# FINAL
# INTENDED USE PLAN

# DRINKING WATER
# STATE REVOLVING FUND

**State Fiscal Year 2016**

# COMMONWEALTH OF KENTUCKY

**July 30, 2015**

***PREPARED BY THE***

***KENTUCKY INFRASTRUCTURE AUTHORITY***
***&***
***ENERGY AND ENVIRONMENT CABINET***

## TABLE OF CONTENTS

# I. INTRODUCTION

Kentucky's Intended Use Plan (IUP) for the Drinking Water State Revolving Fund (DWSRF, the Fund) is prepared in accordance with the provisions of the Safe Drinking Water Act (SDWA) Amendments of 1996 and P.L. 113-76, The Consolidated Appropriations Act, 2014 and the Consolidated and Further Continuing Appropriations Act 2015 (December 16, 2014). The purpose of the IUP is to communicate Kentucky's DWSRF plan for state fiscal year 2016 to potential borrowers from the Fund, the state's public water systems (PWSs), the public, the Environmental Protection Agency (EPA), and other state agencies. The IUP also includes the Priority System Guidance Document.

An annual Intended Use Plan is required by Section 1452 of the SDWA and is an integral part of the process to request the Federal Fiscal Year (FFY) 2015 Capitalization Grant. The IUP will identify how the funds available to Kentucky's DWSRF will be used during each state fiscal year (SFY) to support the goals of the DWSRF. The 2016 IUP includes:

1. A description of the short and long term goals of the Fund;
2. The criteria and methods established for ranking projects;
3. Administration and operation policies of the Fund including set-aside activities;
4. Assurances and specific certifications for meeting certain requirements of the Capitalization Grant Agreement;
5. The public participation process;
6. The sources and uses of available funds; and,
7. The Project Priority List - a list of eligible projects whose sponsors expressed interest in low interest rate loans from the DWSRF.

## *What is the Drinking Water State Revolving Fund?*

The DWSRF is a national program by which the Environmental Protection Agency (EPA) provides grants to states to further the goals of the SDWA. The national DWSRF originated in 1996, as recognition of SDWA compliance costs led to support for a DWSRF program. The EPA implements the national DWSRF program in such a manner that preserves for states a high degree of flexibility to operate their programs in accordance with each state's unique needs and circumstances.

Kentucky's DWSRF financing program provides low interest loans for drinking water infrastructure projects that promote the goals of the SDWA. Projects identified to receive funding are selected from the ranked group of Project Profiles submitted during the Annual Call for Projects. The ranking is based on the public health criteria outlined in the SDWA. The Fund is administered by the Kentucky Infrastructure Authority (KIA) while the Kentucky Energy and Environment Cabinet (EEC) through the Division of Water (DOW) staff performs environmental and technical reviews on projects that seek assistance from the DWSRF. Since its inception in 1997, Kentucky's DWSRF has committed funds to 147 drinking water infrastructure projects, totaling more than $360.5 million (including planned June 2015 commitments).

## *Eligibility*

An eligible borrower must be a public water system that is also a governmental agency, as defined in KRS 224A.011. Some examples include:

- Municipal corporations
- Cities
- Agencies
- Commissions
- Authorities
- Districts

An eligible borrower must demonstrate the technical, financial and managerial capability to ensure compliance with the requirements of the SDWA, unless the completion of the project receiving financial assistance will ensure compliance and the owners or operators of the systems agree to undertake feasible and appropriate changes in operations to ensure compliance over the long term. Contact KIA or DOW if you need assistance determining if your utility is eligible.

Some examples of eligible projects include:

- Planning, design, and construction of drinking water intake, treatment, or distribution systems
- Purchase of water systems by other public water systems
- Storage tanks
- Clearwells
- Drilled wells and wellhead areas
- Security related activities
- Emergency measures for the protection of public health
- Refinancing or buying eligible debt obligations of a public water system
- Any other structure of facility that the DOW considers necessary to the efficient and sanitary operation of a public water system

If you need assistance determining if your project is eligible for funding, contact Cindy McDonald at the DOW for more information.

## *Significant Federal Requirements*

### A. Davis-Bacon Compliance

Federal labor laws regarding prevailing wages, hours of work, and rates of pay shall apply to construction carried out in whole or in part with assistance from DWSRFs. These requirements are collectively known as the Davis-Bacon laws. These requirements are in addition to the requirements of Kentucky prevailing wage laws. All DWSRF funded projects will be required to comply with the Davis-Bacon laws and incorporate these provisions into any project work that has been or will be contracted. For more information on Davis Bacon laws please visit:

http://www.dol.gov/whd/regs/compliance/whdfs66.pdf.

### B. Additional Subsidization

The FFY 2015 capitalization grant authorization requires that at least 20%, or $2,754,000, and not more than 30%, or $4,131,000 of funds made available under the grant must be used by the State to provide additional subsidization to eligible applicants. The State will make such additional subsidization in the form of loans with principal forgiveness based on the system's median household income (MHI). Twenty-five percent of the loan amount, up to a maximum of $1.3 million per borrower, will be offered as principal forgiveness to projects in rank order that qualify for a .75% interest rate. Principal forgiveness will not be provided on loan increase requests that result from scope changes, specification changes, or bid variations for commitments made after June 30, 2015.

### C. American Iron and Steel (AIS)

The Consolidated and Further Continuing Appropriations Act of 2015 requires the use of American Iron and Steel (AIS) products in DWSRF projects through September 30, 2015. Implementation guidance can be found at:

http://water.epa.gov/grants_funding/upload/AIS-final-guidance-3-20-14.pdf.

## *Structure of the DWSRF Program in Kentucky*

KIA and the DOW jointly administer the program via a Memorandum of Agreement in accordance with Kentucky Revised Statute KRS 224A.1115 and Kentucky Administrative Regulation 200 KAR 17:070[1].

The following contacts can assist with DWSRF inquiries:

| Contact | Agency | Subject |
|---|---|---|
| Jami Johnson<br>(502) 573-0260<br>Jami.Johnson@ky.gov | KIA | Loan Application, Financial Terms, Interest Rates |
| Cindy McDonald<br>(502) 564-3410<br>Cindy.McDonald@ky.gov | DOW | Project Profile Submittal, Priority List, Environmental Review; Assess Technical, Financial and Managerial Capacity of Public Water Systems |
| Buddy Griffin<br>(502) 564-3410<br>Buddy.Griffin@ky.gov | DOW | Procurement, Bidding Requirements |
| Mark Rasche<br>(502) 564-3410<br>Mark.Rasche@ky.gov | DOW | Plans and Specifications |

[1] KRS Ch 224A.1115 and 200 KAR 17:070 may be found on the Internet from the Kentucky Legislature Home Page address: http://lrc.ky.gov/home.htm.

| Contact | Agency | Subject |
|---|---|---|
| Jory Becker<br>Water Infrastructure Branch Manager<br>(502) 564-3410<br>Jory.Becker@ky.gov | DOW | General Information, Set-Asides Activities, RFPs |

# II. DRINKING WATER STATE REVOLVING FUND GOALS

The primary goal of the DWSRF program is to assist PWSs in providing safe drinking water at an affordable cost to their customers. The program offers low cost financing to PWSs for eligible drinking water infrastructure construction projects, planning and design costs relating to eligible projects, and eligible security projects. Through set-aside funds, the DWSRF is also used to improve environmental programs that support the goals of the SDWA. Examples include capacity development, operator certification, source water protection and wellhead protection. Effective and efficient administration of the DWSRF program, combined with below-market interest rates and long-term financing, will assist PWSs in providing sufficient quality and quantity of affordable potable water throughout Kentucky. Progress is reported for each SFY in the Annual Report to the EPA.

**Short-Term Goals**

1. Continue to define and develop specific environmental outcomes and measures that will demonstrate the protection of public health by category type through DWSRF funding.

2. Continue to issue and evaluate contracts associated with set-aside initiatives.

4. Educate borrowers, Area Development Districts and engineers to assure compliance with Davis Bacon and American Iron and Steel requirements.

3. Fund projects designed to remediate risk to human health or are necessary to ensure compliance with requirements of the SDWA.

4. Support components of the state drinking water and groundwater programs by directing the necessary resources toward the state's most pressing compliance and health needs.

5. Continue to refine the integration of the SRF Call for Projects into the Water Resource Information System (WRIS).

**Long-Term Goals**

1. Maintain a self-sustaining revolving loan program that will support protection of public health by ensuring DWSRF funds are used to finance only those projects necessary to remediate serious risk to human health or are necessary to ensure compliance with the requirements of the SDWA.

2. Ensure that all public water systems have the necessary technical, financial and magerial capacity to maintain compliance with the current and foreseeable SDWA requirements and provide safe drinking water to their customers.

3. Work with the Energy and Environment Cabinet to explore solutions to increase energy efficiency for drinking water utilities.

4. Continue to work towards making the program easier to use by the borrowers by improving communication and the sharing of data between KIA and DOW, also by working toward the use of electronic forms and data as opposed to paper documents.

## III. CRITERIA FOR PROJECT SELECTION

Kentucky's Priority System Guidance Document was established to determine the order in which projects are evaluated for funding. Kentucky's priority ranking formula was designed by the DOW and is based on the following criteria: (1) most serious risk to human health, (2) compliance with the requirements of the SDWA, and (3) systems most in need on a per-household basis according to state affordability criteria. A Project Priority List is produced annually based on this ranking system. The Project Priority List is comprised of one list which serves as both a "fundable list" and a "comprehensive list." The fundable list is defined as a list of projects eligible for funding with available funds for the SFY 2016. The projects on the comprehensive list may receive funding in the event that a project from the fundable list is withdrawn, deemed ineligible, or unable to meet the DWSRF program requirements within the given time frame.

During the Call for Projects, which began October 1, 2014 and ended December 12, 2014, KIA and DOW invited all eligible borrowers to submit DWSRF project information via the Water Resource Information System (WRIS). An email invitation was sent to all drinking water utilities, area development districts, mayors, county judges executive, and the engineering community. A sample of the Call for Projects email is attached in Appendix B. Only designated projects submitted via the WRIS during the Call for Projects process were considered for funding and placement on the Project Priority List. Projects were evaluated and assigned a score based upon the ranking criteria in the Priority System Guidance Document. In the event of a tie, the following factors were utilized to priority rank each project: (1) service of a small system as defined by population; (2) projects with existing enforcement actions (i.e. Agreed Orders) and (3) financial need as evidenced by the MHI of the applicant. More information on tie breakers can be found in the priority ranking guidance attached in Appendix C.

The 2016 Project Priority List (Appendix A) shows that Kentucky has sufficient eligible projects to meet the binding commitment requirements of the FFY 2015 Capitalization Grant. A brief description of the following fields will be helpful in reviewing the list.

**Rank**: Rank of project on the comprehensive Project Priority List.

**Score**: Total number of points the project received using the Priority System Guidance Document ranking criteria in Appendix C.

**Loan Number**: Priority list tracking number for project. This is the assigned loan number for the project throughout the process and should be referred to on all correspondence about the project.

**Applicant**: Name of applicant identified on the Project Profile Form or the community the project is associated with.

**Loan Package Title**: Short description of project components (may include multiple WRIS numbers).

**Requested Loan Amount**: Amount of desired SRF loan identified in the Project Profile Form.

**Invited Loan Amount**: The amount of DWSRF funds that KIA has allocated to the proposed project. If this field lists a dollar amount greater than zero, then the project is invited for funding.

**Principal Forgiveness Amount**: Estimated amount of principal forgiveness that a project is eligible to receive if sufficient principal forgiveness is available.

**GPR Amount**: Amount of desired SRF loan identified that may qualify as green infrastructure. The drinking water capitalization grant does not require that funds be used for projects which address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities (collectively referred to as "green" projects). However, projects on the priority list were awarded ranking points for components that could be identified as green.

**WRIS #**: The WRIS number is assigned by an Area Water Management Council after a project has received endorsement by a regional planning group. Information stored in the WRIS database includes geographic information system (GIS) data, information on water resources, and drinking and wastewater facilities. It is used by different entities and provides much of the information needed for all aspects of water resource planning.

The 2017 IUP process will begin in October 2015. The annual Call for Projects will be open from October to December 2015 during which time projects will be accepted for ranking in the SFY 2017 funding cycle. **An applicant must submit a request for each project to be ranked for the 2017 cycle even if it was included on a previous year's Project Priority List.** The following tentative schedule will apply:

| | |
|---|---|
| **2017 Call for Projects** | **October 1, 2015 - December 11, 2015** |
| **Creation of Project Priority List** | **January 1, 2016 - March 31, 2016** |
| **Public Notice Period for IUP** | **May 1, 2016 - June 1, 2016** |
| **Finalize 2017 IUP and send to EPA** | **Prior to June 30, 2016** |

Email notifications will be sent in September 2015 to all drinking water utilities, area development districts, mayors, county judge executives, economic development directors, and the Kentucky Society of Professional Engineers announcing the call for projects.

# IV. FUND ADMINISTRATION AND OPERATION

## A. Project Funding

As required by the SDWA, to the maximum extent practicable, the highest priority projects are funded first. The projects chosen for funding are based on their readiness to proceed.

Kentucky's DWSRF generally limits the amount of funds that will be made available to any one borrower to $4 million from each available funding source during the year. Prior to 2016, after initial approval a project would be required to be reranked and invited to apply during subsequent years if the borrower wished to pursue incremental funding. This requirement has been discontinued beginning in 2016. After a project is initially funded by KIA, it will receive priority funding, up to an additional $4 million from each available funding source, during subsequent funding cycles, based on funding limits and the original project budget amount. This will minimize the uncertainy of some borrowers about the future availability of additional project funds. If a project was eligible to receive principal forgiveness during its initial funding year, it will continue to be eligible to receive principal forgiveness in future years based on the parameters that are in effect for that funding year. Limits may also be imposed on borrowers that have outstanding loan balances or loan commitments that increase the concentration risk for the total loan portfolio.

Actual project funding amounts may vary from amounts presented in the Project Priority List due to updated cost estimates and funding received from other sources. Increases to existing loans must be approved prior to the date of initiation of operation.

### Invited Projects

Applicants whose projects contain an "Invited Loan Amount" on the Project Priority List are invited to submit a loan application package for financial assistance from the DWSRF. A letter of invitation to apply was e-mailed to applicants at the same time that the Intended Use Plan was published. The letter of invitation provides instructions to accept or decline the invitation through KIA's web site. Invitees will have seven days from the end of the IUP thirty day comment period to accept the invitation. First round invitation applicants will be given 21 days from the end of the IUP thirty day comment period to submit a complete loan application. Applicants that do not submit a loan application, complete with Kentucky e-Clearinghouse comments, by the deadline will be bypassed and the next eligible project(s) will be invited and they will have 45 days to submit a loan application. This process will continue until all estimated available funds have been allocated to projects.

The application invitation process is designed to commit available funds as soon as possible with limited invitation iterations. Given an uncertain invitation acceptance rate, KIA will invite significantly more project dollars than are available to fund. If more projects than anticipated accept an invitation to apply it is possible that presentation of an invited project or projects to the KIA Board will be delayed until later in the year, will not be funded, or will be invited to apply for other KIA loan programs. If this situation occurs we will communicate with individual borrowers as expeditiously as possible.

Upon receipt of a complete loan application, KIA staff will review the information and prepare a credit analysis. Applicants must provide the three most current years (2012, 2013, 2014) of audited financial statements to support the credit analysis. A loan request will be presented to the KIA Board for financial review and conditional approval for each qualifying applicant. Upon KIA Board approval, a Conditional Commitment Letter will assure that funding will remain committed to the project for a period established in the letter, provided all of the conditions of the letter are met.

All DWSRF program requirements must be met by the term outlined in the Conditional Commitment Letter. A one-time extension of up to six months for approved applicants that experience extenuating circumstances may be granted. Projects that are not approved for an extension will not be eligible for funding during the funding cycle in which the Conditional Commitment Letter expires unless they were resubmitted and ranked during that cycle's Call for Projects.

**Planning and Design Loans**

KIA recognizes that larger or particularly complex projects may require a lengthy planning and design process and thus may not be ready for construction within the allotted twelve months after the conditional commitment letter is issued or perhaps even with a six month extension period. For ranked projects that require funding for planning and design before the project can be bid, KIA will encourage the applicant to apply for a Planning and Design loan rather than a full construction loan. The standard interest rate will apply during the five year term of the loan. However, if the applicant initiates construction within a prescribed time frame after approval of plans and specifications for the project, the loan can be converted to a construction loan with the interest rate that the applicant would otherwise qualify for and the loan term established in the conditional commitment letter. Upon approval of plans and specifications the applicant will receive a priority funding position to apply for a construction loan in the subsequent year's Intended Use Plan. If the applicant declines the invitation to apply for a construction loan the project will need to be resubmitted during future Calls for Projects to be considered for funding.

**B. Bypass Process**

A high-priority project that does not demonstrate capacity or is not ready to proceed within the given timeframe will be bypassed. A bypassed project will become ineligible for DWSRF funding in the current funding year and will have to reapply through the annual Call for Projects process to be re-ranked for future funding cycles.

**C. Emergency Projects**

The Project Priority List may be amended during the year for declarations of emergencies designated by the Governor. An emergency project might involve an unanticipated failure requiring immediate attention to protect public health. The emergency project must meet all eligibility and loan requirements, but the additional public review and comment requirement may be waived. The EPA must approve these deviations.

## D. Refinancing

Refinancing of existing projects will be allowed only for debt incurred after July 1993. Any project requesting to refinance existing debt must be on the project priority list in a position high enough to be eligible to receive funding and meet all program requirements. Refinancing will only be offered for terms up to 20 years from the original debt issuance or the remaining useful life of the equipment, whichever is less.

## E. Small Systems

To the extent possible, a minimum of 15 percent of all funds credited to the project fund will be used to assist systems serving fewer than 10,000 persons.

## F. Financial Terms of Loans

### 1. Interest Rates

The KIA Board must establish interest rates at least annually. Staff intends to present rates for Board consideration at the beginning of the state fiscal year. The rates are based on prevailing market conditions with the 20 Bond General Obligation (GO) index as a reference rate. Staff intends to recommend a standard rate of 2.75 percent with two non-standard rates of 1.75 percent and 0.75 percent.

The standard rate will apply to all borrowers at or above the ACS 5 Year Estimate 2009-2013 MHI of $43,036. To qualify for the non-standard rate of 1.75%, the project must assist the system to achieve compliance with an order or judgment addressing risks to public health, or the borrower must have a MHI between $43,036 and $34,429 (80% of the State MHI) or be considered regional. To qualify for the non-standard rate of 0.75%, a borrower must have a MHI below $34,430. Qualifications for rates are subject to 200 KAR 17:070.

For ranked projects that require funding for planning and design before the project can be bid, KIA will encourage the applicant to apply for a Planning and Design loan rather than a full construction loan. The standard interest rate will apply during the five year term of the loan. However, if the applicant initiates construction within a prescribed time frame after approval of plans and specifications for the project, the loan can be converted to a construction loan with the interest rate that the applicant would otherwise qualify for and the loan term established in the conditional commitment letter.

### 2. Repayment Terms

Planning and design loans will not exceed five years. If the planning and design loan is rolled into a DWSRF construction loan, the term for the planning and design amount will revert to the term approved for the construction loan.

Construction loans will have up to a 20 year repayment term. At the KIA Board's discretion, the repayment term for a construction loan for a service area that is eligible for the lowest

non-standard rate, currently 0.75%, may be extended to 30 years, but not beyond the expected design life of the project.

Principal and interest payments on each loan will commence not later than one year after initiation of operation of the project for which the loan was made. The recipient of each loan must establish a dedicated source of revenue for the repayment of the loan.

### 3. Loan Servicing Fees

A loan servicing fee of 0.25 percent on the annual outstanding loan balance will be charged as a part of each semi-annual loan payment in accordance with 200 KAR 17:070, Section 12. The fee is assessed to recover administrative expenses incurred over the life of the loan. These fees are accounted for outside of the program fund and will be used for necessary DWSRF program expenses.

### 4. Borrower Loan Compliance and Financial Monitoring

The borrower's ability to repay its loans has a direct effect on the financial condition of the DWSRF fund. Additionally, maintaining a positive operating cash flow and capital asset reserve funding program will protect both the utility and its customers financially against unforeseen capital replacements in the future. Upon acceptance of a loan each borrower agrees to a number of post closing conditions, some of which are noted below, to remain in compliance with the terms of the loan.

a) If more than $750,000 of Federal funds are disbursed during any one (borrower) fiscal year, the borrower is required to have a single or program-specific audit conducted for that year in accordance with OMB Circular A-133.

b) The borrower must provide audited financial statements to KIA within six months of the entity's fiscal year end date. KIA will review each borrower's financial performance and, if necessary, will work with them to identify ways to remedy any financial non compliance issues.

c) Borrowers are required to fund a repair and replacement reserve account annually based on amounts and the time period specified by KIA unless a documented replacement program is in place and being actively funded at a level that is acceptable to KIA.

## G. Fund Transfers Between the CWSRF and the DWSRF

Transfers between the SRF programs are allowed up to a maximum of 33 percent of the total DWSRF capitalization grants received. KIA reserves the right to transfer the maximum allowable 33 percent of uncommitted repayment funds from the Clean Water SRF to the Drinking Water repayment fund as loan demand arises. This decision will be evaluated annually by DOW and KIA. These funds will be distributed using the same criteria and method as

described in the governing IUP. Funds not transferred within one fiscal year of receipt of a capitalization grant award shall be reserved for transfer in future years.

# V. SET-ASIDE ACTIVITIES

The federal authority to establish assistance priorities and to carry out oversight and related activities of the DWSRF program, other than financial administration of the fund, resides with the EEC after consultation with other appropriate state agencies. Federal regulations allow states to "set aside" up to 31% of each capitalization grant for various programs, aside from project loans, that support the act. Kentucky will set aside 31% of the 2015 capitalization grant. Any set-aside funds that are not taken in one year or are transferred into the construction account will be reserved for use in a future year. Required set-a-side work plans are included as Appendix E.

The following is a list of Kentucky's set-aside allotments:

| **Set-Aside Description** | **KY's 2015 Allotment** |
|---|---|
| DWSRF Program Administration (4% maximum) | 4.0% |
| State Program Management (10% maximum) | 10.0% |
| Small Systems Technical Assistance (2% maximum) | 2.0% |
| State and Local Assistance (15% maximum) | 15.0% |
| **Total** | 31.0% |

## A. DWSRF Program Administration - Sect. 1452(g)(2) - four percent maximum

Section 1452(g)(2) of the SDWA allows up to four percent of the DWSRF capitalization grant to be set aside for administration of the DWSRF program. Kentucky will set aside four percent from the 2015 capitalization grant for administration.

The EEC will set-aside three percent and the KIA will set aside one percent of the 2015 capitalization grant, as agreed upon in Memorandum of Agreement between the two parties. The EEC and KIA conduct regular activities to develop and maintain the DWSRF program. These include reporting activities, payment processing, pre-application activities, travel, application review, engineering review, environmental review, project management, program coordination, construction progress inspection, training, evaluating infrastructure needs for the Needs Survey; portfolio management, audit management, cash management, securities management, financial management, financial analysis and capacity review. A formal work plan is not required under this set-aside category.

## B. State Program Management – Sect. 1452(g)(2)(A) - 10 percent maximum

Section 1452(g)(2)(A) allows a state to set aside ten percent of its annual capitalization grant to support other program initiatives of the SDWA. Set-asides under this authorization require an additional one-to-one state match. Thus, money expended in these set-asides will

require a heavier investment of state funds. Kentucky will set aside ten percent of the 2015 capitalization grant under this category to support the following:

1. Compliance activities associated with the drinking water program, including receipt and review of data, issuing and tracking public notifications and Consumer Confidence Reports and violations, database management and revisions, SDWIS and SDWIS Prime impacts, preparing and issuing annual compliance reports, coordinating enforcement activities, implementation of the Enforcement Referral Policy, providing technical and compliance assistance and conducting inspections and sanitary surveys.

2. Other activities include: state regulation development, preparing primacy applications, conducting training events for drinking water personnel, assisting with engineering reviews, assessing the impacts of Clean Water Act decisions and permit action on drinking water systems, oversight of the drinking water lab certification program, providing technical assistance to water systems, implementation of a similar AWOP-based program for disinfection byproduct control, plans and specifications review for SRF funded projects, assessing drinking water security and emergency response activities, and strengthening inter-agency relationships as they relate to the program.

Funds may be used for travel and equipment as specified in work plans.

**C. Technical Assistance – Sect. 1452(g)(2)(D) - two percent maximum**

Section 1452 (g)(2)(D) of the SDWA allows a state to set aside a maximum of two percent of its annual capitalization grant to support technical assistance initiatives. Kentucky will set aside two percent of the 2015 capitalization grant to provide small systems technical assistance to include the following: Training and guidance on disinfection by-product (DBP) compliance, turbidity and RTCR through one-on-one utility and group presentations; on-site water plant and distribution evaluations for DBPs, turbidity, and RTCR compliance and optimization; Performance Based Training for a minimum of one small system; AWOP involvement towards DBP optimization. Funding will also be used to provide training to DOW staff on the latest treatment technologies, regulations, how to conduct inspections, and small water system issues.

Funds may be used for travel and equipment as specified in work plans.

**D. State/Local Assistance – Section 1452(k) - 15 percent total, 10 percent maximum for any one activity.**

Section 1452(k) of the SDWA allows up to fifteen percent of the DWSRF capitalization grant to be set aside to support local assistance and other program initiatives of the SDWA with a ten percent maximum allotment for the individual program areas as outlined below:

- Loans for source water protection through land acquisition or conservation easements
- Loans for Source Water Quality Protection
- Technical, managerial, or financial assistance via the Capacity Development Program

- Source Water Protection Program
- Wellhead Protection Program

Kentucky will set aside fifteen percent from the 2015 capitalization grant under the State and Local Assistance category, as follows:

| **Set-Aside Description** | **KY's 2015 Allotment** |
|---|---|
| Capacity Development | 10.0% |
| Source Water Assessment | 2.0% |
| Wellhead Protection | 3.0% |
| **Total** | 15.0% |

Capacity Development, ten percent

- Activities may include, but are not limited to, identification of PWSs that may need assistance obtaining or maintaining financial, managerial, or technical capacity to operate in compliance with the SDWA; capital improvement and asset management planning; developing and assisting with water system management training events and enhanced tracking of technical, managerial, and financial information; continuation of the Capacity Development Assistance Program (CDAP).
- Providing training and certification exam opportunities to operators and potential operators. Auditing existing exam questions and developing new exams and training material to ensure that that the testing process is up-to-date with current trends and regulations.
- Contractual services may also be acquired to assist PWSs with emergency response planning.

Source Water Assessment Program, two percent

- Additional assistance may be provided to support U.S. Geological Survey stream gauging activities for source water assessment and protection purposes.

Wellhead Protection Program, three percent

- Activities may include, but are not limited to, initiating and maintaining contact with PWSs to establish wellhead protection programs; assisting with technical delineations of wellhead protection areas including pumping tests, geological and hydro-geologic write-ups, modeling and dye tracing; GUDI determinations; providing technical assistance with Groundwater Protection Plans; assisting public water systems with problems and issues related to groundwater quality and quantity; assisting with development of management strategies to be used in wellhead protection; and providing public education assistance.

- Continued development and expansion of the Source Water Assessment Program, a new program modeled from Washington State, that provides funding for non-capital projects to protect source water.

Funds may be used for travel and equipment as specified in work plans.

# VI. FUNDS AVAILABLE TO BE COMMITTED AND DISBURSED

Kentucky's DWSRF is capitalized by appropriations from the U.S. Congress and the Kentucky General Assembly. The fund provides, in perpetuity, financial assistance to Kentucky's eligible DWSRF projects. As of June 30, 2014 the DWSRF had net assets of $207,002,000 and 107 active loans. During SFY 2016, Kentucky will rely on funding as outlined in Table A to provide financial assistance and to support the operations of KIA and DOW.

**Table A**
**Kentucky DWSRF Sources and Uses of Funds for 2016**
July 1, 2015 through June 30, 2016

| Funding Sources | Federal Contribution | State Contribution | Other | Total |
|---|---|---|---|---|
| Uncommitted Prior Year Loan Funds | | | 0 | 0 |
| Loan Repayments (P&I) | | | 12,722,888 | 12,722,888 |
| Interest Earnings (from cash on hand) | | | 50,000 | 50,000 |
| Leverage Bond Proceeds | | | 10,900,000 | 10,900,000 |
| Banked Prior Year Set-Aside Funds | | | 5,000,000 | 5,000,000 |
| 2015 Capitalization Grant | 13,770,000 | 2,754,000 | | 16,524,000 |
| State Program Management Expenditure Match | | 1,377,000 | | 1,377,000 |
| **Total Funding Sources** | 13,770,000 | 4,131,000 | 28,672,888 | 46,573,888 |
| | | | | |
| **Funding Uses** | | | | |
| Financial Assistance | 9,501,300 | 2,754,000 | 19,244,700 | 31,500,000 |
| Leverage Bond Debt Service | | | 4,428,188 | 4,428,188 |
| Banked Prior Year Set-Aside Funds | | | 5,000,000 | 5,000,000 |
| 2015 Administration (4%) | 550,800 | | | 550,800 |
| 2015 State Program Management (10%) | 1,377,000 | 1,377,000 | | 2,754,000 |
| 2015 Technical Assistance (2%) | 275,400 | | | 275,400 |
| 2015 Local and Other Assistance (15%) | 2,065,500 | | | 2,065,500 |
| **Total Funding Uses** | 13,770,000 | 4,131,000 | 28,672,888 | 46,573,888 |

In SFY 2016, KIA will have an estimated $31,500,000 available to fund eligible DWSRF projects. This is comprised of the 2015 capitalization grant of $13,770,000, state match funds of $2,754,000, leverage bond authorization of $10,900,000, estimated loan repayments of $12,722,888 and $50,000 interest earnings on existing cash balances. Funding is reduced by leverage bond debt service of $4,428,188 administrative costs of $550,800 (4%) and other set-

aside costs totaling $3,717,900 (27%). Any set-aside funds that are not taken in one year or are transferred into the construction account will be reserved for use in a future year.

The $2,754,000 state match will consist of proceeds from the sale of tax-exempt revenue bonds with debt service provided by the Commonwealth. KIA will coordinate with the Finance and Administration Cabinet regarding the anticipated sale date of the bonds. The anticipated submission dates for the 2015 capitalization grant application is June 2, 2015. Grant awards are typically made within 90 days but not later than September 30 of each year. The estimated federal to state cash draw ratio for the DWSRF for the FFY 2015 capitalization grant is 78:22.

Transfers between the Clean Water State Revolving Fund and the Drinking Water State Revolving Fund programs are allowed up to a maximum of 33 percent of the total DWSRF capitalization grants received. While KIA reserves the right to transfer available funds, a transfer is not expected during SFY 2016.

KIA received budgetary authorization to issue agency leverage bonds during the 2014-2016 biennium in an amount not to exceed $25 million. Bond proceeds will be deposited into the fund and used to make eligible DWSRF loans. For this authorization to become effective, KIA must obtain approval from the Kentucky Infrastructure Authority Board, the Capital Projects and Bond Oversight Committee, the Office of the State Budget Director and the Office of Financial Management in the Finance and Administration Cabinet with respect to the timing and amount of the leverage bond issuance. KIA allocated $14.1 million to fiscal 2015 based on funding demand and $10.9 million to fiscal 2016.

Additionally, KIA reserves the right to defer issuance of bonds based on conditions in financial markets. Unstable market conditions could negatively impact the amount of funds available for loans. KIA intends to maximize the amount of funding available for eligible projects.

## VII. PUBLIC PARTICIPATION

The draft 2016 DWSRF IUP including the Project Priority List was made available for public review and comment on the Kentucky Infrastructure Authority website at www.kia.ky.gov and the Division of Water website at water.ky.gov from May 15, 2015 through June 15, 2015. A public meeting to discuss the plan contents was held on May 27, 2015, at 1:30 p.m. at the offices of the Kentucky Infrastructure Authority located at 1024 Capital Center Drive, Suite 340, Frankfort, Kentucky.

A summary of verbal and written comments received appear in Appendix E.

# APPENDIX A

# COMPREHENSIVE PROJECT PRIORITY LIST

# 2016 DWSRF Project Priority List

| Rank | Score | Loan Number | Applicant | Loan Package Title | Total Project Costs | Requested Loan Amount | Invited Loan Amount | Utility Service Area MHI | Population | Principal Forgiveness Amount | Green Amount | Green Category | WRIS # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 400 | F16-001 | Hopkinsville Water Environment Authority | HWEA US 41A Water Main Improvement, 2 MG Southpark Tank, Tank Rehabilitation | $ 9,300,000 | $ 8,000,000 | $ 8,000,000 | $ 35,444 | 36,222 | $ 0 | $ 0 | 0 | WX21047013 |
| 2 | 243 | F16-002 | Cumberland Falls Highway Water District | CFHWYWD - Line Replacement and Reinforcement | 1,723,000 | 1,723,000 | 1,723,000 | 27,721 | 8,909 | 430,750 | 1,339,000 | 0 | WX21235002 |
| 3 | 190 | F16-003 | Western Pulaski County Water District | Water System Improvements & Replacements | 3,304,000 | 3,304,000 | 3,304,000 | 39,512 | 16,902 | 0 | 1,422,347 | 0 | WX21199123 |
| 4 | 150 | F16-004 | Green River Valley Water District | GRVWD - Water Treatment Plant Expansion | 12,000,000 | 4,000,000 | 4,000,000 | 37,608 | 16,339 | 0 | 3,030,000 | 0 | WX21099029 |
| 5 | 135 | F16-005 | Carlisle, City of | Phase 2 - Drinking Water System Improvements | 1,195,000 | 1,195,000 | 1,195,000 | 31,230 | 2,045 | 298,750 | 708,000 | 0 | WX21181006 |
| 6 | 130 | F16-006 | Monroe County Water District | Monroe County Water District - New Regional Water Treatment Plant and Water System Improvements | 12,412,000 | 4,013,638 | 4,013,638 | 30,324 | 8,002 | 1,003,410 | 250,000 | 0 | WX21171045 |
| 7 | 125 | F16-007 | Jackson, City of | Jackson HWY 15 Water Improvement Project | 1,472,970 | 1,472,970 | 1,472,970 | 21,820 | 4,719 | 368,243 | 495,000 | 0 | WX21025511 |
| 8 | 125 | F16-008 | Hodgenville, City of | Hodgenville Phase 1a Water System Improvements | 962,000 | 962,000 | 962,000 | 31,007 | 2,002 | 240,500 | 600,000 | 0 | WX21123017 |
| 9 | 115 | F16-009 | Webster County Water District | Webster County Water District Water Tank Maintenance/ Mixing System | 500,000 | 500,000 | 500,000 | 43,939 | 5,305 | 0 | 485,000 | 0 | WX21233009 |
| 10 | 115 | F16-010 | Williamstown, City of | Williamstown - New Water Treatment Plant | 17,249,165 | 3,749,165 | 3,749,165 | 47,723 | 4,593 | 0 | 2,525,000 | 0 | WX21081001 |
| 11 | 110 | F16-011 | Bath County Water District | Scattered Site System Improvements 2015 | 925,470 | 925,470 | 925,470 | 31,136 | 8,842 | 231,368 | 446,750 | 0 | WX21011034 |
| 12 | 107 | F16-012 | Garrison-Quincy-Ky-O-Heights Water District | Garrison Quincy Water District-Phase 4 | 2,500,000 | 2,500,000 | 2,500,000 | 29,552 | 2,820 | 625,000 | 0 | 0 | WX21135007 |
| 13 | 95 | F16-013 | Fleming-Neon, City of | Water Treatment Plant Upgrade Project | 3,000,000 | 1,000,000 | 1,000,000 | 28,935 | 3,198 | 250,000 | 350,000 | 0 | WX21133029 |
| 14 | 90 | F16-014 | Campton, City of | Campton Tank Replacement Project | 1,578,000 | 1,578,000 | 1,578,000 | 21,667 | 6,738 | 394,500 | 792,500 | 0 | WX21237011 |
| 15 | 85 | F16-015 | Versailles, City of | City of Versailles - Water Distribution System Improvements | 2,350,000 | 2,350,000 | 2,350,000 | 51,358 | 14,370 | 0 | 186,000 | 0 | WX21239029 |
| 16 | 80 | F16-016 | Whitley County Water District | Whitley County: Water System Improvements | 937,500 | 937,500 | 0 | 26,370 | 11,581 | 0 | 855,000 | 0 | WX21235434 |
| 17 | 80 | F16-017 | Marion County Water District | Marion County Water District Lebanon Bypass Elevated Tank | 2,055,000 | 2,055,000 | 2,055,000 | 40,122 | 14,706 | 0 | 200,000 | 0 | WX21155036 |
| 18 | 75 | F16-018 | Harrodsburg, City of | College St. and Chestnut St. Water Lines | 326,660 | 326,660 | 0 | 30,808 | 8,363 | 81,665 | 225,550 | 0 | WX21167028 |
| 19 | 75 | F16-019 | Pineville Utility Commission | Pineville: WTP Expansion Project | 3,214,030 | 2,994,030 | 0 | 27,654 | 15,609 | 748,508 | 2,587,305 | 0 | WX21013918 |
| 20 | 74 | F16-020 | Mountain Water District | MWD - Ridgeline Road Section 3 Upper Pompey | 1,850,000 | 925,000 | 925,000 | 32,964 | 48,166 | 231,250 | 0 | 0 | WX21195023 |
| 21 | 70 | F16-021 | Crittenden-Livingston County Water District | Crittenden-Livingston WD - Moore Hill Tank (Crittenden Co.) | 1,039,500 | 1,039,500 | 1,039,500 | 38,364 | 9,037 | 0 | 0 | 0 | WX21055009 |
| 22 | 70 | F16-022 | Webster County Water District | Reworking Mt. Pleasant to Dixon Pumpstation | 80,000 | 80,000 | 80,000 | 43,939 | 5,305 | 0 | 0 | 0 | WX21233102 |
| 23 | 70 | F16-023 | Ashland, City of | Ashland:  Debord Hill Water Tank Upgrade | 900,000 | 900,000 | 900,000 | 35,916 | 35,815 | 0 | 0 | 0 | WX21019047 |
| 24 | 60 | F16-024 | Crab Orchard, City of | City of Crab Orchard - Deepwell Woods Road Water Line | 300,500 | 300,500 | 300,500 | 26,217 | 1,215 | 75,125 | 206,000 | 0 | WX21137049 |
| 25 | 60 | F16-025 | Harrodsburg, City of | Bay West Water Storage Tank Improvements | 490,500 | 490,500 | 490,500 | 30,808 | 8,363 | 122,625 | 0 | 0 | WX21167030 |
| 26 | 60 | F16-026 | Western Pulaski County Water District | Big Clifty Creek Area Water Transmission Main & Improvements | 3,079,000 | 3,079,000 | 0 | 39,512 | 16,902 | 0 | 0 | 0 | WX21199109 |
| 27 | 60 | F16-027 | Northern Kentucky Water District | Campbell and Kenton County Water Main Replacement and SCADA Impr | 5,425,000 | 4,000,000 | 0 | 54,500 | 242,841 | 0 | 1,902,000 | 0 | WX21117003 |
| 28 | 58 | F16-028 | Hopkinsville Water Environment Authority | HWEA Hopkinsville Water Main Extension Project | 8,163,337 | 8,163,337 | 0 | 35,444 | 36,222 | 0 | 0 | 0 | WX21047003 |
| 29 | 56 | F16-029 | Rattlesnake Ridge Water District | RRWD:  Carter County Line Extensions | 628,750 | 628,750 | 0 | 31,600 | 11,418 | 157,188 | 0 | 0 | WX21043028 |
| 30 | 55 | F16-030 | Martin County Water District | Martin County Rehab Aging Infrastructure | 2,760,960 | 2,760,960 | 0 | 26,459 | 11,849 | 690,240 | 2,228,000 | 0 | WX21159006 |
| 31 | 55 | F16-031 | Paris, City of | Paris Water Treatment Plant Improvements | 1,500,000 | 1,500,000 | 0 | 35,054 | 12,261 | 0 | 435,000 | 0 | WX21017021 |

# 2016 DWSRF Project Priority List

| Rank | Score | Loan Number | Applicant | Loan Package Title | Total Project Costs | Requested Loan Amount | Invited Loan Amount | Utility Service Area MHI | Population | Principal Forgiveness Amount | Green Amount | Green Category | WRIS # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 50 | F16-032 | Cave Run Water Commission | System Improvement Project | 700,000 | 700,000 | 0 | | | 175,000 | 150,000 | 0 | WX21165023 |
| 33 | 50 | F16-033 | Southern Water & Sewer District | Southern Water - Mink Branch Tank Replacement | 550,000 | 550,000 | 0 | 30,405 | 19,900 | 137,500 | 0 | 0 | WX21071008 |
| 34 | 50 | F16-034 | Bowling Green Municipal Utilities | BGMU - Water Treatment Plant - Caustic Soda | 1,141,000 | 1,141,000 | 0 | 34,418 | 46,878 | 285,250 | 1,000,000 | 0 | WX21227074 |
| 35 | 50 | F16-035 | Bowling Green Municipal Utilities | BGMU - Water Treatment Plant - Alternate Disinfection Process | 4,424,000 | 4,424,000 | 0 | 34,418 | 46,878 | 1,106,000 | 0 | 0 | WX21227076 |
| 36 | 45 | F16-036 | Evarts, City of | Raw Water Suppily Line for Evarts Water Plant | 275,000 | 275,000 | 0 | 20,519 | 3,409 | 68,750 | 0 | 0 | WX21095642 |
| 37 | 40 | F16-037 | McLean County Fiscal Court | Beech Grove Water System Storage Tank Addition | 1,305,650 | 960,000 | 0 | 45,656 | 1,130 | 0 | 350,000 | 0 | WX21149005 |
| 38 | 40 | F16-038 | Salyersville Water Works | Salyersville Church Street Storage Tank | 700,982 | 700,982 | 0 | 20,077 | 2,259 | 175,246 | 0 | 0 | WX21153013 |
| 39 | 40 | F16-039 | Campton, City of | Trace Fork Waterline Project | 80,190 | 80,190 | 0 | 21,667 | 6,738 | 20,048 | 0 | 0 | WX21237012 |
| 40 | 40 | F16-040 | Crab Orchard, City of | City of Crab Orchard - J & V Lane New Water Line | 174,000 | 174,000 | 0 | 26,217 | 1,215 | 43,500 | 113,500 | 0 | WX21137048 |
| 41 | 40 | F16-041 | Cynthiana, City of | City of Cynthiana West By-Pass Water Main Extension Project | 581,774 | 581,774 | 0 | 27,525 | 6,634 | 145,444 | 0 | 0 | WX21097025 |
| 42 | 40 | F16-042 | Hodgenville, City of | Lincoln Blvd. South Replacement | 593,000 | 593,000 | 0 | 31,007 | 2,002 | 148,250 | 0 | 0 | WX21123008 |
| 43 | 40 | F16-043 | Scottsville, City of | Holland Road New Pump Station Project | 1,334,180 | 1,334,180 | 0 | 34,029 | 5,092 | 333,545 | 0 | 0 | WX21003001 |
| 44 | 40 | F16-044 | Falmouth, City of | Water Storage Reservoir Repair and Roof Replacement | 548,709 | 548,709 | 0 | 37,513 | 2,568 | 0 | 0 | 0 | WX21191003 |
| 45 | 40 | F16-045 | Prestonsburg City's Utilities Commission | PCUC-Modifications to Existing Water Treatment Plant | 1,088,085 | 1,088,085 | 0 | 29,137 | 18,053 | 272,021 | 0 | 0 | WX21071223 |
| 46 | 40 | F16-046 | Hopkinsville Water Environment Authority | HWEA - Crofton 750K Tank & Water Main Replacement | 2,545,000 | 2,545,000 | 0 | 35,444 | 36,222 | 0 | 0 | 0 | WX21047002 |
| 47 | 40 | F16-047 | Ohio County Water District | Ohio County Water District Water Main Upgrade Project | 1,630,000 | 3,400,000 | 0 | 41,609 | 14,790 | 0 | 3,084,000 | 0 | WX21183039 |
| 48 | 35 | F16-048 | Southern Water & Sewer District | City of Martin Emergency Water Interconnect | 101,749 | 101,749 | 0 | 22,691 | 651 | 25,437 | 0 | 0 | WX21071001 |
| 49 | 35 | F16-049 | Harrodsburg, City of | Water Distribution Main Replacement 2015 | 2,887,200 | 2,887,200 | 0 | 30,808 | 8,363 | 721,800 | 2,351,300 | 0 | WX21167029 |
| 50 | 35 | F16-050 | Southern Water & Sewer District | SWSD - Lackey to Wayland Water Line Replacement | 1,350,000 | 1,350,000 | 0 | 30,405 | 19,900 | 337,500 | 1,050,000 | 0 | WX21071730 |
| 51 | 30 | F16-051 | Elkhorn City, City of | Railroad Bridge Water Line Replacement | 192,000 | 192,000 | 0 | 27,273 | 1,429 | 48,000 | 0 | 0 | WX21195010 |
| 52 | 30 | F16-052 | South Shore, City of | South Shore:  WTP Upgrade | 500,000 | 500,000 | 0 | 30,397 | 4,590 | 125,000 | 0 | 0 | WX21089067 |
| 53 | 30 | F16-053 | Olive Hill, City of | Olive Hill:  New Backwash Pump at WTP | 85,000 | 85,000 | 0 | 32,712 | 4,953 | 21,250 | 0 | 0 | WX21043042 |
| 54 | 30 | F16-054 | Mountain Water District | Greasy Creek Booster Pump Station | 500,000 | 500,000 | 0 | 32,964 | 48,166 | 125,000 | 0 | 0 | WX21195021 |
| 55 | 30 | F16-055 | Richmond, City of | Standby Power Upgrade for Side Storage and College Hill Plant | 2,546,700 | 2,496,700 | 0 | 34,189 | 31,580 | 624,175 | 0 | 0 | WX21151008 |
| 56 | 30 | F16-056 | Hopkinsville Water Environment Authority | HWEA - Hopkinsville Industrial Foundation Commerce Park West Loop | 210,000 | 210,000 | 0 | 35,444 | 36,222 | 0 | 0 | 0 | WX21047029 |
| 57 | 30 | F16-057 | Grayson Utility Commission | Grayson:  WTP Emergency Power Generators | 333,000 | 333,000 | 0 | 36,106 | 10,817 | 0 | 0 | 0 | WX21043038 |
| 58 | 30 | F16-058 | Hardinsburg, City of | City of Hardinsburg Henning Booster Station Parallel Line | 309,420 | 309,420 | 0 | 37,194 | 11,494 | 0 | 0 | 0 | WX21027020 |
| 59 | 30 | F16-059 | Versailles, City of | Versailles Raw Water Main Replacement | 1,234,500 | 326,928 | 0 | 51,358 | 14,370 | 0 | 0 | 0 | WX21239026 |
| 60 | 25 | F16-060 | Crab Orchard, City of | City of Crab Orchard - Radio Read Conversion Project | 315,000 | 315,000 | 0 | 26,217 | 1,215 | 78,750 | 160,000 | 0 | WX21137045 |
| 61 | 25 | F16-061 | Versailles, City of | Automatic Meter Reading (AMR) System | 1,576,625 | 1,576,625 | 0 | 51,358 | 14,370 | 0 | 1,378,750 | 0 | WX21239030 |
| 62 | 20 | F16-062 | Magoffin County Water District | Magoffin County Water District - Radio Telemetry System | 644,000 | 644,000 | 0 | 25,989 | 10,840 | 161,000 | 0 | 0 | WX21153023 |
| 63 | 20 | F16-063 | Hopkinsville Water Environment Authority | HWEA - Crofton Water Line Replacement | 4,060,995 | 4,000,000 | 0 | 35,444 | 36,222 | 0 | 0 | 0 | WX21047027 |
| 64 | 20 | F16-064 | Hardinsburg, City of | Hardinsburg Water Treatment Plant Expansion Phase I | 1,249,240 | 1,249,240 | 0 | 37,194 | 11,494 | 0 | 0 | 0 | WX21027044 |

# 2016 DWSRF Project Priority List

| Rank | Score | Loan Number | Applicant | Loan Package Title | Total Project Costs | Requested Loan Amount | Invited Loan Amount | Utility Service Area MHI | Population | Principal Forgiveness Amount | Green Amount | Green Category | WRIS # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 20 | F16-065 | North Nelson Water District | North Nelson Hwy 245 Replacement | 450,500 | 450,500 | 0 | 56,961 | 10,923 | 0 | 0 | 0 | WX21179010 |
| 66 | 10 | F16-066 | Flatwoods, City of | Flatwoods: Radio Read Meter Project | 1,000,000 | 750,000 | 0 | 41,404 | 8,030 | 0 | 0 | 0 | WX21089074 |
| 67 | 10 | F16-067 | Hopkinsville Water Environment Authority | HWEA Water Meter Replacement and AMR | 6,000,000 | 6,000,000 | 0 | 35,444 | 36,222 | 0 | 0 | 0 | WX21047032 |
| 68 | 10 | F16-068 | Henderson County Water District | US 41-A Main Replacement | 1,242,318 | 1,242,318 | 0 | 56,131 | 16,024 | 0 | 0 | 0 | WX21101107 |
| 69 | 10 | F16-069 | Henderson County Water District | US 41 South A/C Main Replacement | 1,046,452 | 1,046,452 | 0 | 56,131 | 16,024 | 0 | 0 | 0 | WX21101108 |
| 70 | 10 | F16-070 | Henderson County Water District | Hwy 416 W Main Replacement | 972,561 | 972,561 | 0 | 56,131 | 16,024 | 0 | 0 | 0 | WX21101109 |
| 71 | 10 | F16-071 | Henderson County Water District | Hwy 351 Main Replacement | 1,550,219 | 1,550,219 | 0 | 56,131 | 16,024 | 0 | 0 | 0 | WX21101110 |
| **Total** | | | | | **$ 151,251,391** | **$ 115,638,812** | **$ 43,063,743** | | | **$ 11,127,588** | **$ 30,906,002** | | |

# APPENDIX B

# CALL FOR PROJECTS LETTER

**KENTUCKY INFRASTRUCTURE AUTHORITY**

**Steven L. Beshear**
Governor

1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601
Phone (502) 573-0260
Fax (502) 573-0157
http://kia.ky.gov

**John E. Covington, III**
Executive Director

September 25, 2014

To Whom It May Concern:

The Kentucky Infrastructure Authority and the Kentucky Division of Water are announcing the 2016 Drinking Water State Revolving Fund Call for Projects.

**The Drinking Water State Revolving Fund Call for Projects**

**Will Be Open from October 1, 2014, to December 12, 2014**

If you have a drinking water project that will need funding during the 2016 state fiscal year (July 1, 2015 thru June 30, 2016), we want to hear from you as your project may be eligible for funding from the Drinking Water State Revolving Fund (DWSRF). The DWSRF is a competitive program. To qualify to apply for a low interest DWSRF loan, your project MUST be ranked and listed on the 2016 DWSRF Priority List developed by the Division of Water (DOW). Projects will not be carried forward from the 2015 project priority list to the 2016 project priority list.

**You Will Need a Project Profile for Your Project**

To submit a project for inclusion on the DWSRF Priority List you must work with your local Area Water Management Council (AWMC) through the Area Development District (ADD) to complete or update a Project Profile (and related mapping) in the Water Resource Information System (WRIS). The Project Profile includes the information necessary to evaluate potential DWSRF projects. All information needed by DOW to review and rank potential DWSRF projects has been incorporated into the Project Profile template. If you do not have a Project Profile, you can complete the fill in template and then send the information to your AWMC before their next meeting. Please ensure that project cost estimates have been updated.

**Your Project Profile MUST be Approved by the Area Water Management Council**

For your project to be included in the DWSRF Priority List your Project Profile must have AWMC approval. To give the ADD staff time to get your profile approved by the AWMC, you must get the profile information to your AWMC before their next meeting.

DOW strongly encourages you to read the Priority System Guidance Document before you submit your Project Profile as you might obtain some useful ideas to improve your project's overall score. **Only those projects that can start construction by March 31, 2017, will be considered for funding.**

## Current Interest Rates

**Interest rates for the 2016 SRF funding cycle have not yet been determined.** Projected interest rates for the program will be provided in the 2016 DWSRF Intended Use Plan (IUP) which will be available late spring of 2015. Rates provided in the IUP are subject to approval by the KIA Board.

As an example, KIA currently offers three interest rates for the DWSRF program. The standard rate of 2.75% is available for borrowers with a median household income (MHI) at or above $42,610, the MHI of the Commonwealth based on U.S. Census, American Community Survey, 5-year estimates. A 1.75% rate is offered to borrowers whose MHI is between $42,609 and $34,088. The 1.75% rate also applies to those projects that facilitate compliance with an order or judgment addressing environmental non-compliance or those systems that are considered regional. To qualify for the 0.75% rate, the borrower must have an MHI below $34,088. Keep in mind these figures may change in the coming funding cycle.

## Sustainable Infrastructure Initiative

A brochure that highlights the Sustainable Infrastructure (SI) initiative launched by EPA and the Kentucky Division of Water in 2008 is available on KIA's and DOW's websites. Projects that incorporate some of the practices and recommendations described in the SI brochure might receive additional points, resulting in a higher ranking on the DWSRF Project Priority List. The DOW encourages you to contact them with any questions or feedback regarding the SI initiative.

## Questions?

If you have questions about completing the questionnaire or project eligibility for priority list inclusion, please contact Cindy McDonald (cindy.mcdonald@ky.gov) or Shafiq Amawi (shafiq.amawi@ky.gov) at the Water Infrastructure Branch or call (502) 564-3410. For more information on loan requirements, terms or eligibility, please contact Jeff Abshire (jeff.abshire@ky.gov) or Brandi Armstrong (brandi.armstrong@ky.gov) at KIA or call (502) 573-0260.

Sincerely,

John E. Covington, III, Executive Director
Kentucky Infrastructure Authority

# APPENDIX C

# PRIORITY SYSTEM GUIDANCE DOCUMENT

# KENTUCKY
# Priority System Guidance Document

For Drinking Water Projects
Eligible To Be Funded By The

KENTUCKY DRINKING WATER STATE REVOLVING FUND

**2016 Funding Cycle**


**ENERGY AND ENVIRONMENT CABINET**
**Department for Environmental Protection**
**Division of Water**

200 Fair Oaks Lane – 4th Floor
Frankfort, Kentucky 40601
Phone: (502) 564-3410
Fax: (502) 564-0111
water.ky.gov

# Table of Contents

# I. INTRODUCTION

## PURPOSE

The Drinking Water State Revolving Fund (DWSRF) priority system was developed to prioritize eligible projects for funding from the DWSRF. The DWSRF funds are intended to facilitate the ability of a Public Water System (PWS) to obtain and maintain financial, managerial and technical capabilities for compliance with the Safe Drinking Water Act (SDWA). This includes compliance with existing and future national drinking water standards or other activities to significantly further the health protection objectives of the SDWA.

## METHODOLOGY

The structure of the priority system incorporates new rules and initiatives promulgated since the 1996 amendments to the SDWA. The amendments encompass financial, managerial and technical capacity; Surface Water Treatment Rule; Total Coliform Rule; Lead and Copper Rule; Asbestos Standard; Enhanced Surface Water Treatment Rule; Disinfectants and Disinfection Byproducts Rule; Groundwater Rule; and best available and affordable technology. Projects are prioritized based on scores derived from a comprehensive review of each project using the DWSRF ranking criteria.

## PRIORITY FORMULA

Violations of drinking water standards occur for a variety of reasons. A proactive approach has been developed to determine priority based on infrastructure needs to address the goals of the SDWA.

## APPLYING THE PRIORITY SYSTEM TO PROJECTS

The Division of Water (DOW) assigns points in each of nine categories: Regionalization, Public Health Criteria-Treatment, Public Health Criteria-Distribution, Extension of Service, Security, Compliance and Enforcement, Public Water System Financial Need, Asset Management, Sustainable Infrastructure, and Project Readiness (see Table 1, DWSRF Ranking Criteria). Points are based on information provided by PWSs and/or their consultants, and submitted by local area development districts through the Water Resources Information System (WRIS). The total score is of the sum of all points assigned in each of the nine categories.

## TIE BREAKER

It is possible the points assignment process could result in two or more projects having the same total score. A tie breaker has been developed for this situation considering the following factors: maintaining priorities to be funded in the order as set forth by the priority formula, expending DWSRF dollars to maximize the benefit toward compliance with the SDWA, and providing funding of projects that are affordable to the households that benefit from the project.

Those PWSs serving a population of 10,000 people or less are prioritized over those serving populations over 10,000. Consideration is then given to those projects with existing enforcement actions (i.e. Agreed Orders). Lastly, the financial need as evidenced by the median household income (American Community Survey 5-Year Estimates 2009-2013) of the applicant is taken into consideration.

# II. REGIONALIZATION

This category allows affordable alternatives for a PWS to obtain and maintain financial, managerial and technical capabilities to comply with the SDWA through mergers, interconnections, and emergency planning.

**A. Elimination of a Public Water System (PWS) through a merger or acquisition (elimination of a PWSID)**

Under this category, points will be provided to projects promoting regionalization. Section (a) applies points to water systems absorbing another water system. This is not the same as an interconnection where two or more water systems provide potable water supplies to one another, but retain their own individual identities and PWSIDs. The merger must result in the dissolution of the PWSID of the receiving PWS. (Example: Sun Water Works is extending a transmission main to Beach Water Works because their wells are contaminated. Under formal agreement, the entire Beach Water Works service area will now be converted to the Sun Water Works service area and the wells and treatment plant will be closed. Beach Water Works will no longer be in the business of producing water or maintaining a distribution system and therefore will not have a PWSID number.)

**Points Received: 50**

**B. Elimination of a water treatment plant as a result of an interconnection**

This section applies points to a project that will result in the elimination of a water treatment plant, as a result of an interconnection, that is in need of rehabilitation, modification or expansion to comply with the SDWA. This is different from a merger in that both utilities will remain solvent with individual PWSIDs. (Example: Coral Water Works is extending a transmission main to the Reef Water Works system that will allow the aging water treatment plant to be closed down. Coral Water Works will provide all of the water to the Reef Water Works distribution system under a purchase contract, however, Reef Water Works will remain in business as a distribution system only and will retain a PWSID number.)

**Points Received: 25**

**C. Acquisition of a supplemental potable water supply**

**D. Replacement or supplemental raw water supply**

**E. Acquisition of an emergency potable water supply**

A PWS is responsible for ensuring, even in drought conditions, sufficient quantity and quality of raw and potable water supplies are available to meet demands. This section provides points to projects that are securing supplemental potable water supplies rather than constructing a new water treatment plant; or to projects looking to replace an existing raw water supply. This section also provides points to those utilities that protect public health by planning for emergencies though an interconnection with a neighboring utility.

**Points Received: 15 each**

RESTRICTIONS:

Reservoirs, dams, dam rehabilitation, and water rights are not eligible for funding from the DWSRF.

# III. PUBLIC HEALTH CRITERIA – TREATMENT

This category provides points to treatment projects that will provide improved compliance with the National Drinking Water Standards of the SDWA.

**A. Treatment Facilities**

**i) Construction of a new water treatment plant (where one does not presently exist) or expansion of an existing plant**

New water treatment facilities or water treatment plant expansions are limited to 20 points unless a need for best available technology is demonstrated based on raw or finished water quality or other extenuating circumstances. Additional points may be applied under B, C, or D for such cases.

Examples include but are not limited to, the construction of a new water treatment plant or an expansion of an existing water works facility where it is unfeasible to purchase a supplemental supply from another PWS; construction of a new intake structure; or upgrade of intake pumps or any other treatment processes resulting in an increase in the production capacity of the plant, etc.

**Points Received: 20**

**ii) Rehabilitation and/or upgrade of the water treatment plant**

Water treatment plant rehabilitation projects are limited to 10 points unless the proposed project is needed to acquire or maintain compliance with the National Drinking Water Standards of the SDWA. In such cases, additional points may be applied under B, C, or D.

Examples may include, but are not limited to the functional replacement of treatment processes due to age/condition, the upgrade of any treatment process to meet drinking water standards with no increase in treatment capacity, etc.

**Points Received: 10**

**iii) Redundant processes/emergency power generators**

Redundant processes and/or emergency power generators at the treatment facilities.

**Points received: 10 for each unit**

**B. Treatment – Acute Public Health Risk**

**i) Infrastructure options to meet Cryptosporidium removal/inactivation requirements**

Examples of treatment projects include, but are not limited to, installation of membrane technology, additional filtration, improvements to sedimentation basins such as softening or construction of a pre-sedimentation basin, ozone, UV, chlorine dioxide, etc.

**Points Received: 25**

**ii) Modifications to meet CT inactivation requirement**

Disinfection techniques needed to comply with CT inactivation requirements of the Surface Water Treatment Rule and the Groundwater Rule. Examples of treatment projects include, but are not limited to, alternate disinfection feed points, baffling of clearwells, etc.

**Points Received: 20**

**C. Treatment – Chronic Public Health Risk**

**i) Modifications to address disinfection byproducts requirements**

Examples of treatment projects include, but are not limited to, changing disinfectants, modification of disinfection feed points, Granular Activated Carbon (GAC), coagulation, etc.

**Points Received: 25**

**ii) Modifications to address VOC, IOC, SOC, radionuclide requirements**
Examples of treatment projects include, but are not limited to, aeration, improved coagulation, non-conventional treatments, air stripping, new chemical feed, etc.
**Points Received: 15**

**D. Treatment- Infrastructure to address Secondary Contaminants**
Examples of treatment projects under II(d) to address Secondary Contaminants include, but are not limited to, water softening, sedimentation basin covers, corrosion control systems, green sand filters, new chemical feed system for manganese removal, etc.
**Points Received: 10**

RESTRICTIONS:
Points will be assigned to project components under B, C, and D where a need for the project can be adequately demonstrated. A history of non-compliance may be required for certain treatment applications in order to receive points. In some cases, specific monitoring must warrant the need for the project in order to receive points.

# IV. PUBLIC HEALTH CRITERIA – DISTRIBUTION

This category provides points to distribution projects that will provide improved compliance with the National Drinking Water Standards of the SDWA.

**A. Hydraulics/Storage**
Examples of projects under this category include waterline replacements, new water storage tanks or pump stations, and rehabilitation of existing storage tanks or pump stations. The applicant must be prepared to demonstrate the need for the project whether it be loss of pressure, inadequate storage, or significant water loss to support the need for the project. For waterline replacement projects, scores are applied based upon the number of roads that are affected. ***It is imperative*** road names be provided in the Project Profile to receive all applicable points.

**i) Replacement of inadequately sized, age deteriorated, or lead/asbestos-cement waterlines**
**Points Received: 10 for each road**

**ii) Rehabilitation or replacement of a water storage tank**
**Points Received: 30 for each tank**

**iii) New water storage tank**
**Points Received: 20 for each tank**

**iv) New or rehabilitated pump station (not associated with a new tank)**
**Points Received: 10 for each pump station**

**B. Finished Water Quality**

**i) Infrastructure to address inadequate turnover and disinfection byproducts (DBPs)**
Examples include the installation of a water storage tank mixing system to address a DBP issue, or looping of waterlines to improve service. If unable to comply with the DBP Rule, Lead and Copper Rule, or the Asbestos Standard information should be provided in the project profile to support the need.
**Points Received: 20**

**ii) Redundant equipment/emergency power generators** **10 pts.**
Provide redundancy or emergency power within the distribution system
**Points Received: 10 for each unit**

RESTRICTIONS:
Identify the primary reason for the replacement in the Project Profile. A waterline may in fact, need to be replaced because it is both undersized and made up of asbestos-cement. However, points can only be applied under one category (see example below). If a project consists of multiple replacements throughout an area, each alignment can be assigned 10 points for either inadequately sized lines; leaks, breaks or restrictive flows; or asbestos cement or lead waterlines.

*Example:*
*Project A consists of a county-wide waterline replacement project broken down as follows:*

| | | |
|---|---|---|
| *i.* | *Replacement of 2,000 LF of undersized waterline along **Riley Road*** | *10 pts.* |
| *ii.* | *Replacement of 3,000 LF of undersized waterline along **Fair Road*** | *10 pts.* |
| *iii.* | *Replacement of 1,000 LF of asbestos-cement waterline along **Oaks Rd.*** | *10 pts.* |
| | | *30 pts.* |

*On the contrary, if a waterline is both undersized and is composed of asbestos-cement (within the same alignment), only 10 points could be applied, as follows:*

- *Replacement of 2,000 LF of undersized waterline along KY Road* *10 pts.*
- *Replacement of 2,000 LF of asbestos-cement waterline along KY Road* *0 pts.*

*10 pts.*

**C. Extension of Service**
This section applies points to waterline extension projects. The waterline extension must be for the use of existing households and to serve areas where existing potable water supplies such as wells or cisterns are contaminated or where there is insufficient financial and technical capability to maintain a compliant water supply system. Twenty points will be applied to a waterline extension project under this category for the first 10 households. Every 10 households thereafter will accumulate two additional points, to be added to the total score.
**Points Received: 20 up to 10 existing homes and**
**2 for every additional 10 existing homes thereafter**

*Example:*
*Project A consists of a county-wide waterline extension project, extending approximately 40,000 LF of waterlines to 150 existing homes throughout the county.*

- *First 10 households* *20 pts.*
- *140 remaining households (14*2pts=28pts)* *28 pts.*

*Total: 48 pts.*

RESTRICTIONS:
The DWSRF cannot fund waterline extension projects to primarily accommodate growth. The need must apply to at least 50 percent of the households potentially affected by the project.

# V. SECURITY

**A. Measures taken at the water treatment plant facilities or within the distribution system**
This category allows points to be applied to a project for measures taken at the physical location of the water treatment plant facilities or within the distribution system, with the intent to prevent, deter, and readily respond to terroristic acts. Examples include, but are not limited to, fencing, video surveillance of treatment and/or storage facilities, alarms, signs, lock gates, and radio intercom systems. Each security component will receive 5 points.

**Points Received: 5 for each component**

RESTRICTIONS:
Salaries for security personnel are not eligible for funding through the DWSRF.

## VI. COMPLIANCE AND ENFORCEMENT

**A. Entities with executed Agreed Orders or Court Orders**
Project is necessary for achieving full or partial compliance with an Agreed Order or other enforcement action. The project must address the terms of the Agreed Order.
**Points Received: 50**

**B. Projects with violations that achieve voluntary compliance before being referred for an enforcement case**
Project must address a compliance issue with a history of multiple violations (Notices of Violation).
**Points Received: 25**

## VII. PUBLIC WATER SYSTEM FINANCIAL NEED

**A. Borrowers with a median household income (MHI) below 80 percent of the Commonwealth's MHI**
As determined by the current American Community Survey (ACS) 5-Year Estimate
**Points Received: 20**

**B. Borrowers with a MHI between 80 and 100 percent of the Commonwealth's MHI**
As determined by the current American Community Survey (ACS) 5-Year Estimate
**Points Received: 10**

## VIII. ASSET MANAGEMENT

**A. System has or is developing an Asset Management Program or similar planning document**
Points will be given if the system has mapped its treatment and collection system and analyzed conditions, including risks of failure, expected dates of renewals and ultimate replacements, and sources and amounts of revenues needed to finance operation, maintenance, and capital needs (i.e. Capital Improvement Plan (CIP), Asset Inventory Report). Points will also be given to systems in the process of developing an Asset Management Program or similar planning document. To obtain points under this category, evidence of the program must be uploaded in WRIS.
**Points Received: 20 for Fully Operational Asset Management Program**
**10 or Asset Management Program Under Development**

**B. System has developed appropriate rate structures to build, operate, and maintain the water works**
**Points Received: 10**

**C. System has specifically allocated funds for the rehabilitation and replacement of aging and deteriorating infrastructure**
**Points Received: 10**

To obtain points under this category, supporting documents (Asset Management Program, Capital Improvement Plan, rate structure, budget, etc.) must be uploaded into the WRIS.

# IX. SUSTAINABLE INFRASTRUCTURE

## A. Green Infrastructure

Green stormwater infrastructure includes a wide array of practices at multiple scales managing wet weather and maintaining and restoring natural hydrology by infiltration, evapotranspiration, and harvesting and reuse. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains, and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavement, and cisterns.

**Points Received: 5 each with a maximum of 10**

*Examples:*

- *Pervious or porous pavement*
- *Biorentention*
- *Green roofs*
- *Rainwater harvesting/cisterns*
- *Gray water use*
- *Xeriscape*
- *Landscape conversion programs*
- *Retrofitting or replacing existing irrigation systems with moisture and rain sensing equipment*

Projects That Do Not Meet the Definition of Green Infrastructure:

- Stormwater controls that have impervious or semi-impervious liners and provide no compensatory evapotranspirative or harvesting function for stormwater retention.
- Stormwater ponds that serve an extended detention function and/or extended filtration. This includes soil-lined detention basins.
- In-line and end-of-pipe treatment systems that only filter or detain stormwater.
- Underground stormwater control and treatment devices such as swirl concentrators, hydrodynamic separators, baffle systems for grit, trash removal/floatables, oil and grease, inflatable booms and dams for in-line underground storage and diversion of flows.
- Stormwater conveyance systems that are not soil/vegetation based (swales) such as pipes and concrete channels. Green infrastructure projects that include pipes to collect stormwater may be justified as innovative environmental projects.

## B. Water Efficiency

EPA's WaterSense program defines water efficiency as the use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future.

**Points Received: 5 each with a maximum of 10**

*Examples:*

- *Installing or retrofitting water efficient devices such as plumbing fixtures and appliances, for example: showerheads, toilets, urinals, and other plumbing devices*
- *Implementation of incentive programs to conserve water such as rebates*

- *Installing WaterSense labeled products (http://www.epa.gov/watersense/index.html)*
- *Installing any type of water meter in previously unmetered areas if rate structures are based on metered use or includes backflow prevention devices if installed in conjunction with water meter.*
- *Replacing existing broken/malfunctioning water meters with Automatic Meter Reading systems (AMR), meters with built in leak detection, or backflow prevention devices if installed in conjunction with water meter replacement.*
- *Retrofitting/adding AMR capabilities or leak equipment to existing meters (not replacing the meter itself).*
- *Conducting water utility audits, leak detection studies, and water use efficiency baseline studies, which are reasonably expected to result in a capital project or in a reduction in demand to alleviate the need for additional capital investment.*
- *Developing conservation plans/programs reasonably expected to result in a water conserving capital project or in a reduction in demand to alleviate the need for additional capital investment.*
- *Recycling and water reuse projects that replace potable sources with non-potable sources such as gray water, condensate, and wastewater effluent reuse systems (where local codes allow the practice) and extra treatment costs and distribution pipes associated with water reuse.*
- *Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems, including moisture and rain sensing controllers.*
- *Projects that result from a water efficiency related assessments (such as water audits, leak detection studies, conservation plans, etc) as long as the assessments adhered to the standard industry practices referenced above.*
- *Distribution system leak detection equipment, portable or permanent.*
- *Automatic flushing systems (portable or permanent).*
- *Pressure reducing valves (PRVs).*
- *Internal plant water reuse (such as backwash water recycling).*
- *Water meter replacement with traditional water meters**
- *Distribution pipe replacement or rehabilitation to reduce water loss and prevent water main breaks**
- *Storage tank replacement/rehabilitation to reduce water loss**
- *New water efficient landscape irrigation system (where there currently is not one).**

Projects That Do Not Meet the Definition of Water Efficiency:

- Covering open, finished water reservoirs

**C. Energy Efficiency**

Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

**Points Received: 10 each with no maximum**

*Examples:*

- *Renewable energy projects, which are part of a public health project, such as wind, solar, geothermal, and micro-hydroelectric that provide power to a utility (http://www.epa.gov/cleanenergy). Micro-hydroelectric projects involve capturing the energy from pipe flow.*
- *Utility-owned renewable energy projects can be located on-site or off-site, includes the portion of a publicly owned renewable energy project that serves the utility's energy needs, and must feed into the grid that the utility draws from and/or there is a direct connection.*
- *Utility energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas, which are reasonably expected to result in*

*energy efficiency capital projects or in a reduction in demand to alleviate the need for additional capital investment.*

- *Energy efficient retrofits, upgrades, or new pumping systems and treatment processes (including variable frequency drives (VFDs)).**
- *Pump refurbishment to optimize pump efficiency (such as replacing or trimming impellers if pumps have too much capacity, replacing damaged or worn wearing rings/seals/bearings, etc.).**
- *Projects that result from an energy efficiency related assessments (such as energy audits, energy assessment studies, etc).**
- *Projects that cost effectively eliminate pumps or pumping stations. **
- *Projects that achieve the remaining increments of energy efficiency in a system that is already very efficient.**
- *Upgrade of lighting to energy efficient sources (such as metal halide pulse start technologies, compact fluorescent, light emitting diode, etc).**
- *Automated and remote control systems (SCADA) that achieve substantial energy savings (see AWWA M2 Instrumentation and Control).**

Projects That Do Not Meet the Definition of Energy Efficiency:

- Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency. (Note: replacing it with higher efficiency equipment requires a business case)
- Hydroelectric facilities, except micro-hydroelectric projects. Micro-hydroelectric projects involve capturing the energy from pipe flow.

**D. Environmentally Innovative**

Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way.
**Points Received: 5 each with a maximum of 10**

*Examples:*

- *Total/integrated water resources management planning, or other planning framework where project life cycle costs (including infrastructure, energy consumption, and other operational costs) are minimized, which enables communities to adopt more efficient and cost-effective infrastructure solutions.*
- *Plans to improve water quantity and quality associated with water system technical, financial, and managerial capacity.*
- *Eligible source water protection planning, including periodic, updated, or more detailed source water delineation or assessment as part of a more comprehensive source water*
  *protection program; or source water monitoring (not compliance monitoring) and modeling as part of a more comprehensive source water protection program.*
- *Planning activities by a utility to prepare for adaptation to the long-term effects of climate change and/or extreme weather.*
- *Utility Sustainability Plan consistent with EPA's SRF sustainability policy.*
- *Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry), as long as it is being done for a facility which is eligible for DWSRF assistance.*
- *Source Water Protection Implementation Projects such as voluntary, incentive based source water protection measures , where the state primacy agency has determined that the use of such measures will reduce or preclude the need for treatment.*
- *Construction of US Building Council LEED certified buildings, or renovation of an existing building, owned by the utility, which is part of an eligible DWSRF project. All building costs are eligible, not just stormwater, water efficiency and energy efficiency related costs. Costs are not limited to the incremental additional costs associated with LEED certified buildings. Any level of certification (Platinum, Gold, Silver, Certified) is eligible.*

- *Projects, or components of projects, that result from total/integrated water resources management planning (including climate change) that are DWSRF eligible.**
- *Projects that significantly reduce or eliminate the use of chemicals in water treatment.**
- *Treatment technologies or approaches that significantly reduce the volume of residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals.**
- *Trenchless or low impact construction technology.**
- *Using recycled materials or re-using materials on-site.**
- *Educational activities and demonstration projects for water or energy efficiency (such as rain gardens). **
- *Projects that achieve the goals/objectives of utility asset management plans.**

Projects That Do Not Meet the Definition of Environmentally Innovative:

- Higher sea walls to protect water infrastructure facilities from sea level rise.
- Reflective roofs at water infrastructure facilities to combat heat island effect.

# X. PROJECT READINESS

To be considered "project ready", the borrower must have completed a majority of the planning phase and be ready to bid the project. All three of the criteria under this category must be met in order to receive the full 30 points.

**Note:** A full environmental review does not have to be finalized however the cross-cutter scoping process must be complete. Plans do not have to be approved by the Division of Water, but they must have been submitted for review. Potential borrowers may be asked to provide proof to substantiate claims.

**A. Borrower has submitted complete technical plans to the Division of Water; and,**

**B. Borrower has conducted a full environmental review for all components of the project or has completed the cross-cutter scoping process (including eClearinghouse, US Fish and Wildlife Service, National Resources Conservation Service, U. S. Fish and Wildlife, and U. S. Army Corps of Engineers); and,**

**C. Borrower has received funding commitments from other funding sources; or the DWSRF is the sole source of funding.**

**Points Received: 30**

# DWSRF Ranking Criteria

| | Regionalization | Possible Points |
|---|---|---|
| A | Elimination of a Public Water System (PWS) through a merger or acquisition (*Elimination of a PWSID)*. | 50 |
| B | Elimination of a water treatment plant through an interconnection | 25 |
| C | Acquisition of a supplemental potable water supply | 15 |
| D | Replacement or supplemental raw water source | 15 |
| E | Acquisition of an emergency potable water supply | 15 |

| | Public Health Criteria – Treatment | Possible Points |
|---|---|---|
| A | Treatment Facilities<br>i) Construction of a new water treatment plant (where one does not presently exist) or expansion<br>ii) Rehabilitation and/or upgrade of the water treatment plant<br>iii) Redundant processes/ emergency power generators | <br>20<br>10<br>10 |
| B | Treatment – Acute Public Health Risk<br>i) Infrastructure options to meet Cryptosporidium removal/ inactivation requirements<br>ii) Modifications to meet CT inactivation requirement | <br>25<br>20 |
| C | Treatment – Chronic Public Health Risk<br>i) Modifications to address disinfection byproducts requirements<br>ii) Modifications to address VOC, IOC, SOC, radionuclide requirements | <br>25<br>15 |
| D | Treatment – Infrastructure to address Secondary Contaminants | 10 |

| | Public Health Criteria – Distribution | Possible Points |
|---|---|---|
| A | Hydraulics/Storage<br>(i) Replacement of inadequately sized waterlines, lines with leaks, breaks, or restrictive flows due to age, or lead or asbestos-cement pipe<br>(ii) Rehabilitation or replacement of a water storage tank<br>(iii) New water storage tank<br>(iv) New or rehabilitated pump station (not an appurtenance to a new tank) | <br>10<br><br>30<br>20<br>10 |
| B | Finished Water Quality<br>(i) Infrastructure to address inadequate turnover and disinfection byproducts<br>(ii) Redundant equipment/emergency power generators | <br>20<br>10 |
| C | Extension of Service<br>Waterline extensions to serve existing households with inadequate domestic water supplies such as contaminated wells or cisterns (Up to 10 existing homes) | 20 |
| | Two additional points for every additional 10 households thereafter | 2 |

| | Security | Possible Points |
|---|---|---|
| | Measures taken at the water treatment plant facilities or within the distribution system | 5 |

| | Compliance and Enforcement | Possible Points |
|---|---|---|
| A | Entities with executed Court Orders or Agreed Orders<br>(*Project must address the terms of the Agreed Order*) | 50 |
| B | Projects with violations that achieve voluntary compliance before being referred for an enforcement case | 25 |

| | Public Water System Financial Need | Possible Points |
|---|---|---|
| A | Borrowers with a median household income (MHI) below 80 percent of the Commonwealth's MHI as determined by the current American Community Survey (ACS) 5-Year Estimate | 20 |
| B | Borrowers with a MHI between 80 and 100 percent of the Commonwealth's MHI as determined by the current ACS 5-Year Estimate | 10 |

| | Asset Management | Possible Points |
|---|---|---|
| A | System has or is developing an Asset Management Program or similar planning document | 20 for fully functional<br>10 for under development |
| B | System has developed appropriate rate structures to build, operate, and maintain the water works | 10 |
| C | System has specifically allocated funds for the rehabilitation and replacement of aging and deteriorating infrastructure | 10 |

| | Green Projects (See Green Project Reserve Guidance Document) | Possible Points |
|---|---|---|
| A | Green Infrastructure : Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintains and restores natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains, and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site- and neighborhood-specific practices, such as:<br>• Bioretention<br>• Trees<br>• Green roofs<br>• Permeable pavement<br>• Cisterns | 5 each/10 maximum |
| B | Water Efficiency: The use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future. Examples include:<br>• Installing or retrofitting water efficient devices such as plumbing fixtures and appliances (toilets, showerheads, urinals)<br>• Installing any type of water meter in previously unmetered areas (can include backflow prevention if in conjunction with meter replacement)<br>• Replacing existing broken/malfunctioning water meters with AMR or smart meters, meters with leak detection, backflow prevention<br>• Retrofitting/adding AMR capabilities or leak equipment to existing meters<br>• Conducting water utility audits, leak detection studies, and water use efficiency baseline studies, which are reasonably expected to result in a capital project or in a reduction in demand to alleviate the need for additional capital investment<br>• Developing conservation plans/programs reasonable expected to result in a water conserving capital project or in a reduction in demand to alleviate the need for capital investment<br>• Recycling and water reuse projects that replace potable sources with non-potable sources (Gray water, condensate, and wastewater effluent reuse systems, extra treatment or distribution costs associated with water reuse)<br>• Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems<br>• Water meter replacement with traditional water meters *<br>• Distribution pipe replacement or rehabilitation to reduce water loss and prevent water main breaks*<br>• Storage tank replacement/rehabilitation to reduce water loss*<br>• New water efficient landscape irrigation system, where there currently is not one* | 5 each/10 maximum |

| | | |
|---|---|---|
| C | Energy Efficiency: Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water projects, use energy in a more efficient way, and/or produce/utilize renewable energy. Examples include:<br><br>• Renewable energy projects, which are part of a public health project, such as wind, solar, geothermal, and micro-hydroelectric that provides power to a utility<br>• Utility-owned or publically-owned renewable energy projects<br>• Utility energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas<br>• Energy efficient retrofits, upgrades, or new pumping systems and treatment processes (including variable frequency drives (VFDs)*<br>• Pump refurbishment to optimize pump efficiency*<br>• Projects that result from an energy efficient related assessment*<br>• Projects that cost effectively eliminate pumps or pumping stations*<br>• Projects that achieve the remaining increments of energy efficiency in a system that is already very efficient*<br>• Upgrade of lighting to energy efficient sources*<br>• Automated and remote control systems (SCADA) that achieve substantial energy savings* | 10 each with no maximum |
| D | Environmentally Innovative: Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way. Examples include:<br><br>• Total integrated water resources management planning, or other planning framework where project life cycle costs are minimized, which enables communities to adopt more efficient and cost-effective infrastructure solutions<br>• Plans to improve water quantity and quality associated with water system technical, financial, and managerial capacity<br>• Source water protection planning (delineation, monitoring, modeling)<br>• Planning activities to prepare for adaptation to the long-term affects of climate change and/or extreme weather<br>• Utility sustainability plan consistent with EPA's sustainability policy<br>• Greenhouse gas inventory or mitigation plan and submission of a GHG inventory to a registry as long as it is being done for an SRF eligible facility<br>• Construction of US Building Council LEED certified buildings, or renovation of an existing building<br>• Projects that significantly reduce or eliminate the use of chemicals in water treatment*<br>• Treatment technologies or approaches that significantly reduce the volume of residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals*<br>• Trenchless or low impact construction technology*<br>• Using recycled materials or re-using materials on-site*<br>• Educational activities and demonstration projects for water or energy efficiency (such as rain gardens)*<br>• Projects that achieve the goals/objectives of utility asset management plans* | 5 each/10 maximum |

*Denotes that a business case may be required.

| | **Project Readiness** | **Possible Points** |
|---|---|---|
| | A. Borrower has submitted complete technical plans and specifications to the Division of Water; and,<br><br>B. Borrower has conducted a full environmental review for all components of the project or has completed the cross-cutter scoping process (including eClearinghouse, USFWS, NRCS, and USACofE); and,<br><br>C. Borrower has received funding commitments from other funding sources, or the DWSRF is the sole source of funding | 30 |

# APPENDIX D

# GREEN RESERVE GUIDANCE

The FFY 2015 capitalization grant does not require funding of green projects. However, additional points were awarded in the ranking process for green components. The attached guidance from prior years gives examples of green project activities.

## PART B – DWSRF GPR SPECIFIC GUIDANCE

### DWSRF Eligibility Principles

**State SRF programs are responsible for identifying projects that count toward GPR. The following overarching principles, or decision criteria, apply to all projects that count toward GPR and will help states identify projects.**

0.1 All GPR projects and activities must otherwise be eligible for DWSRF funding. The GPR requirement does not create new funding authority beyond that described in Section 1452 of the SDWA.

0.2 GPR projects and activities must meet the definition of one of the four GPR categories. The individual GPR categories do not create new eligibility for the DWSRF. The projects that count toward GPR must otherwise be eligible for DWSRF funding.

0.3 GPR projects and activities must further the goals stated in Section 1452 of the Safe Drinking Water Act.

0.4 Projects and activities that utilize the DWSRF set-asides can also be eligible for GPR. Planning and assessment activities, such as conducting water or energy audits, are eligible, as well as green-oriented capacity development, source water protection, and total/integrated water resources management planning activities. Where applicable, the pertinent set-asides that can be used are noted in the next section.

### DWSRF Technical Guidance

**The following sections outline the technical aspects for the DWSRF Green Project Reserve. It is organized by the four categories of green projects: green infrastructure, water efficiency, energy efficiency, and environmentally innovative activities. Categorically green projects are listed, as well as projects that are ineligible. Design criteria for business cases and example projects that would require a business case are also provided.**

### 1.0 GREEN INFRASTRUCTURE

1.1 Definition: Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintains and restores natural hydrology by infiltrating, evapotranspiring and harvesting and using stormwater. On a regional scale, green infrastructure is the preservation and restoration of natural landscape features, such as forests, floodplains and wetlands, coupled with policies such as infill and redevelopment that reduce overall imperviousness in a watershed. On the local scale, green infrastructure consists of site- and neighborhood-specific practices, such as bioretention, trees, green roofs, permeable pavements and cisterns.

1.2 Categorical Projects The following types of projects, done at a utility-owned facility or as part of a water infrastructure project, can be counted toward the GPR if they are a part of an eligible DWSRF project:

1.2-1 Pervious or porous pavement
1.2-2 Biorentention
1.2-3 Green roofs
1.2-4 Rainwater harvesting/cisterns
1.2-5 Gray water use
1.2-6 Xeriscape
1.2-7 Landscape conversion programs
1.2-8 Retrofitting or replacing existing irrigation systems with moisture and rain sensing equipment

1.3 Projects That Do Not Meet the Definition of Green Infrastructure

1.3-1 Stormwater controls that have impervious or semi-impervious liners and provide no compensatory evapotranspirative or harvesting function for stormwater retention.
1.3-2 Stormwater ponds that serve an extended detention function and/or extended filtration. This includes dirt lined detention basins.
1.3-3 In-line and end-of-pipe treatment systems that only filter or detain stormwater.
1.3-4 Underground stormwater control and treatment devices such as swirl concentrators, hydrodynamic separators, baffle systems for grit, trash removal/floatables, oil and grease, inflatable booms and dams for in-line underground storage and diversion of flows.
1.3-5 Stormwater conveyance systems that are not soil/vegetation based (swales) such as pipes and concrete channels. Green infrastructure projects that include pipes to collect stormwater may be justified as innovative environmental projects pursuant to Section 4.4 of this guidance.

1.4 Decision Criteria for Business Cases

1.4-1 Green infrastructure projects are designed to mimic the natural hydrologic conditions of the site or watershed.
1.4-2 Projects capture, treat, infiltrate, or evapotranspire stormwater on the parcels where it falls and does not include inter basin transfers of water.
1.4-3 GPR project is in lieu of or to supplement municipal hard/gray infrastructure.
1.4-4 Projects considering both landscape and site scale will be most successful at protecting water quality.
1.4-5 Design criteria is available at http://cfpub.epa.gov/npdes/greeninfrastructure/munichandbook.cfm and http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm

## 2.0 WATER EFFICIENCY

2.1 Definition: EPA's WaterSense program defines water efficiency as the use of improved technologies and practices to deliver equal or better services with less water. Water efficiency encompasses conservation and reuse efforts, as well as water loss reduction and prevention, to protect water resources for the future.

2.2 Categorical Projects

2.2-1 Installing or retrofitting water efficient devices such as plumbing fixtures and appliances

2.2-1a For example – showerheads, toilets, urinals, and other plumbing devices

2.2-1b Implementation of incentive programs to conserve water such as rebates

2.2-1c WaterSense labeled products (http://www.epa.gov/watersense/index.html)

2.2-2 Installing any type of water meter in previously unmetered areas:

2.2-2a If rate structures are based on metered use,

2.2-2b Can include backflow prevention devices if installed in conjunction with water meter.

2.2-3 Replacing existing broken/malfunctioning water meters with:

2.2-3a Automatic meter reading systems (AMR), for example:

2.2-3a(i) Advanced metering infrastructure (AMI).

2.2-3a(ii) Smart meters.

2.2-3b Meters with built in leak detection,

2.2-3c Can include backflow prevention devices if installed in conjunction with water meter replacement.

2.2-4 Retrofitting/adding AMR capabilities or leak equipment to existing meters (not replacing the meter itself).

2.2-5 Conducting water utility audits, leak detection studies, and water use efficiency baseline studies, which are reasonably expected to result in a capital project or in a reduction in demand to alleviate the need for additional capital investment.

2.2-5a Funded through set-asides: Small Systems Technical Assistance, State Program Management – Capacity Development, or Local Assistance & Other State Programs – Capacity Development; where consistent with the state capacity development strategy

2.2-5b For standard practices, see AWWA M36 *Water Audits and Loss Control Programs*.

2.2-5c Free Water Audit Software, Version 4.1 (2010) (http://www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=47846&navItemNumber=48155)

2.2-6 Developing conservation plans/programs reasonably expected to result in a water conserving capital project or in a reduction in demand to alleviate the need for additional capital investment.

2.2-6a Funded through set-asides: Small Systems Technical Assistance, State Program Management – Capacity Development, or Local Assistance & Other State Programs – Capacity Development; where consistent with the state capacity development strategy

2.2-6b For standard practices, see AWWA M52 *Water Conservation Programs – A Planning Manual*

2.2-7 Recycling and water reuse projects that replace potable sources with non-potable sources,

2.2-7a Gray water, condensate, and wastewater effluent reuse systems (where local codes allow the practice).

2.2-7b Extra treatment costs and distribution pipes associated with water reuse.

2.2-8 Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems, including moisture and rain sensing controllers.
2.2-9 Projects that result from a water efficiency related assessments (such as water audits, leak detection studies, conservation plans, etc) as long as the assessments adhered to the standard industry practices referenced above.
2.2-10 Distribution system leak detection equipment, portable or permanent.
2.2-11 Automatic flushing systems (portable or permanent).
2.2-12 Pressure reducing valves (PRVs).
2.2-13 Internal plant water reuse (such as backwash water recycling).

2.3 Projects That Do Not Meet the Definition of Water Efficiency
2.3-1 Covering open finished water reservoirs – Federally mandated, so not considered "above and beyond."

2.4 Decision Criteria For Business Cases
2.4-1 Water efficiency can be accomplished through water saving elements or reducing water consumption. This will reduce the amount of water taken out of rivers, lakes, streams, groundwater, or from other sources.
2.4-2 Water efficiency projects should deliver equal or better services with less net water use as compared to traditional or standard technologies and practices.
2.4-3 Efficient water use often has the added benefit of reducing the amount of energy required by a drinking water system, since less water would need to be treated and transported; therefore, there are also energy and financial savings.
2.4-4 Proper water infrastructure management should address where water losses could be occurring in the system and fix or avert them. This could be achieved, for example, by making operational changes or replacing aging infrastructure.

2.5 Example Projects Requiring a Business Case
2.5-1 Water meter replacement with traditional water meters (see AWWA M6 *Water Meters – Selection, Installation, Testing, and Maintenance*).
2.5-2 Distribution pipe replacement or rehabilitation to reduce water loss and prevent water main breaks (see AWWA M28 Rehabilitation of Water Mains).
2.5-3 Storage tank replacement/rehabilitation to reduce water loss.
2.5-4 New water efficient landscape irrigation system (where there currently is not one).

## 3.0ENERGY EFFICIENCY

3.1 Definition: Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water projects, use energy in a more efficient way, and/or produce/utilize renewable energy.

3.2 Categorical Projects[1]

[1] EPA has concluded that existing literature does not support a 20% energy efficiency improvement threshold for drinking water systems; therefore, there is no categorical 20% threshold for pumping/treatment systems for the DWSRF. A business case is required.

3.2-1 Renewable energy projects, which are part of a public health project, such as wind, solar, geothermal, and micro-hydroelectric that provide power to a utility (http://www.epa.gov/cleanenergy). Micro-hydroelectric projects involve capturing the energy from pipe flow.

3.2-1a Utility-owned renewable energy projects can be located on-site or off-site.

3.2-1b Includes the portion of a publicly owned renewable energy project that serves the utility's energy needs.

3.2-1c Must feed into the grid that the utility draws from and/or there is a direct connection.

3.2-2 Utility energy management planning, including energy assessments, energy audits, optimization studies, and sub-metering of individual processes to determine high energy use areas, which are reasonably expected to result in energy efficiency capital projects or in a reduction in demand to alleviate the need for additional capital investment.

3.2-2a Funded through set-asides: Small Systems Technical Assistance, State Program Management – Capacity Development, or Local Assistance & Other State Programs – Capacity Development; where consistent with the state capacity development strategy

3.2-2b For standard energy management practices, see *Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities*, located at http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf

3.2-2c Energy Efficiency Step-By-Step Guide: http://www.epa.gov/region09/waterinfrastructure/howto.html

3.2-3 National Electric Manufacturers Association (NEMA) Premium energy efficiency motors (http://www.nema.org/gov/energy/efficiency/premium/)

3.3 Projects That Do Not Meet the Definition of Energy Efficiency

3.3-1 Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency. (Note: replacing it with higher efficiency equipment requires a business case)

3.3-2 Hydroelectric facilities, except micro-hydroelectric projects. Micro-hydroelectric projects involve capturing the energy from pipe flow.

3.4 Decision Criteria for Business Cases

3.4-1 Projects should include products and practices which will decrease environmental impacts, such as reducing greenhouse gas emissions, and provide financial savings.

3.4-2 Projects should include approaches to integrate energy efficient practices into daily management and long-term planning (http://water.epa.gov/infrastructure/sustain/energyefficiency.cfm).

3.4-3 Operator training in conjunction with any energy savings project is strongly encouraged in order to maximize the energy savings potential.

3.4-4 Using existing tools such as Energy Star‟s Portfolio Manager (http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager) or Check Up Program for Small Systems (CUPSS) (http://www.epa.gov/cupss/) to document current energy usage and track anticipated savings.

3.5 Example Projects Requiring a Business Case

3.5-1 Energy efficient retrofits, upgrades, or new pumping systems and treatment processes (including variable frequency drives (VFDs)).

3.5-2 Pump refurbishment to optimize pump efficiency (such as replacing or trimming impellers if pumps have too much capacity, replacing damaged or worn wearing rings/seals/bearings, etc.).

3.5-3 Projects that result from an energy efficiency related assessments (such as energy audits, energy assessment studies, etc), that are not otherwise designated as categorical.

3.5-4 Projects that cost effectively eliminate pumps or pumping stations.

3.5-5 Projects that achieve the remaining increments of energy efficiency in a system that is already very efficient.

3.5-6 Upgrade of lighting to energy efficient sources (such as metal halide pulse start technologies, compact fluorescent, light emitting diode, etc).

3.5-7 Automated and remote control systems (SCADA) that achieve substantial energy savings (see AWWA M2 *Instrumentation and Control*).

## 4.0 ENVIRONMENTALLY INNOVATIVE

4.1 Definition: Environmentally innovative projects include those that demonstrate new and/or innovative approaches to delivering services or managing water resources in a more sustainable way.

4.2 Categorical Projects

4.2-1 Total/integrated water resources management planning, or other planning framework where project life cycle costs (including infrastructure, energy consumption, and other operational costs) are minimized, which enables communities to adopt more efficient and cost-effective infrastructure solutions.

4.2-1a Funded through set-asides: Small Systems Technical Assistance, State Program Management, or Local Assistance & Other State Programs.

4.2-1b Plans to improve water quantity and quality associated with water system technical, financial, and managerial capacity.

4.2-1c Eligible source water protection planning.

4.2-1c(i) Periodic, updated, or more detailed source water delineation or assessment as part of a more comprehensive source water protection program.

4.2-1c(ii) Source water monitoring (not compliance monitoring) and modeling as part of a more comprehensive source water protection program.

4.2-1c(iii) http://www.epa.gov/safewater/dwsrf/pdfs/source.pdf

4.2-1d Planning activities by a utility to prepare for adaptation to the long-term affects of climate change and/or extreme weather.
4.2-1d(i) Office of Water – Climate Change and Water website: http://www.epa.gov/water/climatechange/

4.2-2 Utility Sustainability Plan consistent with EPA"s SRF sustainability policy.

4.2-3 Greenhouse gas (GHG) inventory or mitigation plan and submission of a GHG inventory to a registry (such as Climate Leaders or Climate Registry), as long as it is being done for a facility which is eligible for DWSRF assistance.
4.2-3a EPA Climate Leaders: http://www.epa.gov/climateleaders/basic/index.html
4.2-3b Climate Registry – http://www.theclimateregistry.org/

4.2-4 Source Water Protection Implementation Projects
4.2-4a Voluntary, incentive based source water protection measures pursuant to Section 1452(k)(1)(A)(ii), where the state primacy agency has determined that the use of such measures will reduce or preclude the need for treatment. Under the FY 2010 appropriation, additional subsidization for these measures may be provided in the form of principal forgiveness or negative interest rate loans.

4.2-5 Construction of US Building Council LEED certified buildings, or renovation of an existing building, owned by the utility, which is part of an eligible DWSRF project.
4.2-5a Any level of certification (Platinum, Gold, Silver, Certified).
4.2-5b All building costs are eligible, not just stormwater, water efficiency and energy efficiency related costs. Costs are not limited to the incremental additional costs associated with LEED certified buildings.
4.2-5c http://www.usgbc.org/DisplayPage.aspx?CategoryID=19

4.3 Projects That Do Not Meet the Definition of Environmentally Innovative

4.3-1 Higher sea walls to protect water infrastructure facilities from sea level rise.

4.3-2 Reflective roofs at water infrastructure facilities to combat heat island effect.

4.4 Decision Criteria for Business Cases

4.4-1 State programs are allowed flexibility in determining what projects qualify as innovative in their state based on unique geographical and climatological conditions.
4.4-1a Technology or approach whose performance is expected to address water quality but the actual performance has not been demonstrated in the state; or
4.4-1b Technology or approach that is not widely used in the state, but does perform as well or better than conventional technology/approaches at lower cost; or
4.4-1c Conventional technology or approaches that are used in a new application in the state.

4.5 Example Projects Requiring A Business Case

4.5-1 Projects, or components of projects, that result from total/integrated water resources management planning (including climate change) consistent with the Decision Criteria for environmentally innovative projects and that are DWSRF eligible.

4.5-2 Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the Decision Criteria for environmentally innovative projects, such as:

4.5-2a Projects that significantly reduce or eliminate the use of chemicals in water treatment.

4.5-2b Treatment technologies or approaches that significantly reduce the volume of residuals, minimize the generation of residuals, or lower the amount of chemicals in the residuals (Cornwell, 2009; *Water Treatment Residuals Engineering*; Water Research Foundation).

4.5-2c Trenchless or low impact construction technology.

4.5-2d Using recycled materials or re-using materials on-site.

4.5-3 Educational activities and demonstration projects for water or energy efficiency (such as rain gardens).

4.5-4 Projects that achieve the goals/objectives of utility asset management plans (http://www.epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_assetmanagement_bestpractices.pdf; http://www.epa.gov/owm/assetmanage/index.htm).

## DWSRF Business Case Development

**This guidance is intended to be comprehensive; however, EPA understands our examples projects requiring a business case may not be all inclusive. A business case is a due diligence document. For those projects, or portions of projects, which are not included in the categorical projects lists provided above, a business case will be required to demonstrate that an assistance recipient has thoroughly researched anticipated 'green' benefits of a project. Business cases will be approved by the State (see Section III.A. in the *Procedures for Implementing Certain Provisions of EPA's Fiscal Year 2011 Full-Year Continuing Appropriation Affecting the Clean Water and Drinking Water State Revolving Fund Programs*). An approved business case must be included in the State's project files and contain clear documentation that the project achieves identifiable and substantial benefits. The following sections provide guidelines for business case development.**

5.0 Length of a Business Case

5.0-1 Business cases should be adequate but not exhaustive.

5.0-1a There are many formats and approaches. EPA does not require any specific one.

5.0-1b Some projects will require detailed analysis and calculations, while others many not require more than one page.

5.0-1c Limit the information contained in the business case to only the pertinent 'green' information needed to justify the project.

5.0-2 A business case can simply summarize results from, and then cite, existing documentation – such as engineering reports, water or energy audits, results of water system tests, etc.

5.1 Content of a Business Case

5.1-1 Business cases must address the decision criteria for the category of project.

5.1-2 Quantifiable water and/or energy savings or water loss reduction for water and energy efficiency projects should be included.

5.1-3 The cost and financial benefit of the project should be included, along with the payback time period, where applicable.

5.2 Items Which Strengthen Business Case, but Are Not Required

5.2-1 Showing that the project was designed to enable equipment to operate most efficiently.

5.2-2 Demonstrating that equipment will meet or exceed standards set by professional associations.

5.2-3 Including operator training or committing to utilizing existing tools such as Energy Star's Portfolio Manager or CUPSS for energy efficiency projects.

5.3 Example Business Cases Are Available at http://www.srfbusinesscases.net/.

# APPENDIX E

# SET-ASIDE WORKPLANS

# KENTUCKY DIVISION OF WATER

# 2016 IUP

| | % | FFY 2015 | Expended by: |
|---|---|---|---|
| Grant Amount $: | | $ 13,770,000 | |
| | | | |
| **DWSRF Program Admin(4% max available):** | | $ 550,800 | |
| DOW (max 3%) | **3** | $ 413,100 | **December 2017** |
| KIA (1%) | **1** | $ 137,700 | |
| **Subtotal Amount:** | | **$ 550,800** | |
| | | | |
| **State Program Mgt. (10% max available):** | | $ 1,377,000 | |
| **Supplement PWSS Program** | **10** | **$ 1,377,000** | |
| DOW Personnel | | $ 1,292,591 | |
| Contractual | | $ 84,409 | |
| **Subtotal Amount:** | | **$ 1,377,000** | **February 2017** |
| | | | |
| **Small Systems Tech. Assist (2% max):** | | $ 275,400 | |
| DOW Personnel | **2** | $ 275,400 | |
| **Subtotal Amount:** | | **$ 275,400** | **May 2017** |
| | | | |
| **State/Local Assist (up to 15%-10% max):** | | $ 2,065,500 | |
| **Capacity Development - TMF Assistance** | **10** | **$ 1,377,000** | **February 2018** |
| DOW Personnel | | $ 895,000 | |
| Equipment | | $ 5,000 | |
| Travel | | $ 30,000 | |
| Contracts | | $ 150,000 | |
| Dev/Implement Operator Cert Program | | $ 297,000 | |
| **Source Water Assessment Program:** | **2** | **$ 275,400** | **September 2017** |
| DOW Personnel | | $ 11,400 | |
| Contracts | | $ 264,000 | |
| **Wellhead Protection Program** | **3** | **$ 413,100** | **September 2017** |
| DOW Personnel | | $ 63,100 | |
| Equipment | | $ - | |
| Travel | | $ - | |
| Contracts | | $ 350,000 | |
| **Subtotal Amount:** | | **$ 2,065,500** | |
| | | | |
| **Total Set Aside Amount:** | **31** | **$ 4,268,700** | |
| Total DOW Set Aside Amount: | 30 | $ 4,131,000 | |
| Total KIA Set Aside Amount: | 1 | $ 137,700 | |

**Supplement to the Public Water System Supervision Program**
**State Program Management**

## Introduction

Kentucky's Public Water System Supervision Program (PWSS) conducts compliance determination and evaluation of public water systems, review of plans and specifications for public water system treatment and distribution facilities, and technical assistance.

The major activities projected for the PWSS program include the compliance activities associated with all current Safe Drinking Water Act (SDWA) rules and regulations including the Revised Total Coliform Rule (RTCR). The implementation of all SDWA rules and regulations, along with special primacy requirements, continues to impact Kentucky's staff resources.

The Division of Water (DOW) will use the PWSS Supplement Set-Aside funds to provide additional resources for:

- Primacy package and state regulation development;
- Compliance determination and evaluation of public water systems;
- Sanitary surveys and inspections;
- Safe Drinking Water Information System (SDWIS) impacts;
- Drinking water laboratory certification;
- Review of plans and specifications for public water system treatment and distribution facilities, including water availability;
- Technical assistance to all public water systems;
- Training for the entire drinking water industry upon request; and
- Planning and coordination of various Division of Water programs related to the SDWA.

## Compliance Activities

SDWA regulations require continued monitoring, evaluation, and reporting by both the public water systems and the primacy agency. The existing SDWIS database is nearing the end of its functionality and will be undergoing a major overhaul at the federal level. Additional resources may be required to coordinate with USEPA and their contractors in the implementation of the new, updated database. As of FFY 2010 enforcement activities and appropriate remedial measures are processed based on the USEPA Enforcement Referral Policy (ERP). The DOW is also responsible for the Drinking Water Laboratory Certification program, conducting chemistry and Cryptosporidium audits, reviewing microbiology audits, and program coordination.

State Program Management funds will be used to continue refinement of the sanitary survey process and further development of such initiatives as water audits and drinking water sanctions, in coordination with the Drinking Water Capacity Development Program.

**Plans, Specifications and Water Quantity Review Activities**

The Kentucky Division of Water reviews plans and specifications for drinking water treatment and distribution facilities for compliance with federal and state drinking water standards. The technical review process is one of continuous improvement and is modified and enhanced as necessary to implement new strategies and initiatives. Activities to be conducted include:

- Review and approval of drinking water plans and specifications to maintain/obtain compliance with the SDWA,
- Water availability assessments in conjunction with the DOW Watershed Management Branch,
- Cross-training of staff,
- On-site construction inspections of infrastructure projects funded by the Drinking Water State Revolving Funds, and
- Development of standard operating procedures for the program.

**Technical Assistance Program Activities**

The Drinking Water program participates in the Area-Wide Optimization Program (AWOP) with the U.S. Environmental Protection Agency (USEPA). The program strives to optimize the treatment, maintenance, administration, and design of surface water treatment plants. The initiative includes:

- Developing evaluation processes to insure the best possible water quality is provided to all customers by each water system;
- Providing technical assistance to surface water systems to enable them to meet, not only the regulatory turbidity level, but also the more stringent turbidity goals of the AWOP; and
- Implementing similar AWOP-based program for disinfection by-product control.

In addition, the Technical Assistance program continues to train the DOW's staff in the goals, objectives, and technical aspects of water treatment plant and distribution system optimization. Based upon the same performance criteria, all surface water treatment systems are evaluated by a self-evaluation program, by DOW's Field Office personnel on-site, or by Technical Assistance personnel on-site. Technical Assistance staff also participates in sanitary surveys and limited emergency response.

**Planning and Coordination Activities**

The development of partnerships among various state programs is necessary to efficiently and effectively implement the SDWA. Kentucky's diverse programs for drinking water, groundwater, water quantity, water quality, enforcement, watershed, operator certification, and various other programs are required to coordinate their activities and products to support and enhance each other with the common goal of sufficient quantity and quality of potable water for all the citizens of the Commonwealth of Kentucky. Interagency coordination occurs with other

state agencies including the Public Service Commission, Division of Plumbing, and Division of Public Health and Safety as well as technical assistance providers and professional organizations.

**Milestones**

| | |
|---|---|
| Surface water systems evaluated for optimization annually | Ongoing |
| Meet conditions of the USEPA Region 4 work plans allowing Kentucky to retain primacy for SDWA regulatory authority | Ongoing |
| Administer the Laboratory Certification Program | Ongoing |
| Evaluate the impact of implementing SDWIS Prime | Ongoing |
| Incorporate the Enforcement Referral Policy/Targeting Tool into capacity development and technical assistance activities | Ongoing |

**Deliverables**

| | |
|---|---|
| Compliance monitoring, evaluation, and reporting for SDWA standards with inclusion in State regulations | Ongoing |
| Plans and specifications review and approval based on SDWA, 10 States Standards, approved technologies, and standard operational procedures | Ongoing |
| Water availability assessments | Ongoing |
| Maintain latest version of the SDWIS database while evaluating SDWIS Prime | Ongoing |
| Surface and ground water treatment plant evaluations for optimizing treatment processes | Ongoing |
| Updating Standard Operating Procedures for the planning and coordination of Division of Water programs to effectively and efficiently implement the SDWA requirements | Ongoing |
| Training to all interested drinking water industry stakeholders regarding new rules, implementation issues, and other miscellaneous professional updates | Ongoing |
| Coordination with state agencies and external partners to resolve drinking water issues of common concerns | Ongoing |
| Oversee the Laboratory Certification Program | Ongoing |

**Budget**

The following funds were set-aside in the 2015 federal DWSRF Capitalization Grants to supplement the Public Water System Supervision Program under State Program Management.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 1,057,639 |
| Contractual | $ 84,409 |
| **Total Direct Charges** | **$ 1,142,048** |
| Indirect Charges (36.21%) | $ 234,952 |
| **Total** | **$ 1,377,000** |

**Outlay Strategy:**

Personnel:
$1,292,591: The average monthly payroll for employees working on this initiative is $100,000 per month. These funds are projected to be expended February 2017 through February 2018.

Contractual:
$84,409: The MSU Microbiology Lab contract provides funding for the state microbiology primacy lab as well as emergency analysis. The Lab Auditor contract provides funding for a contract employee conducting drinking water microbiology audits.

## Small System Technical Assistance Funds

### Introduction

Since 2004, regulations continue to affect small systems serving less than 10,000 in population. These rules lowered the Maximum Contaminant Levels (MCL) for total trihalomethanes, added new MCLs for haloacetic acids, chlorite and bromate, added Maximum Residual Disinfectant Limits (MRDL) for free chlorine, total chlorine and chlorine dioxide, lowered the Treatment Technique (TT) for turbidity and added individual filter effluent monitoring requirements. The Groundwater Rule had an impact on KY's small drinking water systems as the majority of the small systems with treatment plants use groundwater sources. The Revised Total Coliform Rule (RTCR) also affects small systems as a result of the tiered assessment process.

Kentucky has approximately 210 small surface water treatment plants impacted by the Surface Water Treatment rules and 125 groundwater plants that must comply with the Groundwater Rule. In addition, 156 small purchasing systems must comply with disinfection by-product MCLs, the more stringent sanitary survey requirements, and limited options for resolving distribution issues. The RTCR applies to all small systems, regardless of source water or size. The set-aside funding under this category will be used to provide compliance-based technical assistance by DOW staff to small systems throughout the state.

### Milestones

| | |
|---|---|
| Utilize the Enforcement Targeting Tool (ETT) to prioritize technical assistance activities. | Ongoing |
| Provide training and guidance on disinfection by-products (DBP), turbidity, and the RTCR through one-on-one utility and group presentations. | Ongoing |
| Conduct on-site water plant and distribution evaluations for DBP, turbidity, and RTCR compliance and optimization. | Ongoing |
| Involve small water systems in the Area-Wide Optimization Program (AWOP) efforts toward turbidity optimization through Comprehensive Performance Evaluations (CPE). | Ongoing |
| Involve small water systems in the AWOP efforts toward turbidity optimization through Performance Based Training (PBT). | Ongoing |
| Involve small systems in the AWOP efforts towards disinfection by-product optimization. | Ongoing |
| Provide training to the DOW staff on treatment, regulations, and inspections. | Ongoing |

### Deliverables

| | |
|---|---|
| Training and guidance for disinfection by-products (DBP) and turbidity | Ongoing |

| | |
|---|---|
| On-site water plant evaluations for DBPs and turbidity | Ongoing |
| Conduct 1 microbial/turbidity CPE per year | Ongoing |
| Performance Based Training (PBT) through the Area-Wide Optimization Program (AWOP) for microbial/turbidity | Ongoing |
| Performance Based Training (PBT) through the Area-Wide Optimization Program (AWOP) for DBPs | Ongoing |
| Conduct 1 DBP/CPE evaluation for small water system | TBD |
| Attend AWOP training and/or workshops | When Available |

**Budget**

The following funds were set aside in the 2015 federal DWSRF Capitalization Grants in support of the Small System Technical Assistance Program.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 225,341 |
| **Total Direct Charges** | **$ 225,341** |
| Indirect Charges (36.21%) | $ 50,059 |
| **Total** | **$ 275,400** |

**Outlay Strategy:**

Personnel:
$275,400: The average monthly payroll for employees working on this initiative is $20,000 per month. These funds are projected to be expended April 2016 through May 2017.

## Capacity Development Program

### Introduction

The Capacity Development Program is an initiative of the 1996 Amendments to the Safe Drinking Water Act (SDWA) that encompasses the technical, managerial, and financial (TMF) aspects of public water system (PWS) operation. The U.S. Congress recognized treatment and distribution of water for human consumption is an increasingly complex and expensive undertaking. Many PWSs do not have adequate TMF resources to continue to comply with requirements of the SDWA. Kentucky's Capacity Development Strategy is designed as a planning tool to identify PWSs with TMF related problems, address deficiencies, and determine how the drinking water needs of those systems' customers can best be met.

### Review of Capacity Development Strategy

Kentucky's revised Capacity Development Strategy was accepted by USEPA in 2009. The major objectives addressed by the strategy are:

- Prioritize systems most in need of improving capacity;
- Identify the factors that encourage or impairencouraging or impairing the capacity of water systems;
- Use the authority and resources of the SDWA to enhance technical, managerial, and financial capacity;
- Establish a baseline and measure the capacity improvements of systems in the state; and
- Involve stakeholders in Kentucky's efforts to improve drinking water system capacity.

### Milestones and Deliverables

| | |
|---|---|
| Submit annual Capacity Development Report to USEPA Region 4 | December (annually) |
| Continue to conduct the managerial/financial components of the Sanitary Surveys | Ongoing |
| | |
| Develop managerial and financial guidance documents and tools to assist small public water systems | Ongoing |
| Review the managerial and financial components of the Sanitary Survey; revise as necessary | Ongoing |
| Review and revise, as necessary, the DOW Capacity Development Strategy with submittal to USEPA Region 4 | September 2015 |
| Continue discussions with KIA regarding the extraction of Sanitary Survey data | Ongoing |

### Capacity Development Program Activities

Sanitary Survey and assistance activities continue to be a prime focus of the overall Capacity Development Program. The DOW staff has worked to develop managerial and financial guidance material to assist PWSs in efforts to improve capacity.

In order to better utilize Sanitary Survey (SS) data, discussion to revive a joint project between DOW and the KIA to explore using Kentucky's Water Resources Information System (WRIS) to utilize SS data will continue.

**Budget**

The following funds were set aside in the 2015 federal DWSRF Capitalization Grant in support of DOW's Capacity Development efforts.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 732,318 |
| Equipment | $ 5,000 |
| Travel | $ 30,000 |
| Operator Certification* | $ 297,000 |
| Contractual | $ 150,000 |
| **Total Direct Charges** | **$ 1,214,318** |
| Indirect Charges (36.21%) | $ 162,682 |
| **Total** | **$ 1,377,000** |

*See Operator Certification workplan for details

**Outlay Strategy:**

Personnel:
$1,192,000: The average monthly payroll for employees working on this initiative is $80,000 per month. These funds are projected to be expended January 2017 through February 2018.

Equipment:
$5,000: These funds will be used to purchase equipment for conducting disinfection by-product assessments to assist with regulatory compliance.

Travel:
$30,000: The Division of Water staff will need to remain current with regard to the technical, managerial, and financial aspects of public water systems. Our staff plans to attend:

- KRWA Annual and Management Conferences
- Council of Infrastructure Financing Authorities Conference
- USEPA Data Management Conference
- Association of Safe Drinking Water Administrators
- KY-TN Water Professionals Conference
- USEPA State Water Directors meetings
- USEPA Drinking Water Lab Auditor Training/Refresher Training
- TNI Auditor Training

- NELAC Conference
- USEPA Region 4 State Laboratory Manager/Assessor Meeting
- Area-Wide Optimization Program Meetings
- Area-Wide Optimization Program Annual Meeting
- Kentucky Water & Wastewater Operators' Association Conference and meetings
- Kentucky Water Resources Research Institute
- Out-of-state CPEs/PBTs
- Groundwater Protection Council
- National Groundwater Association
- Midwest Groundwater Council
- Geological Society of America
- American Institute of Professional Geologists/KY Society for Professional Geologists

All travel requests will include registration, lodging, per diem, and transportation costs.

Contractual:
$150,000: Assistance for Small Water Systems program will go toward providing small water systems managerial, financial, and technical assistance.

## Operator Certification Program

### Introduction

The Kentucky Operator Certification Program was developed and implemented in accordance with KRS223.160 through 223.220. KRS 224.10-110 directs the Cabinet to enforce administrative regulations adopted by the Secretary for the regulation and control of the purification of water for public and semipublic use and for the certification of water plant operators. Specific regulations pertaining to the certification program are f in 401 KAR Chapter 11. The USEPA approved the state's program in February of 2001.

There are approximately 450 public water systems in Kentucky. The public water systems are classified into a primary series of I, II, III, and IV according to design capacity of the treatment plant and into a secondary series of A and B based on the type of filtration used in the treatment process. A primary series of I, II, III, and IV is also used for classification of the distribution portion of the system and is based on the number of people served. All public water systems must be operated with a minimal number of state certified operators in direct responsible charge. Such individuals must possess a current drinking water treatment, distribution, and/or bottled water certification for the classification level of the system under their charge, or possess one of a higher level in the appropriate series. Operators acquire these certifications by demonstrating fulfillment of specific minimum education and experience requirements and by passing a state administered examination. Once acquired, certifications must be renewed every two years. In order to renew these certificates, a specified number of continuing education hours must be completed by the certified operator.

The Division of Water will use Drinking Water State Revolving Fund (DWSRF) set-aside funds to fund a portion of the costs to administer the drinking water operator certification program in the Division of Compliance Assistance (DCA). These moneys will fund administrative and technical staff within DCA, who will provide drinking water certification related services to operators of these public water systems.

### Operator Certification Program Activities

The Operator Certification Program staff processes all applications and other forms related to registration of drinking water operators for certification exams and for renewal of previously earned certifications. They develop exams for each classification, administer the exams around the state, score the exams, and issue the certificates and/or letters with the results of the test. Classroom instruction is provided around the state to aid operators in preparation for exams and to help them acquire continued education credits necessary for certification renewal. Records are maintained on each operator. Certification efforts are designed to help protect public safety and health.

### Deliverables

On-going:

- Review and process operator applications for certification testing.
- Develop new questions for the exam question banks.

- Track operator training hours for continuing education credit toward certificate renewal.
- Update operator information in the department's database.
- Produce and distribute operator certificates and wallet cards.
- Provide certification training and administer certification exams.
- Develop training materials and/or update existing materials.

**Monthly**:
Provide administrative support to the Kentucky Board of Certification of Water Treatment and Distribution System Operators.

**Annually:**
Update existing certification exams as needed.
Develop new certification exams as needed.
Develop a testing and training schedule for operators.

**Budget**

DWSRF set-aside funds for the Operator Certification Program are requested in the amount of $297,000. The funds will be used to provide salaries for staff working on activities related to the training and certification of drinking water treatment, distribution and bottled water operators.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 243,015 |
| **Total Direct Charges** | **$ 243,015** |
| Indirect Charges (36.21%) | $ 53,985 |
| **Total** | **$ 297,000** |

## Source Water Assessment Program

### Introduction

Kentucky's counties have had an initial source water assessment completed as one of the requirements of Kentucky's Water Supply Planning statute (KRS 151.118, as amended).

Kentucky has approximately 450 public water systems with 30% served by groundwater sources and 70% by surface water sources. Wellhead assessments are developed using a community-based planning team attached to the public water system. Surface water source water assessments are developed by regional planning agencies (Area Development Districts) with oversight by planning councils that include county, city, and water system representatives.

### Source Water Assessment Activities

The Source Water Assessment set-aside funds will be used to support the Kentucky stream gage network.

Integral to source water protection is the knowledge of stream flow. Knowledge of flow, both current and historical, provides the necessary information for permitted withdrawals and projecting future availability. The network also provides flow data that can be used for water withdrawals, TMDLs, waste load allocations, drought and flood mitigation and other source water protection activities. The United States Geological Survey (USGS) maintains gages on the major rivers and lakes in Kentucky but has not been able to fully support them in needed locations.

The Division of Water will use 2015 Source Water Assessment (SWA) set-aside funds for a contract to operate and maintain 38 current gaging stations.

### Milestones

- Physical site location and construction of gaging platform;
- Installation of equipment;
- Development of gage rating curves; and
- Full on-line service.

### Deliverables

| | |
|---|---|
| Implementation of routine stream gage operations and maintenance (such as rating curve calibrations and equipment and satellite uplink) | Ongoing |
| Stream flow data and associated products available on the USGS website. | Ongoing |

**Budget**

The 2015 Source Water Assessment Program funds were set-aside from the State and Local Assistance Program.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 9,328 |
| Contractual | $ 264,000 |
| **Total Direct Charges** | **$ 273,328** |
| Indirect Charges (36.21%) | $ 2,072 |
| **Total** | **$ 275,400** |

**Outlay Strategy**

Personnel:
$11,400: The average monthly payroll for employees working on this initiative is $4,000 per month. These funds are projected to be expended September 2016 through September 2017.

Contractual:
$264,000: The Division of Water has entered into an agreement with the United States Geological Survey (USGS). The USGS will maintain thirty-eight (38) current gauging stations. These funds will be expended by September 2017.

## Wellhead Protection Program

### Introduction

The Division of Water implemented the Wellhead Protection Program in 1993 after its approval by the U.S. Environmental Protection Agency. This program is administered through Kentucky's water supply planning regulations (401 KAR 4:220). The Kentucky Wellhead Protection Plan program is a community-based pollution prevention program designed to protect the quality of groundwater utilized for public drinking water supplies. The wellhead protection plans are to be incorporated in the applicable County Water Supply Plan. The Division of Water's Watershed Management Branch is responsible for providing information and assistance to public water systems and communities conducting wellhead protection, and for the review and approval of Wellhead Protection plans.

There are currently 133 public water systems in Kentucky reliant wholly or in part on groundwater that are required to have a wellhead protection plan. These wellhead protection plans will be completed by public water systems and the local communities, with assistance from the Kentucky Division of Water, local and regional planning agencies (e.g. Area Development Districts), and the Kentucky Rural Water Association (KRWA).

The Division of Water will use money set-aside from the Drinking Water Supply Revolving Fund (DWSRF) to provide technical assistance, programmatic guidance, and data management assistance to communities developing wellhead protection plans. The Division of Water will assist in development of each wellhead protection plan, and will review all wellhead protection plans submitted for incorporation in the county water supply plan.

### Wellhead Protection Program Activities

The Kentucky Wellhead Protection program intends to complete Phase I & II wellhead protection plans for all new public water systems using groundwater and to complete 5-year Wellhead Protection Plan updates for all public water systems scheduled to update their plans. The Kentucky Wellhead Protection program will assist public water systems in completing required 5-year updates to the wellhead protection plans with an emphasis on developing and implementing management and protection strategies within the wellhead protection areas. In addition, groundwater under the direct influence (GUDI) determinations will be conducted and/or reviewed.

The Division of Water provides technical and programmatic assistance to communities, water suppliers, and regional planners involved in developing wellhead protection plans. This assistance includes: providing written guidance to communities; conducting community outreach program coordination; providing individual consultation to water suppliers and local and regional planners; delineating WHP areas; conducting limited monitoring of groundwater sources, sponsoring technical workshops for wellhead protection; and providing maps, technical documents, educational information, and data to be included in wellhead protection plans. The Division of Water will also review all implementation schedules and wellhead protection plans for approval.

The Division of Water will provide technical assistance and programmatic guidance to public water suppliers. The Division of Water will assist in coordinating the WHP activities between local communities and water systems, regulatory agencies, technical assistance outlets, volunteer organizations (including local citizens), local planning councils, and regional planning agencies.

The Division of Water will provide technical assistance and programmatic guidance to public water suppliers conducting wellhead protection plan 5-year updates, including updating the plan to incorporate changes such as delineation of new source areas, updating contaminant source inventories, and updating the susceptibility analysis. The Division of Water will focus on the development and implement of management and protection strategies in the 5-year updates.

Delineations of wellhead protection areas and Contaminant Source Inventory data for all wellhead protection areas in Kentucky will be developed in GIS format for use as tool for internal DEP programs (e.g. UST, RCRA, Solid Waste, KPDES, etc.), and will be made available to USEPA, regional field offices, emergency response officials, local community officials and PWSS, and the general public on the Kentucky Geonet.

Scheduled public meetings are a required element of the WHP plan. Technical and programmatic assistance will be provided by the DOW at public meetings as requested by local communities, public water systems, and planning agencies. Programmatic focus will be on the completion of 30 five year updates by the end of 2010 as well as emplacement of signs in Wellhead Protection Areas.

**Activities**

- Develop wellhead protection plans with new public water systems, or those systems newly using groundwater in the 5-year update cycle
- Develop wellhead protection plans with public water systems in the 5-year update cycle
- Continue the development and expansion of the Source Water Assessment Program, a new program modeled from Washington State, that provides funding for non-capitol projects to protect source water.
- Work with communities to develop and implement management strategies for the wellhead protection area
- Work with Kentucky Rural Water Association (KRWA) to coordinate their wellhead protection activities and align these activities with the programmatic goals of the Division of Water.
- Review wellhead plans submitted by KRWA
- Conduct fieldwork to assist PWS systems with problems and issues related to groundwater quality and quantity
- Update GIS coverage of wellhead protection areas (WHPAs), as delineated, and any changes which may occur in the 5-year update cycle
- Develop contaminant source inventory (CSI) coverages for wellhead protection areas in a GIS format to be used in education and planning processes.
- Work with the Groundwater Protection Plan (GPP) program to identify sites in wellhead protection areas that are required to have a GPP

- Conduct Groundwater Protection Plan (GPP) program inspections in WHPAs and provide technical assistance to businesses and individuals in developing and implementing effective GPPs
- Work with public water systems and the DOW's drinking water program to determine GUDI status on systems using groundwater
- Report to USEPA on wellhead protection activities
- Conduct public education regarding groundwater protection and wellhead protection issues at public meetings, science fairs, schools, and other venues
- Participate in local, regional, and national meetings dealing with wellhead protection and other source water protection issues
- Sample raw water quality at several public water systems reliant on groundwater and developing or implementing WHP plans
- Interpret analytical results and discuss with operators, especially regarding naturally-occurring and NPS threats to groundwater quality
- Interpret water quality in regard to current and potential land use, as well as zone-of-influence and time-of-travel studies
- Incorporate water quality results into appropriate statewide and BMU reports
- Forward analytical data to the Groundwater Data Repository at UK

**Deliverables**

- All public water systems dependent on groundwater will have an approved wellhead protection plan. For those systems scheduled to revisit their wellhead protection plan, a 5-year update will be completed and approved by the Kentucky Division of Water.
- All wellhead protection areas in Kentucky will be delineated, digitally mapped, and will reside in a GIS-compatible database, and will be available to USEPA, internal DEP programs (e.g. UST, RCRA, solid Waste), regional field offices, emergency response officials, local community officials and PWSS, and the general public through the Kentucky Geonet.
- All significant potential contaminant sources within delineated WHP areas will be identified and this information will reside in a GIS-compatible database.
- The Source Water Assistance Program projects will be reviewed, ranked and once awarded tracked for progress and completion.

**Budget**

The following funds are set-aside in the 2015 DWSRF Capitalization Grant in support of the Wellhead Protection Program.

| **Category:** | **Amount:** |
|---|---|
| Personnel | $ 51,630 |
| Contractual | $ 350,000 |
| **Total Direct Charges** | **$ 401,630** |
| Indirect Charges (36.21%) | $ 11,470 |
| **Total** | **$ 413,100** |

**Outlay Strategy**

Personnel:
$11,400: The average monthly payroll for employees working on this initiative is $4,000 per month. These funds are projected to be expended June 2016 through June 2017.

Contractual:
$130,000: Continue the Source Water Assistance Program to assist public water systems with implementing protection activities, including capping of abandoned wells.

$220,000: The Division of Water is currently assessing the need for additional gauging stations. These funds will be expended by September 2017.

# APPENDIX F

# PUBLIC COMMENTS

# 2016 Drinking Water State Revolving Fund Intended Use Plan
# Public Comments

## Summary of Comments Received During the Public Comment Period

No verbal comments were received during the public comment period. A written comment from one source was received during the meeting and is summarized below.

Roger Recktenwald
Director of Research & Planning
Kentucky Association of Counties
400 Englewood Drive
Frankfort, Kentucky 40601

**Comment 1**
Roger Recktenwald commented on the awareness of failing systems in the Commonwealth lack of interim funding to cover the intervention or transitional costs being an issue. Mr. Recktenwald suggested KIA establishing an "intervention response fund" to allow a preventative management approach to state wide utitilty sustainability.

**Response:**
KIA has become aware of the need for interim funding during transitional periods for regionalization and consolidation of systems. KIA appreciates the comment and will take Mr. Recktenwald's suggestion into consideration while working within the confines of federal and state legislation and regulation.