

TERRITORY OF THE VIRGIN ISLANDS

**DEPARTMENT OF PLANNING & NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION**

TERRITORIAL DRINKING WATER CAPITAL IMPROVEMENTS GRANTS PROGRAM



FISCAL YEAR 2015 INTENDED USE PLAN, PRIORITY SYSTEM, AND PROJECT PRIORITY LIST



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I. INTRODUCTION

Many public water systems are in need of infrastructure improvements to protect public health and maintain compliance with the Safe Drinking Water Act (SDWA). The Safe Drinking Water Act Amendments of 1996 authorized a Drinking Water State Revolving Fund (DWSRF) to help publicly owned and privately owned community public water systems and nonprofit non-community public water systems finance the costs of capital improvements. These capital improvements must be able to achieve and maintain compliance with the SDWA requirements and to further the public health protection objectives of the SDWA. Through the DWSRF, grants are available to eligible public water systems in the Territories of the United States. These grants are administered by the Virgin Islands Department of Planning and Natural Resources - Division of Environmental Protection (DPNR/DEP) through the Virgin Islands Drinking Water Capital Improvement Grants (VIDWCIG) program.

The DPNR/DEP, acting on behalf of the Government of the Virgin Islands as the authorized grant administrator, hereby submits to the U.S. Environmental Protection Agency (EPA) this Intended Use Plan (IUP). This IUP describes the use of FY2015 grant monies by the Virgin Islands' DWICIG program to meet the objectives of the SDWA and further the goal of protecting public health. Specifically, the IUP includes the annual schedule, financial overview, priority ranking system, Project Priority List (PPL), project planning procedures, construction oversight, and other program requirements.

Through an annual grant provided by the DWSRF during fiscal year 2015 **\$4,349,000** will be available to the VIDWCIG program. Eligible public water systems will receive grants directly from DPNR/DEP. DPNR/DEP is authorized and intends to use 4% for administration of the program and 2% for technical assistance to small public water systems. A complete breakdown of the available funds is shown in *Section IV. Financial Overview*.

II. PROGRAM GOALS

The VIDWCIG program will help ensure that drinking water supplies in Virgin Islands remain safe and affordable and that public water systems, which receive funding, will be properly operated and maintained. The goals of the VIDWCIG program include the following:

1. To implement and maintain the VIDWCIG program for the Territory of the Virgin Islands.
2. To provide financial assistance by administering grants to eligible public water systems for eligible projects associated with the capital improvements of water collection, storage, treatment and distribution facilities.
3. To ensure that capital improvement projects will help public water systems achieve and maintain compliance with the Virgin Islands and National Primary Drinking Water Regulations and further the health protection objectives of the SDWA.

4. To assist small public water systems (population served less than 3,300) in the Virgin Islands with the development of effective capital improvement projects.

III. PROGRAM OVERVIEW

DPNR/DEP must apply for the DWSRF grant(s) allotted to the U.S. Virgin Islands. In order to identify the projects that will be funded under the program “call for projects” letters and pre-application forms requesting project proposals are issued to the Territory’s public water systems. The submitted pre-applications are used to rank and prioritize projects for inclusion on a Project Priority List (PPL). This list will determine which PWS will receive grants from the funds made available through the DWSRF. All projects will be ranked using the priority system described in *Section VI. Project Priority Ranking System*.

DPNR/DEP will prepare an Intended Use Plan (IUP) for grant monies provided by the DWSRF allotment(s). The IUP will describe how the Territory proposes to use the available funds. The IUP will include the Project Priority List (PPL) with a funding line. The projects listed above the funding line will be eligible for Drinking Water Capital Improvement Grants (DWCIG) for the current funding period. All unfunded projects will remain on the list and may be eligible for funding in future years. Additionally, these projects may be funded by available funds from past DWSRF grant awards. This will require an amendment to the preceding IUP(s). Projects already listed on the PPL(s) of previous IUP(s) and were not funded DO NOT need to resubmit pre-applications unless significant changes are made to the project scope or other project information.

DPNR/DEP will use the DWCIG money for both project expenditures and administrative/technical assistance expenditures. The non-project expenditures provide for activities that are not construction related and include costs associated with the administration of the VIDWCIG program and technical assistance to small systems. Project expenditures involve the costs associated with the planning, design, materials, equipment, and construction of public water systems’ capital improvement projects.

A. ADMINISTRATIVE PROCEDURES

DPNR will use the following procedures in administering the Drinking Water Capital Improvement Grants:

1. DPNR/DEP will prepare an IUP and Project Priority List for current and future funding allotted to the U.S. Virgin Islands. The PPL will identify and rank each project.
2. Non-profit, non-community PWS must submit proof of non-profit status prior to DPNR accepting a pre-application for capital improvement projects.
3. All IUPs will be subject to a thirty (30) day public comment period. Additionally, public meetings on the IUP will be held on the St. Croix and St. Thomas/St. John Districts. DPNR/DEP will provide information on the calculation of the priority score of a project

upon request.

4. DPNR/DEP may amend a PPL and IUP to include a project requested by a public water system, as needed to protect public health or to meet emergency needs. PPLs and IUPs may also be amended to include projects from past and future IUPs that are deemed “ready to proceed” and require additional funding.
5. Only public water systems listed on the PPLs of this IUP and past and future IUPs may receive funding for approved projects. These facilities must begin construction of a project only after execution of a Grant Agreement between the PWS and DPNR.
6. The construction cost for projects will be financed only after the execution of the Grant Agreement and the documents for payments are approved by DPNR.
7. If available monies are not used by the projects identified above the funding line on the PPL within a specified time (*see section III-E. Project Bypass*), those funds will be made available to the next highest ranked project listed below the funding line or to projects amended to the PPL that are deemed ready to proceed.

B. PUBLIC REVIEW AND COMMENT

In accordance with the requirements of 40 CFR Part 25 (Public Participation for certain EPA programs) and 40 CFR Part 6 (NEPA), DPNR will ensure proper public participation during the development of the Project Priority List, the Intended Use Plan, and environmental review procedures.

All public water systems in the Virgin Islands may be notified through written communication and the general public will be notified via printed media that copies of the proposed IUP will be available for review and comment.

Once the IUP is issued, there will be a 30-day comment period. After the comment period has closed, DPNR will prepare and distribute a response to comments and a final IUP.

C. PROGRAM SCHEDULES

In order to ensure that all available funds are obligated on a timely basis, DPNR has established a strict schedule for the implementation of the VIDWCIG program. The table below summarizes significant deadlines and other anticipated milestones which must be adhered to by the grant recipient and the VIDWCIG program.

Table 1: Anticipated Schedules

ACTIVITY	ANTICIPATED MILESTONE
DPNR will finalize this IUP by incorporating public comments and make copies of the final plan available to the PWSs listed on the PPL.	October 31, 2015
All PWSs listed above the funding line on the PPL must submit a project schedule within 1 month of DPNR issuing the finalized IUP to the PWS.	December 31, 2015
All PWSs listed above the funding line on the PPL must submit a complete grant application package within 12 months of DPNR issuing the finalized IUP to the PWS.	December 31, 2016
Grant Agreements between DPNR and the PWS must be executed within 45 days of the submittal of the complete grant application package. (During this time the DWCIG program will review design plans and environmental assessment reports)	45 days after submittal of final application package
Facilities will be required to begin construction within six (6) months of the execution of the Grant Agreement.	6 months after execution of grant agreement

D. GREEN INFRASTRUCTURE (OPTIONAL)

The DWSRF requires that, to the extent there are sufficient eligible project applications, not less than 20% of the funds provided for projects be used for water efficiency, energy efficiency, green infrastructure, or other environmentally innovative activities. This requirement is optional for the U.S. Virgin Islands. There are no green infrastructure projects listed on the Project Priority List of this Intended Use Plan. Priority, however, will be given to a project that incorporates components that qualifies towards the green project reserve. This IUP will be amended to reflect the addition of green infrastructure project(s). A business case that demonstrates why a project qualifies as green infrastructure must be submitted to DPNR.

E. PROJECT BYPASS

Any project that is not ready to proceed may be bypassed. A project is designated as “ready to proceed” once a final plans & design package (i.e. scope of work, engineering report, environmental documents) has been approved by DPNR. The contents of the final plans & design package is discussed in *section VIII-A. Design and Administrative Considerations*. Upon approval of the bid selection process by the Subrecipient, a Subaward Grant Agreement between DPNR and the Subrecipient will be executed. A project may also be bypassed if the Subrecipient fails to implement construction within the timeframe specified by the Subaward Grant Agreement.

Bypassed projects may lose their grant allotment to other projects listed below the funding line in the order indicated on the Project Priority List. If there is a decision to bypass a project, DPNR/DEP will notify, in writing, the public water system whose project is being bypassed and indicate the reason for the bypass, unless it is known that the bypassed project has been withdrawn by the PWS. The notified PWS shall have 15 calendar days to respond in writing with any objections for being bypassed. If any objections are received by DPNR/DEP within the specified time period, DPNR/DEP will address the objections.

Any of the following circumstances will be used to bypass a project on the PPL.

1. The project is for a system that is identified as a Significant Non-Compiler (SNC) under the Safe Drinking Water Act and the project will not ensure compliance.
2. The project has had a major change in scope.
3. The grant application, project feasibility report, environmental planning documentation, and other applicable planning and construction documentation has not been submitted to DPNR/DEP in a timely manner as indicated above.
4. The project is unable to proceed in a timely manner.
5. The project is withdrawn by the applicant or DPNR.

A bypassed project will be added to the PPL of a subsequent Intended Use Plan and therefore will remain eligible for funding. **DPNR will also increase the funding for the bypassed project by 15% to account for expected cost increases over time.** Projects which are bypassed because the PWS is identified as a SNC or because the project is withdrawn by the applicant or DPNR, **WILL NOT** remain on the PPL unless the PWS returns to compliance or the applicant resubmits the project. DPNR/DEP will work with the public water system(s) whose project(s) have been bypassed to ensure that the project(s) will be eligible for funding under subsequent Intended Use Plans/DWIGs.

F. EMERGENCY PROJECTS

Consistent with Federal Guidelines, DPNR/DEP may bypass projects listed on the PPL to fund an emergency project. Emergency projects may include those where some type of unanticipated failure has occurred and requires immediate attention in order to protect public health. In such cases, DPNR/DEP has the authority to fund the emergency project ahead of other selected projects. DPNR/DEP will inform the public water system(s) whose project(s) were bypassed of the decision and rationale behind that decision. The projects that were bypassed will receive the highest priority for the next available funding.

IV. FINANCIAL OVERVIEW

A. PROJECT FUNDS AVAILABLE

Tables 2 and 3 below indicate the total amount of monies made available to the VIDWCIG program from grants provided by the DWSRF during FY2009 and FY2010. Also indicated are the amounts which will be used for projects, administration, and technical assistance.

Table 2: Sources of Capitalization Grant

Sources	Amount
FY2015 Allotment	\$4,349,000.00

Table 3: Uses of Capitalization Grant

Uses	FY2015
4% DWSRF Program Administration	\$173,960.00
2% Small System Technical Assistance	\$86,980.00
Infrastructure Assistance	\$4,088,060.00
20% Green Infrastructure Reserve (<i>Optional</i>)	\$0.00
Total	\$4,349,000.00

B. FUNDING ALLOCATION FOR SMALL, MEDIUM, AND LARGE SYSTEMS' PROJECTS

In keeping with § 1442(e) of the SDWA, DPNR/DEP will provide technical and financial assistance to small and medium size public water systems through the DWCIG. In order to ensure that small and medium size public water systems are able to participate in the VIDWCIG program, DPNR/DEP will reserve 25-45% of the project funds available for grants to small and medium size water system (population served is less than 10,000). The remaining 55-75% of the project funds will be used for providing grants to large size water systems (population served is more than 10,000).

In the event that there are insufficient small and medium size public water systems projects to meet the 25-45% reserve the funding percentage for the large public water systems will be increased accordingly to ensure the disbursement of all project funds. The funding percentage targets may also be adjusted if final construction costs are less than the estimated assistance requests and when projects are withdrawn or bypassed on the Project Priority List(s).

To ensure participation of small & medium sized public water systems in the DWCIG program, approximately 30% of the project funds has been allocated to these types of water systems. The remaining 70% has been allocated to large public water systems. These percentages may change if the IUP is amended to include a project requested by a public water system, as needed to protect public health or to meet emergency needs.

DRINKING WATER CAPITAL IMPROVEMENTS GRANT ALLOCATIONS

Grants Available		FY2015
	Project Funds Available	\$4,088,060.00
<i>Small and Medium Projects</i>	<i>(30% of Project Funds)</i>	\$1,220,584.00
<i>Large Projects</i>	<i>(70% of Project Funds)</i>	\$2,867,476.00

C. PLANNING AND ENGINEERING DESIGN ALLOWANCES

While the purpose of the DWSRF is to provide funding for capital improvements at public water systems, DPNR/DEP recognizes that preliminary work (planning, design, and engineering) is necessary before the construction of a project can take place. DPNR/DEP will allow a portion of the grant money to defray the cost of the planning, design, and engineering of the capital improvement projects. The allowance for planning, design, and engineering will be a percentage of the cost of the construction and materials to complete the capital improvement project and will be allowed in addition to the construction and materials costs. This means that if the planning and design costs exceed the allowed percentage of construction costs, the public water system must pay the difference out of their own funds. The following table provides the percentage of the construction costs, which will be allowed to be used for planning, design, and engineering purposes.

PROJECT COST	ALLOWANCE FOR PLANNING AND DESIGN AS A PERCENTAGE OF CONSTRUCTION COST
Up to \$5,000	14% or up to \$650
\$5,001 to \$20,000	13% or up to \$2,400
\$20,001 to \$35,000	12% or up to \$3,850
\$35,001 to \$50,000	11% or up to \$5,125
\$50,001 to \$75,000	10.25% or up to \$7,313
\$75,001 to \$100,000	9.75% or up to \$9,250
\$100,001 to \$150,000	9.25% or up to \$13,200
\$150,001 to \$200,000	8.8% or up to \$16,800
\$200,001 to \$300,000	8.4% or up to \$24,450
\$300,001 to \$400,000	8.15% or up to \$31,200
\$400,001 to \$500,000	7.8% or up to \$37,500
\$500,001 to \$750,000	7.5% or up to \$54,375
\$750,001 to \$1,000,000	7.25% or up to \$70,000
Over \$1,000,000	7%

NOTE: The compensation for planning or design services should be based upon the nature, scope and complexity of services required by the system. Therefore, the allowance table should not be used to determine the cost for planning or design services.

V. CAPACITY DEVELOPMENT REQUIREMENTS

Before a drinking water capital improvement grant can be awarded, a public water system must have adequate technical, financial, and managerial capacity (TFM). Each applicant must provide a capacity assessment (described below) as part of the pre-application. Public water systems that do not have adequate TFM are not eligible to be funded unless the public water system agrees to make appropriate changes in operation (management, rate structure, maintenance, consolidation, alternative supplies, etc.) that will ensure the long-term capability of the system.

Water system capacity is the ability to plan for, achieve, and maintain compliance with applicable

drinking water regulations and to provide safe drinking water to the public. Below is an excerpt from an EPA guidance document that defines TFM and identifies questions that lead toward an assessment/ demonstration of adequate capacity.

A. TECHNICAL CAPACITY

Technical capacity is the physical and operational ability of a water system to deliver safe drinking water and to meet SDWA requirements. Technical capacity refers to the physical infrastructure of the water system, including the adequacy of source water and the adequacy of treatment, storage and distribution infrastructure. It also refers to the ability of system personnel to adequately operate and maintain the system and to otherwise implement requisite technical knowledge. A water system's technical capacity can be determined by examining key issues and questions, including the following:

Source water adequacy: Does the system have a reliable source of drinking water? Is the source of water generally good quality and adequately protected?

Infrastructure adequacy: Can the system provide water that meets SDWA standards? What is the condition of its infrastructure, including wells(s) or sources of water intakes, treatment, storage, and distribution? What is the infrastructure's life expectancy? Does the system have a capital improvement plan?

Technical knowledge and implementation: Is the system's operator(s) certified? Does the operator(s) have sufficient knowledge of applicable standards? Can the operator(s) effectively implement this technical knowledge? Does the system have an effective operation and maintenance program?

B. FINANCIAL CAPACITY

Financial capacity is a water system's ability to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with the SDWA requirements. Financial capacity can be determined by examining key issues and questions, including the following:

Revenue sufficiency: Do revenues cover costs to operate and maintain the system in compliance with SDWA standards? Are water rates and charges adequate to cover the cost of water?

Credit worthiness: Is the system financially healthy? Does it have access to capital through public or private sources?

Fiscal management and controls: Are adequate books and records maintained? Are appropriate budgeting, accounting, and financial planning methods used? Does the system manage its revenues effectively?

C. MANAGERIAL CAPACITY

Managerial capacity is the ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with the SDWA requirements. Managerial capacity refers to the system's institutional and administrative capabilities. A water system's managerial capacity can be determined by examining key issues and questions, including the following:

Ownership accountability: Are the system owners clearly identified? Can they be held accountable for the system?

Staffing and organization: Is the system operator(s) and manager(s) clearly identified? Is the system properly organized and staffed? Do personnel understand the management aspects of regulatory requirements and system operations? Do personnel have adequate expertise to manage water system operations? Do personnel have the necessary licenses and certifications?

VI. PROJECT PRIORITY RANKING SYSTEM

The following priority ranking system will be used to establish a list of eligible projects to be funded in a manner that the most serious risks to public health are given the highest priority. The DPNR proposes that the highest priority be given to acute public health risks, particularly those related to microbiological organisms.

A. SYSTEMS ELIGIBLE FOR FUNDING

Water systems eligible for project funding are as follows:

1. All community PWSs as defined under the CFR, Part 141, §141.2;
2. Only **non-profit** non-community, public water systems as defined under the CFR, Part 141, §141.2.

B. SYSTEMS INELIGIBLE FOR FUNDING

Some water systems may not be eligible for grant funding. If DPNR/DEP finds that a system may not be capable of maintaining capital improvement projects or has a history of showing a lack of interest and good faith efforts in maintaining SDWA water quality standards, DPNR/DEP may find the system ineligible for funding.

1. Lack of technical, managerial and financial capability. The DWCIG program will not provide any type of assistance to a system that lacks the technical, managerial or financial capability to maintain SDWA compliance, unless the owner or operator of the system agrees to undertake feasible and appropriate changes in operation practices or if the use of the financial assistance from the DWCIG will ensure compliance over the long term.

2. Significant noncompliance. The DWCIG program cannot provide assistance to any system that is in significant noncompliance with any national drinking water regulation or variance unless DPNR determines that the project will enable the system to return to compliance and the system will maintain an adequate level of technical, managerial and financial capability to maintain compliance.
3. Federally owned systems are not eligible to receive funding from the DWCIG.

C. SPECIAL CONDITIONS

1. The Virgin Islands uniquely uses roofs to catch/collect rainwater as a source of water to meet its human consumption needs. This occurs through a system of roof surfaces, gutters, downspouts and cisterns. This system must conform to V.I. Code Title 29, Chapter 5.

Projects for the improvement of a rainwater collection system or for the increase of rainwater collection and storage may be eligible for funds from the DWCIG.

The following types of projects relating to a rainwater catchment system will be 100% funded:

- Construction of additional catchment surface to increase water collection capability.
- Repair or replacement of gutters and downspouts.
- Installation of first flush device or rainwater bypass device.

The following projects, subject to DPNR's evaluation will receive 50% funding:

- Repair and coating of roof surface with NSF approved coating.

D. PRIORITY RANKING CRITERIA

The purpose of the priority ranking system is to establish a list of eligible projects to be funded in a manner that the most serious risks to public health are given the highest priority. DPNR has established that the highest priority be given to acute public health risks, particularly those related to microbiological organisms. The next priority is given to situations that pose chronic and longer term risk to consumers, such as chemical contamination (i.e. lead and copper). The scoring criteria also considers issues that are related to infrastructure upgrading or replacement.

The ranking criteria will be divided into the following four categories: 1) Compliance with SDWA Health Standards; 2) Infrastructure Improvements for Public Water Systems; 3) Consolidation or Interconnection of systems; 4) Population Served. Eligible projects can receive points from any of the categories (*see Appendix C for RANKING POINTS SYSTEM*). The project's rank will be determined from the sum of all points received in each category. Each category is briefly described below. ***In addition to the above listed categories special consideration will be given to projects that address water efficiency, energy efficiency, green infrastructure, or other environmentally***

innovative activities. These projects may be placed above the funding line to ensure compliance with the green project reserve requirements. The ranking scheme is as follows:

1) Compliance with SDWA Health Standards:

Great emphasis will be placed on addressing compliance with health standards established by the Safe Drinking Water Act (SDWA). Projects to address SDWA health standards that have been exceeded or to prevent future violations of rules will receive higher ranking points. The ranking scheme is as follows:

- a. Project that will bring into compliance a public water system that is not currently in compliance with existing acute drinking water standards (fecal coliform, E. coli, nitrate).
- b. Project that will bring into compliance a public water system that is not currently in compliance with existing non-acute drinking water standards (all non-acute MCLs including heavy metals, SOCs, VOCs).
- c. Project that will ensure compliance (prevent non-compliance) with existing acute drinking water standards.
- d. Project that will ensure compliance (prevent non-compliance) with existing non-acute drinking water standards.

2) Infrastructure Improvements for Public Water Systems:

Projects aimed at infrastructure deficiencies that may affect water quality or the system's ability to comply with the SDWA.

- a. Rehabilitate or develop sources to replace contaminated sources.
- b. Rehabilitate storage system which, is in poor condition, has failed, or subject to contamination, not related to inadequate maintenance of the facilities.
- c. Cross-contamination prevention/ backflow prevention projects.
- d. Existing transmission or distribution mains with appurtenances that need to be rehabilitated, repaired, replaced, or looped to improve water pressure to maintain safe levels or to ensure compliance with the SDWA.
- e. Existing treatment facilities or equipment that need to be rehabilitated, repaired, or replaced to ensure compliance with the SDWA.
- f. Add, upgrade, replace or rehabilitate water system components necessary to meet standards specified in *Recommended Standards for Water Works*.

3) Consolidation or Interconnection of Systems:

Capital improvement projects which consolidate or interconnect systems to ensure the consistent production and distribution of water of adequate drinking quality is considered in the priority system. The ranking scheme is as follows:

- a. Project which will consolidate water systems or provide an interconnection with another water system for capacity development and to ensure that the system returns to and maintains compliance with SDWA requirements.

4) Population Served:

Projects that serve a larger number of people will receive more ranking points because they will benefit more people and further the health protection objectives more.

E. TIE BREAKER

It is possible that two or more projects may receive the same total number of points in the project ranking process. In the event of a tie, the project that is more cost effective will be ranked higher. Cost effectiveness will be evaluated by determining which project will benefit the most people at the least cost. Please note, that if two or more projects are tied, it will be assumed that the public health and compliance benefits are the same. If anyone disagrees with DPNR/DEP's final tie breaking decision, they may present to DPNR/DEP an argument for why they feel one project should out rank another project based on public health protection or regulatory compliance merits.

VII. PROJECT PRIORITY LIST

The DWCIG Project Priority List, based on the priority ranking system, lists the capital improvement projects eligible for funding in the order to be funded during the current funding period. All projects on the list were thoroughly reviewed by DPNR/DEP and will go through the public review process.

In the event that projects identified for funding are unable to proceed, these delayed projects may be bypassed. As indicated in section III-E, a project is deemed "ready to proceed" upon the submission of the complete grant application package. All required engineering, plans, and environmental reviews for projects must be prepared and submitted as part of the complete grant application.

The PPL can be amended to include projects listed on past and future PPLs that need additional funds and are deemed "ready to proceed". These projects will be inserted above the funding line ahead of projects that are bypassed because they were not ready to proceed.

A line will be drawn dividing the PPL at the point where available program funds end. Applicants above the line will receive funding only after complying with VIDWCIG program requirements and the incurrence of the project cost. Compliance of program requirements includes timely submission of the complete grant application and implementation of construction within six months of execution

of the MOA between DPNR and the system. The line may be adjusted downward if projects above the line are bypassed or removed from the list.

If funds have not been obligated to projects above the line as a result of a systems noncompliance with VIDWCIG program requirements or the system decision to withdraw a project, the line will be moved down the list and drawn at the point where the remaining un-obligated funds end. New projects now above the line may submit a final grant application within twelve months of being notified of their funding status.

Projects which remain below the funding line after all funds have been exhausted as well as the projects that were bypassed will be added to the PPL of the subsequent Intended Use Plan and therefore remain eligible for funding. **DPNR will also increase the funding for these projects by 15% to account for expected cost increases over time.**

PROJECT PRIORITY LIST

Table 4: Large System PPL

Rank	Points	Large PWS Name	Pop	Location	Project Description	Estimated Assistance Amount	Green Project Reserve Amount
1	530	WAPA St. Croix	1,750	Campo Rico	Replace 2,080 ft of 8" & 17,140 ft of 6" aging ductile iron pipes (30% Funding)	\$1,120,618	
2	530	WAPA St. Croix	1,750	Hannah's Rest	Replace 20,220 ft of 6" aging ductile iron pipes	\$3,863,616	
3	520	WAPA St. Thomas	500	Mahogany Estate	Replace 2,500 ft of 6" aging cast iron pipes	\$1,462,402	
4	520	WAPA St. Thomas	500	Blackbeard Hill	Replace 2,560 ft of 4" aging cast iron pipes	\$1,675,020	
5	510	WAPA St. Thomas	50	Altona	Replace 700 ft of 6" aging cast iron pipes (Altona Phase III)	\$579,830	
6	475	WAPA St. Croix	35,000	St. Croix	Rehabilitate interior & exterior of 3 Concrete Tanks (Anna's Hope, Kingshill, Mountain)	\$402,271	
7	475	WAPA St. Thomas	29000	St. Thomas	Water Tank #2 Rehabilitation (10.5 MG)	\$5,381,867	
8	425	WAPA-St. Croix	35,000	St. Croix	Storage Tank Telemetry	\$120,681	
9	200	WAPA-St. Croix	10,000	Sion Farm to Juan Luis Hospital Loop	Replace 3,000 ft of water lines from Sion Farm to Juan Luis Loop	\$534,230	
10	180	WAPA-St. Croix	35,000	Sunny Isle to Ruby & Strawberry	Replace 6,500' of aging 10" ductile iron pipe	\$652,585	
11	180	WAPA-St. Croix	35,000	Loop Strawberry to Kingshill	Install 10,500' of 12" PVC pipe	\$892,091	
12	180	WAPA-St. Croix	35,000	Richmond to Princesse & St. John	Replace 16,000' of aging ductile iron pipes with 10" C900 PVC pipe	\$1,040,757	
13	180	WAPA-St. Croix	35,000	Contentment to Kingshill	Replace 30,000' of aging 10" ductile iron pipe	\$2,582,583	
14	180	WAPA-St. Croix	35,000	Kingshill to Stony Ground	Replace 38,000' of aging 10" ductile iron pipe	\$3,271,272	
15	110	WAPA-St. Croix	1,000	Estate Princesse	Replace 7,750 ft of water lines in the Princesse community	\$2,877,157	
16	100	WAPA-St. Croix	500	Connector Road	Replace 6,500 ft. of water lines in Clifton Hill/Profit	\$2,463,842	
Total Estimated Assistance Amount						\$28,920,822.00	

Table 5: Small & Medium System PPL

Rank	Points	Small & Medium PWS	Pop	Project Description	Estimated Assistance Amount	Green Project Reserve Amount
1	785	Queen Louise Home for the Aged	110	Cistern repair. Installation of a UV Purifier, Pump, Gutters, Filters and Fittings. Connection of downspouts.	\$64,639.91	
2	785	Knud Hansen Complex	95	Cistern repair, Gutter replacement, installation of UV Purifier and Filters and replacement of Fittings.	\$78,136.20	
3	785	Lindbergh Bay Head Start	25	Cistern repair. Installation of UV Purifier, Pumps, Water Storage Tank and Filters. Installation and connection of downspouts.	\$78,514.78	
4	785	Romeo Malone Community Center	25	Cistern repair, Installation of UV purifier, Filters, Removal of copper piping and installation of a Pump and PVC pipes.	\$98,902.31	
5	635	Sugar Estate Multipurpose Center	105	Cistern repair, replace and cover gutters.	\$122,963.14	
6	510	Cruz Bay Head Start	25	Replacement of roof catchment surface. Removal and replacement of copper lines in distribution system and installation of Gutters, UV Purifier and Filters.	\$46,608.87	
7	385	Wilhelm George Community Center	25	Cistern repair	\$82,210.78	
8	360	Herbert Grigg Home Long Term Care Unit	185	Replace roof catchment surface, replace copper lines in distribution system, replace fittings and install filters.	\$182,189.10	
9	360	Herbert Grigg Home Intermediate Care Unit	92	Replace roof catchment surface, replace copper lines in distribution system, replace fittings and install filters.	\$176,221.50	
10	385	Cowpet Bay East	300	Repair Cistern	\$52,207	
11	385	Mill Harbour Condominium	180	Repair & Seal Cistern	\$18,400	
12	385	Point Pleasant	100	Construct new cistern w/ pump, pressure tanks, pipes & electrical; Seal existing cistern	\$276,396	
13	100	Mahogany Run Golf Course	500	Replacing & Rerouting 4" distribution pipe	\$45,778	
14	90	Cowpet Bay East	30	Replace aging supply lines	\$20,380	
Total Estimated Assistance Amount					1,220,584.45	

VIII. PROJECT PLANNING

The design phase of the project turns the conceptual project proposed in the pre-application into concrete plans and specifications. The activities undertaken during the design phase can have a substantial impact on cost of the project when bids are taken.

A. DESIGN AND ADMINISTRATIVE CONSIDERATIONS

Each public water system that has a proposed capital improvement project on the Project Priority List must submit a Final Plans & Design Package to DPNR/DEP before the funding of any project can proceed. **The technical and engineering plans, specifications, and cost estimates must be included in the Final Plans & Design Package for approval by DPNR/DEP.** The preparation of the plans, specifications, and cost estimates included in the Engineering Report must be well organized and complete in order to obtain the lowest, realistic bid possible.

B. TECHNICAL REVIEW

The Engineering Report is the document that will demonstrate the need for a proposed project. The information contained in this document provides the basis for the design and construction of the capital improvement project. Depending on the scope of the project, a licensed plumber or a professional engineer registered in the U.S. Virgin Islands must prepare the Engineering report. Project review will be based heavily on this document. All technical and engineering plans, drawings, and specifications, and cost lists must be detailed and specific.

The Engineering Report must include the following:

- Description of the project;
- Objective of the project or the problem which the project will solve;
- Design plans and engineering drawings;
- Equipment and materials specifications;
- Environmental Review as necessary to evaluate short and long term impacts of capital improvement projects and related construction;
- Construction schedule with a chronological list of construction tasks and deadlines;
- Materials lists with costs;
- Cost schedule, including design costs, construction costs, labor costs, and equipment costs.

C. ADDENDA AND REVISED PLANS

Changes are often made to design plans and specifications between the time they are approved and the advertisement for bids. If any change occurs, revised documents must be submitted to DPNR/DEP for approval. DPNR/DEP will determine if the changes can be incorporated through the issuance of an addenda or if the grantee would have to re-advertise for bids.

IX. CONSTRUCTION OVERSIGHT

The construction phase of the project is very important from a managerial standpoint. The ability of a project to achieve its design performance for the estimated design life is dependant upon proper construction techniques. Costs can be increased during construction due to change orders. Without proper inspection and construction management, the public water system may face increased capital costs and increased operation and maintenance costs during the facilities useful life. Adequate construction oversight of the capital improvement project must be planned for and maintained.

A. INCREASES AND DECREASES IN COSTS DUE TO BIDS

Bids that are significantly lower or higher than estimated must be carefully analyzed. The plans and specifications should be reviewed to ensure that all work in the pre-bid cost estimate is included. The experience of the contractor should also be assessed to ensure that the scope of work is clearly understood.

B. CHANGE ORDERS

A change order is a written authorization by the grantee, approved by DPNR/DEP, to the construction contractor for an addition, deletion, or revision in the scope of work of the project after execution of the construction contract. The grantee is responsible for determining whether a proposed change is appropriate. Documentation of the proposed change in scope of work and reasons for the change must be submitted to DPNR/DEP prior to the approval of any change orders.

C. CONSTRUCTION MONITORING

Inspections will be conducted by DPNR/DEP throughout the construction of the project to ensure that the construction is in accordance with the contract. These inspections will check for compliance with the plans and specifications, as well as with the contract schedule. Payment of grant funds to the Subrecipient by DPNR/DEP will be contingent upon compliance with the project contract. If it is found through these inspection that modifications have been made to the agreed upon plans and specifications without prior approval of DPNR/DEP, these modifications may not be funded by the Drinking Water Capital Improvements Grant. Upon completion of the construction, a final inspection will be conducted. Any deficiencies noted during the final inspection must be resolved prior to release of the final grant award.

The following construction oversight process must be adhered to for any DWCIG project to receive grant awards.

1. A copy of the Construction Contract with the bid documents must be submitted to DPNR/DEP.
2. DPNR/DEP will attend all contract negotiation meetings.
3. No contract shall be awarded without the approval of DPNR/DEP.
4. Once a bid is awarded, a pre-construction meeting is to take place before any construction is started. The Subrecipient, DPNR/DEP and the construction contractor are to be present at this

meeting.

5. Inspections must be performed by DPNR/DEP prior to any grant disbursements to the construction contractor. Inspections for the purpose of making grant payments must be scheduled by the Subrecipient. Documentation of materials procurement may be required at these inspections.
6. Periodic inspections, in or out of schedule, may take place at the discretion of DPNR/DEP.
7. DPNR/DEP may attend all or any construction progress meetings, at their discretion. The Subrecipient must keep DPNR/DEP apprized of when construction progress meetings are scheduled.
8. DPNR/DEP will review, evaluate and recommend the approval of all change orders for capital improvement projects.
9. DPNR/DEP will review all documents related to the contract closeout. The Operation and Maintenance (O & M) Manual is considered a closeout document and no project will be given final payment without the submittals of an O & M Manual.
10. DPNR /DEP will perform a final project construction inspection in conjunction with the Subrecipient to ensure compliance with the design plans and specifications. Evaluation for start-up for the facility will take place at the final inspection.

D. OPERATION AND MAINTENANCE MANUAL

Proper operation and maintenance of a drinking water facility is essential to ensure a continuing supply of safe drinking water. In order to achieve the maximum design life of the drinking water system and its equipment, adequate maintenance and correct operation of the system are also necessary. Therefore, an Operation and Maintenance (O & M) Manual is required for all Capital Improvement Grants. Any project that does not have an O & M Manual will not be considered complete and will therefore not receive final payment for the project. The O & M Manual may be submitted to DPNR/DEP for review at any time before completion of the construction phase of the Capital Improvement Project.

APPENDIX A: GRANT ELIGIBILITY

Eligible Systems and Type of Projects to be Funded

A. Eligible Systems

Drinking water systems that are eligible for project funding are community water systems (CWS), both privately and publicly owned; and non-profit non-community water systems (NCWS). Federally owned systems are not eligible to receive VICIG assistance.

B. Eligible Projects

Drinking water capital improvement project or water supply project means the planning, design, construction, improvement, or acquisition of facilities, equipment, or buildings for the supply, control, treatment, distribution, and transport of drinking water and the testing and monitoring to ensure the integrity and quality of such water supply project intended to improve drinking water facilities including achievement of compliance with the Federal SDWA and Territory drinking water quality goals and standards.

Projects eligible for DWCIG financing include design and construction to upgrade or replace infrastructure, address exceedances of Federal or Territory health standards, prevent future violations of drinking water standards, and provide the public with safe drinking water. Examples of such projects include:

- Rehabilitation or development of drinking water sources (excluding reservoirs, dams, dam rehabilitation and water rights) to replace contaminated water sources;
- Installation or upgrading of treatment facilities if the project will improve the quality of drinking water to comply with primary or secondary drinking water standards;
- Installation or upgrading of storage facilities, including finished water reservoirs, to prevent microbiological contaminants from entering the water system
- Installation or replacement of transmission and distribution pipes to prevent contamination caused by leaks or breaks; and
- Replacement of aging infrastructure if the replacement is needed to maintain compliance or further the health protection goals of the SDWA

The DWCIG program will provide assistance to an eligible public water system to consolidate with other public water system(s) only if the consolidation will ensure that the system returns to and maintains compliance with SDWA requirements, and the owner or operator of the water system agrees to undertake feasible and appropriate changes in operations necessary to ensure the system has the technical, managerial and financial capability to comply with the SDWA requirements.

C. Projects not Eligible for Funding

The DWCIIG cannot provide funding assistance for the following projects and activities:

- Dams, or rehabilitation of dams;
- Water rights, except if the water rights are owned by a system that is being purchased through consolidation as part of a capacity development strategy;
- Reservoirs, except for finished water reservoirs and those reservoirs that are part of the treatment process and are located on the property where the treatment facility is located;
- Laboratory fees for monitoring;
- Operation and maintenance expenses;
- Projects needed mainly for fire protection;
- Projects for systems that lack adequate technical, managerial and financial capability, unless funding will ensure TFM;
- Projects for systems in significant noncompliance, unless funding will ensure compliance;
- Projects primarily intended to serve future growth.

APPENDIX B: PRIORITY RANKING POINTS SYSTEM

The purpose of the priority ranking system is to establish a list of eligible projects to be funded in a manner that the most serious risks to public health are given the highest priority. DPNR has established that the highest priority be given to acute public health risks, particularly those related to microbiological organisms. The next priority is given to situations that pose chronic and longer term risk to consumers, such as chemical contamination (i.e. lead and copper). The scoring criteria also considers issues that are related to infrastructure upgrading or replacement. Consistent with these priorities, the numerical scores in the priority ranking system are based on the following criteria.

All eligible projects will be rated with respect to four categories to determine their ranking and selection for funding. These categories are discussed in *Section VI-D* of this IUP.

- **Compliance with SDWA Health Standards** - Up to 500 points will be given to projects that address public health issues. Points will be awarded based on the seriousness of the health risk. The highest points are given to projects which will bring a system into compliance with monitoring requirements which address acute health hazards. Projects will receive points for only the highest applicable classification as illustrated in the table below:

Item	Score
Repair source of bacteriological contamination to bring system into compliance	500
Repair source of chemical contamination to bring system into compliance	450
Prevent bacteriological contamination to ensure compliance	400
Prevent or reduce chemical to ensure compliance	350
Corrosion Control (Lead & Copper)	300
Reduce turbidity levels to meet SDWA Standards	250

- **Infrastructure Improvements for Public Water Systems** - up to 400 points will be given to project that address system deficiencies. Projects will receive points for only the highest applicable classification as illustrated in the table below:

Item	Score
Rehabilitate old or develop new source to replace contaminated sources	400
Install, upgrade or rehabilitate storage facilities	375
Cross contamination prevention/backflow prevention	350
Ensure proper flow pressure to distribution system	325
Provide adequate storage capacity	300
Develop rainwater catchment area for increase water collection capability	275
Install new disinfection/treatment system	250
Upgrade existing disinfection/treatment system	200
Introduce new R/O treatment unit	175
Rehabilitate old R/O treatment unit (<i>not for routine replacement of membranes</i>)	125
Repair Leaks	100
Improve distribution system	80
Repair or replace aging gutters and downspouts	75
Introduce new filtration system	60
Improve existing filtration system	50

Item	Score
Repair catchment surface and re-coat with NSF approved coating	45
Introduce point-of-use treatment units for additional treatment	40

- Consolidation or Interconnection of Systems** - up to 200 points will be given to project that address this criteria. Projects which consolidate or interconnect systems to ensure the consistent production and distribution of water of adequate drinking quality is considered in the priority system. Projects will receive points for only the highest applicable classification as illustrated in the table below:

Item	Score
Introduce new public water system or distribution line extensions to a service area with water quality problems	200
Interconnect water system with more reliable source(s)	100

- Population Served** - Projects that serve a larger number of people will receive more ranking points because they will benefit more people and further the health protection objectives more. Projects will receive between 10 and 100 points based on population served by the system as illustrated in the table below:

Population Served	Score
25 to 499	10
500 to 999	20
1000 to 1999	30
2000 to 3999	40
4000 to 5999	50
6000 to 7499	60
7500 to 9999	85
10,000 and up	100

A project’s ranking will be the sum of all points received in each category. However, before any final funding is granted, each project will be carefully evaluated to ensure that the project addresses all issues for which points are scored.

Appendix C: GREEN INFRASTRUCTURE

DWSRF Project Descriptions and Examples for Green Project Reserve

The Safe Drinking Water Act (SDWA) Drinking Water State Revolving Fund (DWSRF) requires that, to the extent there are eligible project applications, a State shall use 20 percent of its DWSRF capitalization grant for green infrastructure projects to address water and energy efficiency improvements or other environmentally innovative activities. EPA is referring to this provision as creating a Green Infrastructure Reserve within each DWSRF capitalization grant.

EPA anticipates that “water or energy efficiency” projects will likely be the principal focus of the Green Project Reserve under the DWSRF. However, there may also be projects, or components of projects, that qualify for consideration under the Green Infrastructure Reserve in the DWSRF on the basis of application of green infrastructure or being environmentally innovative.

Under the Green Project Reserve in the DWSRF both entire projects may be considered for inclusion or appropriate identifiable components of larger projects may be considered for inclusion. Whatever projects or project components are included, such projects or project components must clearly advance the objectives articulated in the specific categories discussed below.

Business Case Requirements for Counting Costs toward the 20 percent Reserve for Energy and Water Efficiency

There are some types of projects that clearly will qualify towards the 20 percent Green Project Reserve, being entirely and explicitly framed as a green infrastructure or a water or energy efficiency project. However, some types of traditional projects may also have benefits that may in some cases be counted towards the 20 percent Green Project requirement. For example, lower friction afforded by a new distribution pipe could reduce the energy needed to pump water through the distribution system. For such traditional projects (or portion of a project) to be counted towards the 20 percent requirement, VIDPNR’s project files must contain documentation that the clear business case for the project (or portion) investment includes achievement of identifiable and substantial benefits that qualify as Green Project benefits.

The required documentation could be a simple memo but must indicate the basis on which this project was judged to qualify to be counted toward the 20 percent requirement. Such a memo would typically include direct reference to a preliminary engineering or other planning document that makes clear that the basis upon which the project (or portion) was undertaken included identifiable and substantial benefits qualifying for the Green Project Reserve.

Identified below are a number of project and project-related costs that could count toward the 20 percent. Examples that would require a business case are so noted.

Energy Efficiency:

Energy efficiency includes capital projects that reduce the energy consumption of eligible drinking water infrastructure projects

Web link to EPA's Better Management-Energy page

http://www.epa.gov/waterinfrastructure/bettermanagement_energy.html

Web link to EPA's clean energy site <http://www.epa.gov/cleanenergy/>

Clean energy includes wind, solar, geothermal, hydroelectric, and biogas combined heat and power systems.

Eligible costs associated with energy efficiency projects may include:

- Planning and design activities for energy efficiency that are reasonably expected to result in a capital project are eligible.
- Building activities that implement capital energy efficiency projects are eligible.
- Costs associated with a utility energy audit if required as a condition of assistance

Energy efficiency projects can be stand alone projects. They do not need to be part of a larger capital improvement project.

Examples of projects include, but are not limited to:

- Energy efficient retrofits and upgrades to pumps and treatment processes (requires business case)
- Leak detection equipment
- Producing clean power for treatment systems on site (wind, solar, hydroelectric, geothermal, biogas powered combined heat and power)
- Replacement or rehabilitation of distribution lines (requires business case)

Water Efficiency:

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

Water Sense program Focus on Utilities - <http://www.epa.gov/watersense/tips/util.htm>

Eligible costs associated with water efficiency projects may include:

- Planning and design activities for water efficiency that are reasonably expected to result in a capital project.
- Purchase of water efficient fixtures, fittings, equipment, or appliances
- Purchase of leak detection devices and equipment
- Purchase of water meters, meter reading equipment and systems, and pipe
- Construction and installation activities that implement capital water efficiency projects.
- Costs associated with development of a water conservation plan if required as a condition of DWSRF assistance.

Water efficiency projects can be stand alone projects. They do not need to be part of a larger capital improvement project.

Examples of projects include, but are not limited to:

- Installation of water meters or automated meter reading systems
- Retrofit or replacement of water using fixtures, fittings, equipment or appliances (can include rebate programs)
- Distribution system leak detection equipment
- Replacement or rehabilitation of distribution lines (requires business case)

Green Infrastructure:

Definition: Green Infrastructure includes a wide array of practices that manage wet weather to maintain and restore natural hydrology by infiltrating, evapotranspiring and capturing and using stormwater. In the context of the DWSRF, green infrastructure consists of site-specific practices, such as green roofs and porous pavement at drinking water utility facilities. In addition to managing rainfall, these green infrastructure technologies can simultaneously provide other benefits such as reducing energy demands.

Green infrastructure projects can be stand alone projects. They do not need to be part of a larger capital improvement project. Examples of projects include, but are not limited to:

- Implementation of wet weather management systems for utility buildings and 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.

Environmentally Innovative Projects:

Definition: Within the context of the DWSRF program, “environmentally innovative projects” would include those that are: (1) consistent with the underlying project eligibilities of the DWSRF program; and (2) consistent with the timelines and objectives of the SDWA DWSRF; and (3) that demonstrate new and/or innovative approaches to delivering service and/or managing water resources in a more sustainable way, including projects that achieve public health protection and environmental protection objectives at the least life-cycle costs,

Environmentally innovative projects can be stand alone projects. They do not need to be part of a larger capital improvement project. Any project which a State wishes to qualify for funding from the Green Project Reserve on the basis of being an “Environmentally Innovative Project” would require business case documentation. Examples of projects include, but are not limited to:

- Projects, or components of projects, that enable the utility to adapt to the impacts of global climate change
- Projects, or components of projects, consistent with a “Total Water Management” planning framework; or other planning framework within which project life cycle costs (including infrastructure, energy consumption and other operational costs) are minimized.

Appendix D: REPORT ON PUBLIC MEETINGS

The FY2015 IUP will be subjected to a 30-day public comment period from September 14, 2015 to October 13, 2015. Two public meetings, one in each district, are expected to be held during the public comment period as follows: www.dpnr.gov.vi

- (1) **October 08, 2015 at 5:30 pm**
Department of Planning and Natural Resources
St. Croix Conference Room
45 Mars Hill
Frederiksted, St. Croix

- (2) **October 09, 2015 at 5:30 pm**
Department of Planning and Natural Resources
St. Thomas Conference Room
Cyril E. King Airport Terminal Bldg., 2nd Floor
Charlotte Amalie, St. Thomas