federal Office of Management and Budget (OMB). [The NJ-DWSRF grant period was extended to seven years, or until 6/20/2021].
4. The Sandy SRF assistance must be provided to facilities that were impacted by the Superstorm (including physical damage, loss of power, loss of mission-essential services, etc.) and for projects that are otherwise SRF eligible and serve at least one of the following purposes:
  - Reduces the likelihood of physical damage to a treatment works or drinking water system;
  - Reduces a treatment works' or water system's susceptibility to physical damage or ancillary impacts caused by floods;
  - Facilitates preparation for, adaptation to, or recovery from a sudden, unplanned change in the amount of and movement of water in proximity to a treatment works or water system; or,
  - Facilitates preparation for, adaptation to, or recovery from climate change or any other type of natural disaster.

In addition, Executive Order 11988 on floodplain management requires that federal agencies use the best available flood data to determine the location of projects and activities. Project sponsors will be required to use the best available flood hazard data identified by the Federal Emergency Management Agency (FEMA), where applicable, to guide decision-making.

## **G. Schedule for Superstorm Sandy Priority System & Projects for FFY2016**

October 9, 2015	Deadline for FFY2016 DWSRF Base Program and Superstorm Sandy applicants to send in commitment letter and all planning documents (i.e. project reports to Department)
March 4, 2016	Design Documents & Loan Application Submission Deadline
May 2017	Department/Trust loan closings with project sponsors.

## **H. Sources of Funding for Superstorm Sandy projects for FFY2016/SFY 2017**

Sources of funding for Superstorm Sandy projects for FFY 2016/SFY 2017 will come from the unused portion of FFY2015/SFY2016 DRAA authorized funds from the New Jersey Department of Environmental Protection and the New Jersey Environmental Infrastructure Trust.

The amount of approvable projects in the FFY15 program did not utilize or does not expect to utilize all of the available Sandy DWSRF funds. Therefore, the Department will accept submittals under the Sandy DWSRF Program, which includes a principal forgiveness component of approximately 18.75% of the allowable costs

Table 4 contains an outline of the estimated funds available for the Superstorm Sandy IUP Program in SFY2017.

**Table 4.**  
**Intended Use of Superstorm Sandy funds in FFY2016/SFY2017**

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<u>Funds Available</u>	
Federal Capitalization Grant	\$38,189, 086*
Administrative Fees (4%)	(1,527,563)
State Match (20%)	7,637,817
Transfers from CWSRF to DWSRF	0
Subtotal	44,299,340
Trust Share at 25%	14,766,450
Estimated Funds Available for Projects**	\$59,065,790

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\*NJ portion of DRAA

\*\*Minus the projects that are funded in SFY 2015 and SFY 2016 cycle.

## **I. USEPA's Drinking Water SRF List of Eligible Projects (from USEPA Memorandum, May 1, 2013)**

If a project is not specifically listed below, an explanation of how the project addresses the purposes outlined in Section IV.2.d. of the Guidance must be included in the State's Intended Use Plan.

### **I. Projects that prevent interruption of water distribution system operation in the event of a flood or natural disaster, including but not limited to:**

- a. Physical "hardening" or waterproofing of pumps and electrical equipment at pump stations and other components of distribution systems (including storage facilities and associated equipment) through upgrade or replacement including:
  - Waterproofing electrical components (e.g. pump motors)
  - Waterproofing circuitry
  - Dry floodproofing/sealing of structure to prevent floodwater penetration
  - Installation/construction of wind resistant features (e.g. wind resistant roofing materials, wind-damage-resistant windows, storm shutters)
- b. Relocation of pump stations or other distribution system facilities to less flood prone areas
- c. Installation of physical barriers around pump stations or other distribution system facilities (e.g. levies or dykes)
- d. Installation of back-up generators or alternative energy sources (including switch boxes) that service pump stations or other distribution system facilities
- e. Installation/construction of redundant distribution system components and equipment
- f. Construction of interconnections with neighboring water systems which could provide an emergency water supply
- g. SCADA system projects to allow remote or multiple system operation locations
- h. Replacement of damaged equipment with more energy efficient equipment
- i. Construction or installation of flood attenuation, diversion, and retention infrastructure associated with an otherwise eligible drinking water project that protects the distribution system
  - Green infrastructure that reduces the risk of flooding by reducing stormwater runoff including permeable pavement, green roofs and walls, bioretention infrastructure (e.g. constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection
    - Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/ levees
    - Floodwater pumping systems
    - Flood water channels/culverts, physical barriers, and retention infrastructure
- j. Rehabilitation of water mains and valves needed to maintain integrity of water quality and quantity during storm events.

**II. Projects that prevent floodwaters from entering a treatment plant or well house, including but not limited to:**

- a. Installation of physical barriers around a facility (e.g. levies or dykes around the facility to prevent flooding)
- b. Relocation of facilities to less flood prone areas
- c. Construction or installation of flood attenuation, diversion, and retention infrastructure associated with an otherwise eligible drinking water project that protects the treatment plant
  - Green infrastructure that reduces the risk of flooding by reducing stormwater runoff, including permeable pavement, green roofs and walls, bioretention infrastructure (e.g. constructed wetlands, detention basins, riparian buffers, or stormwater tree trenches/pits/boxes), stream daylighting, and downspout disconnection
  - Natural systems, and features thereof, capable of mitigating a storm surge, such as barrier beach and dune systems, tidal wetlands, living shorelines, and natural berms/levees
  - Floodwater pumping systems
  - Flood water channels/culverts, physical barriers, and retention infrastructure

**III. Projects that maintain the operation of a drinking water treatment plant, intake or well in the event of a flood or natural disaster, including but not limited to:**

- a. Physical "hardening" or waterproofing of pumps and electrical equipment at pump stations and other components of distribution systems (including storage facilities and associated equipment) through upgrade or replacement, including:
  - Waterproofing electrical components (e.g. pump motors)
  - Waterproofing circuitry
  - Dry floodproofing/sealing of structure to prevent floodwater penetration
  - Installation/construction of wind resistant features (e.g. wind resistant roofing materials, wind-damage-resistant windows/storm shutters)
- b. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structures
- c. Installation of physical barriers around individual treatment processes
  - Flood walls around treatment tanks
  - Elevated walls or capping of treatment tanks (e.g. tanks, vaults)
- d. Installation of larger capacity storage tanks
  - Installation of larger capacity chemical storage tanks for continued treatment in absence of delivery service
  - Installation of larger capacity fuel storage tanks for back-up generators
  - Installation of larger capacity water storage facilities (e.g. raw water reservoirs, backwash tanks, contact basins)
- e. Installation of back-up energy supply or alternative energy sources and/or hardening of existing connections to the power grid



- f. Installation/construction of redundant distribution system components and equipment
- g. Replacement of damaged equipment with more energy efficient equipment
- h. SCADA system projects to allow remote or multiple system operation locations

**IV. Projects that preserve and protect water system equipment in the event of a flood or natural disaster, including but not limited to:**

- a. Relocation of critical equipment to less flood prone areas of a facility and/or elevation of critical structure
- b. Prevention of saltwater damage to materials and equipment
  - Installation of salt water resistant chemical storage tanks
  - Installation of salt water resistant fuel storage tanks
  - Installation of salt water resistant equipment and appurtenances

**V. Planning projects that assess a treatment works' vulnerability to flood damage or that analyze the best approach to integrate system and community sustainability/resiliency priorities in the face of a variety of uncertain futures including natural disasters and more frequent and intense extreme weather events, provided the planning work is reasonably expected to result in a capital project, including but not limited to:**

- a. Risk/vulnerability assessments considering recent floodplain maps and projected sea level rise
- b. Alternatives analysis
- c. Asset Management Plans
- d. Emergency Preparedness, Response, and Recovery Plans

**ATTACHMENT 1: List for Superstorm Sandy 2016 cycle funding**

<b>RANK</b>	<b>Computer Number</b>	<b>SYSTEM NAME</b>	<b>County</b>	<b>PROJECT DESCRIPTION</b>	<b>PROJECT NUMBER</b>	<b>POPULATION SERVED</b>	<b>BUILDING COST</b>	<b>SUPPORT COST</b>	<b>TOTAL PROJECT COST</b>	<b>TOTAL POINTS</b>	<b>EST. STATE CERT. DATE (yyymmdd)</b>
1	373	Little Egg Harbor	Ocean	Replacement of existing wooden sections of water treatment plant building with concrete masonry unit walls to prevent flooding	1516001-500	20,065	\$452,200.00	\$203,490.00	\$655,690.00	265.430	160430
2	53	Long Beach Township	Ocean	Demolish and replace damaged pump room @ Beach Haven Terrace WTP	1517001-500	8,885	\$1,500,000.00	\$1,937,750.00	\$3,437,750.00	265.089	160430
3	54	Long Beach Township	Ocean	Demolish and replace damaged pump room @ Brant Beach	1517001-501	8,885	\$837,500.00	\$902,250.00	\$1,739,750.00	265.089	160430
4	63	NJ American Water Co.-Raritan	Union	Raise level of floodwall@ Raritan Millstone	2004002-500	610,000	\$24,000,000.00	\$6,000,000.00	\$30,000,000.00	256.100	160430
5		Long Beach Township	Ocean	Replace deteriorated raw water concrete reservoir with a new above ground steel tank; demolish and construct the filter room to 500-yr flood elevation; raise Well #4 to 500-yr flood elevation and construct a new building with emergency generator	1517001-502	35,367	\$1,927,000.00	\$746,640.00	\$2,673,640.00	250.354	160430
6		Newark City	Essex	Install standby generators at the Wayne and Clifton	0714001-500	285,000	\$1,000,000.00	\$450,000.00	\$1,450,000.00	207.850	160430

RANK	Computer Number	SYSTEM NAME	County	PROJECT DESCRIPTION	PROJECT NUMBER	POPULATION SERVED	BUILDING COST	SUPPORT COST	TOTAL PROJECT COST	TOTAL POINTS	EST. STATE CERT. DATE (yyymmdd)
7	69	North Jersey District WS	Passaic	Installation of low lift natural gas pump-design/build	1613001-500	859,318	\$9,142,875.00	\$3,055,720.00	\$12,198,595.00	163.593	160430
8	224	Passaic Valley WC	Passaic	Phase 1-Installation of four 2,500 kW diesel generators with buildings and fuel pumps at the Little Falls WTP	1605002-500	314,900	\$17,649,000.00	\$3,578,019.00	\$21,227,019.00	158.149	160430
9	72	Perth Amboy City	Middlesex	Installation of a new standby generator for Runyon WTP	1216001-500	50,815	\$1,855,500.00	\$723,100.00	\$2,578,600.00	155.508	160430
10	274	Brigantine City	Atlantic	Installation of generators @ wells #4,5 & 7	103001-501	16,057	\$677,100.00	\$795,475.00	\$1,472,575.00	155.161	160430
11	23	Barnegat Twp	Ocean	Install emergency generator for well #4	1533001-500	20,935	\$150,000.00	\$145,973.00	\$295,973.00	140.209	160430
12		North Jersey District WS	Passaic	Purchase and install new dewatering system at the RTF and Upgrade ET3	1613001-031	872,153	\$2,469,700.00	\$1,215,800.00	\$3,685,500.00	88.722	160430
13		North Jersey District WS	Passaic	Rehab of treatment facilities: Replacement of chemical build roof and electrical generator transfer switch, enclosure of sodium hypochlorite tanks, replacement of bar racks at dam 4, boiler repairs/treatment	1613001-032	872,153	\$2,465,520.00	\$1,088,190.00	\$3,553,710.00	88.722	160430

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				system, replacement of filter eff valve actuators, replacement of potassium permanganate feed sys, modification of waste wash water basin for anthracite return prevention, replacement of filter media.							
14		North Jersey District WS	Passaic	FS Rehab: Surge Tank Repainting, Wash Water Tank--repainting and filter backwash pump	1613001-035	872,153	\$1,000,000.00	\$2,690,871.00	\$3,690,871.00	88.722	160430
15		North Jersey District WS	Passaic	Updating the Security Infrastructure for NJDWSC to provide an increased security for the treatment facilities and infrastructure. Tasks located within the Orechio Drive complex and numerous outposts including dams, aqueducts, pump stations and remote treatment facilities and shared facilities.	1613001-033	872,153	\$2,632,200.00	\$1,278,525.00	\$3,910,725.00	88.722	160430
16		North Jersey District WS	Passaic	1)Network Server Replacement 2)Installation of new fire alarm systems in all NJDWSC owned	1613001-034	872,153	\$950,350.00	\$496,558.00	\$1,446,908.00	88.722	160430

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				buildings 3) Guardian Blue Early Warning System 4) Lightning Protection 5) Replacement of existing obsolete Genius modules with Genius II Prohinet @RTF							
17		North Jersey District WS	Passaic	Modify and expand central receiving building-design/build	1613001-030	872,153	\$605,000.00	\$316,113.00	\$921,113.00	88.722	160430
18		Manasquan Borough	Monmouth	Construction of 600 LF of 8 inch water main on Perrine Blvd to connect two mains and loop the existing system. Improvements to increase resiliency.	1327001-002/500	12,265	\$750,000.00	\$434,734.00	\$1,184,734.00	65.123	160430
				<b>18 Projects</b>			<b>\$70,063,945.00</b>	<b>\$26,059,208.00</b>	<b>\$96,123,153.00</b>		

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		<b>Auxiliary Power Set Aside - \$10 Million</b>									
5		Long Beach Township	Ocean	Replace deteriorated raw water concrete reservoir with a new above ground steel tank; demolish and construct the filter room to 500-yr flood elevation; raise Well #4 to 500-yr flood elevation and construct a new building with emergency generator	1517001-502	35,367	\$1,927,000.00	\$746,640.00	\$2,673,640.00	250.354	160430
6		Newark City	Essex	Install standby generators at the Wayne and Clifton	0714001-500	285,000	\$1,000,000.00	\$450,000.00	\$1,450,000.00	207.850	160430
7	69	North Jersey District WS	Passaic	Installation of low lift natural gas pump-design/build	1613001-500	859,318	\$9,142,875.00	\$3,055,720.00	\$12,198,595.00	163.593	160430
8	224	Passaic Valley WC	Passaic	Phase 1-Installation of four 2,500 kW diesel generators with buildings and fuel pumps at the Little Falls WTP	1605002-500	314,900	\$17,649,000.00	\$3,578,019.00	\$21,227,019.00	158.149	160430
9	72	Perth Amboy City	Middlesex	Installation of a new standby generator for Runyon WTP	1216001-500	50,815	\$1,855,500.00	\$723,100.00	\$2,578,600.00	155.508	160430

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10	274	Brigantine City	Atlantic	Installation of generators @ wells #4,5 & 7	103001-501	16,057	\$677,100.00	\$795,475.00	\$1,472,575.00	155.161	160430
11	23	Barnegat Twp	Ocean	Install emergency generator for well #4	1533001-500	20,935	\$150,000.00	\$145,973.00	\$295,973.00	140.209	160430
				<b>7 Projects</b>			<b>\$32,401,475.00</b>	<b>\$9,494,927.00</b>	<b>\$41,896,402.00</b>		