

DRAFT
INTENDED USE PLAN
Including
PROJECT PRIORITY LIST

FOR THE
CLEAN WATER
STATE REVOLVING FUND

For
State Fiscal Year 2011

COMMONWEALTH OF KENTUCKY



August 3, 2010

PREPARED BY THE
ENERGY AND ENVIRONMENT CABINET
&
KENTUCKY INFRASTRUCTURE AUTHORITY

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INTRODUCTION

Kentucky's Intended Use Plan (IUP) for the Clean Water State Revolving Fund (CWSRF) is prepared in accordance with the provisions of the Clean Water Act (CWA). The purpose of this IUP is to communicate Kentucky's CWSRF plan for state fiscal year 2011 to potential borrowers of the fund, the public, the Environmental Protection Agency (EPA), and other state agencies. This IUP also includes the project selection and ranking system.

An annual Intended Use Plan is required by Title VI of the CWA, which identifies how the funds available to Kentucky's CWSRF will be used during each state fiscal year (SFY) to support the goals of the CWSRF. This 2011 IUP includes:

1. A description of the short and long term goals of the fund;
2. The criteria and methods established for selecting projects;
3. Administration and operation policies of the fund;
4. Assurances and specific certifications for meeting certain requirements of the Capitalization Grant Agreement;
5. The public participation process;
6. The sources of available funds and the uses of those funds; and
7. The project priority list---a list of eligible projects and activities whose sponsors expressed interest in low interest rate loans from the CWSRF.

What is the Clean Water State Revolving Fund?

Title VI of the CWA authorized the Environmental Protection Agency to make capitalization grants to each state to establish a water pollution control revolving fund to provide financial assistance for constructing publicly owned treatment works under section 212 of the CWA, implementing watershed management plans under section 319 of the CWA, and developing and implementing a conservation and management plan under section 320 of the CWA. A state match is required to be deposited into the CWSRF in an amount equal to at least 20 percent of the total federal capitalization grant. The general intent of Title VI of the CWA is to ensure that each state's fund is designed and operated to continue providing financial assistance for water pollution control activities in perpetuity.

The Kentucky General Assembly enacted House Bill 217 during the 1988 legislative session, which established a Clean Water State Revolving Fund, the "Federally Assisted Wastewater Revolving Fund," as an enduring and viable fund. This fund is intended to allow Kentucky to qualify for the federal CWSRF capitalization grants. The fund is administered by the Kentucky Infrastructure Authority (KIA) while Division of Water (DOW) staff performs the environmental and technical reviews on projects seeking assistance from the CWSRF.

Kentucky's CWSRF financing program provides low interest loans for infrastructure projects that promote the goals of the CWA. Projects identified to receive funding are selected from the ranked group of questionnaires received during the annual Call for Projects. Since its inception in 1988, Kentucky's CWSRF has committed funds to over 199 clean water infrastructure projects, totaling more than \$909 million.

New CWSRF Requirements

The Federal Fiscal Year 2010 budget (PL 111-88), providing the 2010 appropriation for the CWSRF, contains three provisions that establish new requirements for SRF funding. These requirements address wage rate provisions, additional subsidization, and “green” projects.

To address wage rate provisions, EPA’s interpretation of PL 111-88 requires that all wastewater treatment projects for which SRF assistance agreements are executed on or after October 30, 2009 and prior to October 1, 2010 must meet federal Davis Bacon wage requirements unless construction was completed prior to October 30, 2009. This Davis Bacon provision applies to all assistance agreements signed during the specified time frame.

Another new provision in the FFY10 CWSRF appropriation is that at least 15% (\$3,883,791) and not more than 50% (\$12,945,969) of the CWSRF capitalization grant must be provided as additional subsidy.

The final new provision is that at least 20 percent of the 2010 capitalization grant (\$5,186,400) must be used to fund green projects as defined by EPA.

A. DAVIS-BACON COMPLIANCE

As part of the FFY 2010 budget appropriation for the CWSRF, Congress mandated that 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 CWSRFs. These requirements are collectively known as the Davis-Bacon laws. These requirements are in addition to the requirements of Kentucky prevailing wage laws. Recent EPA guidance requires that any CWSRF financings made on or after October 30, 2009 and prior to October 1, 2010, 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. With the exception of projects funded by American Recovery and Reinvestment Act of 2009 funds, projects that signed an assistance agreement prior to October 30, 2009 will generally not be required to incorporate Davis-Bacon requirements. Work done by a municipal applicant’s employees, generally known as “force account” or “work force”, is not generally subject to Davis-Bacon requirements. For more information on Davis Bacon laws, please visit <http://www.dol.gov/whd/regs/compliance/whdfs66.pdf>.

B. ADDITIONAL SUBSIDIZATION

Provisions in the FFY2010 capitalization grant authorization also require that at least \$3,883,791 but not more than \$12,945,969 of the funds made available under that grant must be used by the State to provide additional subsidization to eligible recipients. The State will make such additional subsidization in the form of loans with 30% principal forgiveness. To be eligible to receive principal forgiveness, the borrower’s entire service area must have a median household income (MHI) less than \$26,938, or 80% of the State’s MHI as determined by the 2000 U.S. Census. If a borrower provides service to more than one jurisdiction, an average MHI will be calculated based on each jurisdiction’s MHI. Should there be insufficient eligible project applications to meet the required subsidization level, KIA may invite additional project applications or may increase the percentage subsidization level to the existing qualifying participants.

C. GREEN PROJECT RESERVE (GPR)

The FFY2010 capitalization grant also requires that to the extent there are sufficient eligible project applications, not less than 20% (\$5,186,400) of the funds made available under that grant must be used by the State for projects which address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities (collectively referred to as "green" projects). The priority list reflects green projects that are eligible under the GPR. Other projects on the priority list may be able to show, through a business case or other information, that they also are green projects and will be considered eligible for award under the GPR.

Structure of the CWSRF Program in Kentucky

The Kentucky Infrastructure Authority (KIA) and the Kentucky Energy and Environment Cabinet (EEC) through the Division of Water (DOW) jointly administer the program via a Memorandum of Agreement in accordance with Kentucky Revised Statute (KRS) 224A.111 and Kentucky Administrative Regulation (KAR) 200 KAR 17:050¹.

The following contacts can assist you with your CWSRF inquiries:

Contact	Agency	Subject
Sandy Williams (502)573-0260 Sandy.williams@ky.gov	KIA	Loan Application, Financial Terms, Rates
Anshu Singh (502)564-3410 Anshu.singh @ky.gov	DOW	Project Questionnaire, Priority List, Environmental Review, Regional Facility Plans
Buddy Griffin (502)564-3410 Buddy.griffin@ky.gov	DOW	Loan Application, Procurement, Bidding Requirements
Greg Goode (502)564-3410 Greg.Goode @ky.gov	DOW	Plans and Specifications
Shafiq Amawi, Water Infrastructure Branch Manager (502)564-3410 Shafiq.amawi@ky.gov	DOW	General Information

CLEAN WATER STATE REVOLVING FUND GOALS

The Sustainable Infrastructure Initiative

The combination of aging water and wastewater infrastructure, growing population, and declining research and development investments in the area of water pollution abatement is forcing EPA, states and local governments to explore innovative methods for funding future water and wastewater capital projects. Based on the 2008 Clean Watersheds Needs Survey, the United States needs more than \$298.1 billion to meet its wastewater needs over the next 20 years; Kentucky's documented share is about \$2.117 billion.

EPA collaborated with external stakeholders and developed the Sustainable Infrastructure (SI) Initiative with a goal to reduce the funding gap between projected investment needs and current spending levels at the federal and local levels so the public can continue to enjoy safe drinking water and adequate sanitary service.

Another goal for the SI Initiative is to help change the way people view, value, manage, and invest in water and wastewater infrastructure. EPA is in the process of training state personnel to promote sustainable infrastructure through a four focused area approach:

- Better Management of Water and Wastewater Utilities
- Rate Structures that reflect the Actual Cost of Service
- Efficient Water Use
- Watershed Approach to Planning and Permitting

For more information, see EPA's Sustainable Infrastructure for Water and Wastewater website <http://www.epa.gov/waterinfrastructure/index.html>.

Short-Term Goals

1. Promote the principles of EPA's Sustainable Infrastructure Initiative to loan recipients so CWSRF borrowers will consider SI Initiatives in their planning, design, and construction activities.
2. Review the Integrated Project Priority Ranking System to prioritize water pollution control projects and activities according to specific criteria aimed at correcting the state's highest priority water quality problems.
3. Promote green infrastructure initiatives to loan recipients to meet the 2010 capitalization grant requirements.
4. Train borrowers to assure compliance with Davis Bacon requirements.
5. Improve the pace at which available funds are loaned. The best way to ensure the perpetuity of the fund is to revolve the available funds more quickly. KIA and DOW staff will promote the fund to potential loan candidates.

6. Expand the use of the fund by soliciting nonpoint source projects to address some of the state's high-priority water quality problems, such as nutrient impairments caused by agricultural runoff.
7. Provide the environmental benefits of CWSRF-funded projects by updating the online CWSRF Benefits Reporting System.

Long-Term Goals

1. Maintain a self-sustaining revolving loan program that will contribute to improving and protecting water quality and public health.
2. Assist publicly owned treatment works in maintaining compliance with their discharge permit limits.
3. Take the steps necessary to integrate the project questionnaire into the Water Resource Information System (WRIS).
4. Continue to assess the project selection and ranking criteria to determine whether revisions are needed to address the state's current high-priority water quality problems.
5. Ensure technical compliance of each project through adequate and effective planning, design and construction management.
6. Ensure that accounting procedures conform to generally accepted governmental accounting standards.

CRITERIA FOR PROJECT SELECTION

The CWSRF was established to fund projects and activities whose primary goal is the protection of water quality. In 1996, EPA issued the funding framework, which encouraged all states that fund both point and nonpoint source projects to integrate their planning and priority ranking systems, so that CWSRF funds can most effectively target the nation's highest water quality problems. Following the EPA's recommendation, Kentucky developed the Kentucky Integrated Project Priority Ranking System (IPPRS) in Appendix C, designed to equally evaluate publicly owned treatment works, storm water, and nonpoint source projects according to water-quality-based criteria developed by the Kentucky Division of Water.

In October 2009, KIA and DOW invited all eligible borrowers to submit their CWSRF project questionnaires through an open Call for Projects that was distributed to all sewer utilities, area development districts, mayors, county judges executive, and the engineering community. The Call for Projects was extended from January 6, 2010 through March 12, 2010 to allow potential applicants additional time to submit project questionnaires for green projects or those projects that may qualify for additional subsidization. The Call for Projects letters are attached in Appendix B. Only questionnaires submitted through 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 IPPRS priority formula.

The 2011 Project Priority List is found in Appendix A. A brief description of the following fields might prove helpful in evaluating the list.

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

Green Infrastructure Points: The number of points earned by a project for green infrastructure components.

Community: Name of applicant identified on the Project Questionnaire Form or the community the project is associated with.

Project Name: Name of project listed on the Project Questionnaire Form.

Project #: Priority list tracking number for project. Include this number on correspondence about the project before a loan number is assigned by DOW or KIA.

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

Loan Amount: Amount of desired SRF loan identified on the Project Questionnaire Form

Score: Total number of points the project received using the IPPRS criteria in Appendix C.

Project Description: Short description of project activities.

The 2012 IUP process will begin in October 2010. The annual Call for Projects will be open during October, November and December 2010, at which time project questionnaires will be accepted for the SFY 2012 funding cycle. The following schedule will apply:

2012 Call for Projects	October 1, 2010- December 31, 2010
Creation of Project Priority List	January 1, 2011- March 31, 2011
Public Notice Period for IUP	May 1, 2011- June 1, 2011
Finalize 2012 IUP and send to EPA	Prior to June 30, 2011

Email notifications will be sent in September 2010 to all sewer utilities, area development districts, mayors, county judge executives, and Kentucky Society of Professional Engineers.

FUND ADMINISTRATION AND OPERATION

A. Actual Project Funding

Although developing and maintaining a priority list is required by the CWA, the states are not required to select the highest ranked projects in any given year for funding. However, due to limited funding availability, Kentucky will fund projects based on priority ranking and readiness to proceed. KIA anticipates that the 20% GPR and the additional subsidization requirements will be met with no changes to the project priority list

Those applicants ranking high on the Project Priority List will be notified of their status on the list and be invited to submit a complete loan application package, including all supporting documentation required for consideration for financial assistance from the CWSRF. Applicants will be given 45 days to meet the application deadline. Those applicants that do not submit a loan application, complete with Kentucky e-Clearinghouse comments, by the 45-day deadline will be bypassed and the next eligible project will be invited with 45 days to submit a loan application.

Upon submittal of a complete loan application, the documents will be reviewed and a credit analysis performed. For those qualifying applicants, a loan request will be taken before the KIA Board for financial review and conditional approval. Upon board approval, a conditional binding commitment letter will assure that funding will be dedicated to that project for a period of 12 months provided all of the conditions of the loan are met.

All CWSRF program requirements must be met by the term outlined in the conditional binding commitment letter. A one-time extension of up to six months for approved applicants that experience extenuating circumstances may be granted. Those applicants not approved for an extension are no longer eligible for funding out of the present funding cycle and must re-apply during the next call for projects.

Kentucky's CWSRF does not have a limit on the amount of funds that will be available to any one borrower from a specific capitalization grant. However, limits may 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 those shown on 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.

B. Bypass Process

A high-priority project that is not ready to proceed within the given timeframe will be bypassed. A bypassed project will become ineligible for CWSRF 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. If, after the receipt of the first round applications, KIA does not have sufficient applications to meet the GPR or additional subsidization requirements, projects will be by-passed until a qualifying GPR or additional subsidization project is reached.

C. *Addition of New Projects*

The Project Priority List may be amended during the year to add eligible projects. Major revisions to the IUP require public notice.

D. *Emergency Projects*

These are projects that do not appear on the Project Priority List and result from unanticipated failures of wastewater infrastructure (treatment and/or collection and conveyance systems) that have a direct adverse effect on public health and the quality of surface and groundwater. The CWSRF may provide financial assistance to emergency projects, subject to projects' eligibility and availability of funds.

E. *Refinancing*

KIA is generally opposed to refinancing existing CWSRF loans due to the lowered return to the revolving fund over time. However, certain hardship cases may be considered when the following criteria are met:

1. The borrower can prove that the existing rates are causing a financial hardship on users in the system;
2. The burden on the users by virtue of such rates is placing the repayment of the original loan in question;
3. The governmental agency can show significant savings as a result of the refinancing;
4. The governmental agency can identify an environmental problem within its jurisdiction that it is willing to immediately address with the savings achieved through the refinancing; and
5. Projects must meet all the applicable program requirements.

KIA is also willing to accept governmental agency requests that the refinancing of projects be on the priority list provided that such refinancing from CWSRF monies will be assigned low priority and only recommended to the board when no other higher ranking projects are ready for consideration. Refinancing projects will be considered by KIA only when all the following criteria are met:

1. There are sufficient funds available in the CWSRF to meet all other identified project needs for the program year;
2. The applicant can show significant savings as a result of the refinancing;
3. The applicant can identify an environmental problem within their jurisdiction that they are willing to immediately address with the savings achieved through the refinancing; and
4. Projects must meet all the applicable program requirements.

F. Rates and 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 the prevailing market conditions, availability of funds and funding demand. Staff intends to recommend a standard rate of 3 percent with two non-standard rates at 2 percent and 1 percent to start off the 2011 fiscal year.

The standard rate will apply to all borrowers at or above the 2000 Census State Median Household Income (MHI) of \$33,672. To qualify for the non-standard rate of 2%, the project must assist the system to achieve compliance with an order or judgment addressing environmental noncompliance, or the borrower must have a MHI between \$33,672 and \$26,938 (80% of the State MHI) or be considered regional. To qualify for the non-standard rate of 1%, a borrower must have a MHI at or below \$26,938. Qualifications for rates are subject to 200 KAR 17:070.

Planning and design loans will be made at the standard rate during the planning and design phase of the project. Should the planning and design loan be rolled into a construction loan, the rate on the planning and design loan amount will revert to the rate approved for the construction loan.

2. Repayment Terms

Terms for planning, design and sanitary sewer evaluation study (SSES) loans will not exceed five years. Planning and design loans may be consolidated into a 20-year construction loan, if the construction of the project is funded by the CWSRF. Should the planning and design loan be rolled into a construction loan, the term for the planning and design loan amount will revert to the term approved for the construction loan. Construction loans will have a 20-year repayment term.

Principal and interest payments on each loan will commence no 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 0.2 percent on the annual outstanding loan balance will be charged as a part of each semi-annual loan payment in accordance with 200 KAR 17:050, 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 CWSRF program expenses.

4. Financial Options of the Fund

The CWA provides guidelines under which the CWSRF program is to be operated. However, the specific implementation of those guidelines affects the long-term financial viability of the fund. The following are allowable options within the CWSRF and Kentucky's treatment of each.

- a. Borrower Repayment – The borrower's ability to repay has a direct effect on the amount of funds available. A thorough credit analysis is performed for each borrower. Loan monitoring is performed throughout the life of the loan.
- b. Leveraging –KIA will consider leveraging the fund to increase the dollars available for financial assistance. KIA received authorization from the General Assembly to issue up to \$100 million in leverage bonds during the 2010-2012 biennium.

F. 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 Drinking Water State Revolving Fund (DWSRF) capitalization grants received. KIA reserves the right to transfer the maximum allowable 33 percent of uncommitted repayment funds from the CWSRF to the DWSRF 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.

While KIA reserves the right to transfer available funds, a transfer is not expected during the 2011 fiscal year.

ASSURANCES AND SPECIFIC CERTIFICATIONS

The state shall provide the assurances and certifications required by U.S EPA as part of the Operating Agreement. This agreement is the official document between Kentucky and the U.S. EPA setting forth legal responsibilities of each. Pursuant to Section 606(c)(4) of the CWA, the State certifies that:

1. The state will enter into binding commitments equal to at least 120 percent of each quarterly grant payment within one year after receipt of the payment;
2. The state will expend all funds in the CWSRF in an expeditious and timely manner;
3. Funds will first be used to assure maintenance of progress toward compliance with enforceable deadlines, goals and requirements of the CWA, including the municipal compliance deadline; and
4. The state will conduct environmental reviews on projects that receive CWSRF assistance.

FUNDS AVAILABLE TO BE COMMITTED AND DISBURSED FOR SFY2011

Kentucky's CWSRF 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 CWSRF projects. During 2011, Kentucky will rely on funding as outlined in Table A to provide financial assistance and to support operations in KIA and DOW.

Table A
Kentucky CWSRF Sources and Uses of Funds for 2011
 July 1, 2010 through June 30, 2011

Funding Sources	Federal Contribution	State Contribution	Other	Total
Uncommitted Prior Year Loan Funds*			\$39,525,850	39,525,850
Loan Repayments *			33,653,574	33,653,574
Leverage Bond Proceeds			50,000,000	50,000,000
Banked Prior Year Administration Funds			1,362,868	1,362,868
Banked Prior Year ARRA Administration Funds			1,743,217	1,743,217
2010 Capitalization Grant	25,932,000	5,186,400		31,118,400
Total Funding Sources	25,932,000	5,186,400	126,285,509	157,403,909
Funding Uses				
Financial Assistance **	24,894,720	5,186,400	112,591,145	142,672,265
Leverage Bond Debt Service			10,588,279	10,588,279
Banked Prior Year Administration Funds			1,362,868	1,362,868
Banked Prior Year ARRA Administration Funds			1,743,217	1,743,217
2010 Administration (4%)	1,037,280			1,037,280
Total Funding Uses	25,932,000	5,186,400	126,285,509	157,403,909

* Estimate as of May 14, 2010.

** An amount equal to 20% of the federal capitalization grant must be used for green projects to the extent that KIA receives sufficient applications. The green project reserve equals \$5,186,400.

In SFY 2011, KIA will have \$142,672,265 available to fund eligible CWSRF projects. This is comprised of the estimated 2010 capitalization grant of \$24,894,720 (after administrative fees) *plus* state funds of \$5,186,400, up to \$50,000,000 from leverage bond proceeds, uncommitted 2010 loan funds of \$39,525,850 and estimated loan repayments (less leverage bond debt service) of \$23,065,295. From the capitalization grants, KIA and DOW will have an additional \$1,037,280 for administration. KIA and DOW will have \$1,743,217 in banked administrative funds from prior capitalization grants for administration of the program. The \$5,186,400 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 date for the 2010 capitalization grant application is September 1, 2010. Grant awards are typically made within 90 days.

KIA requested budgetary authorization to issue agency leverage bonds during the 2010-2012 biennium in an amount not to exceed \$100 million. Bond proceeds would be deposited into the fund and would be used to make eligible CWSRF loans. This authorization was granted in the 2010-2012 biennial budget. For this authorization to become effective, KIA must acquire approval from the Kentucky Infrastructure Authority Board, the Office of the State Budget Director and the Office of Financial Management in the Finance and Administration Cabinet as to the timing and amount of the leverage bond issuance. KIA anticipates that approximately one-half of the authorization will be used in each state fiscal year.

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

PUBLIC PARTICIPATION

The draft 2011 CWSRF IUP including the project priority list will be available for public review and comment on the Division of Water website at www.water.ky.gov and on the Kentucky Infrastructure Authority website at www.kia.ky.gov. After being available for public comment from August 5, 2010 through September 7, 2010, a public meeting to discuss the plan contents will be held on September 7, 2010, at 1:30 p.m. at the offices of the Kentucky Infrastructure Authority located at 1024 Capital Center Drive, Suite 340, Frankfort, Kentucky.

APPENDIX A
COMPREHENSIVE PROJECT PRIORITY LIST

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
1	320	2011-138	Pending	Louisville-Jefferson County MSD	Flood Control Basins Retrofit for Water Quality Phase I	\$2,400,000	\$2,400,000	\$2,400,000	39,457			\$2,400,000	30	SSO Correction	Green Infrastructure	Yes
2	268	2011-143	Pending	Louisville-Jefferson County MSD	Northeast Green Focus Area	\$2,200,000	\$2,200,000	\$4,600,000	39,457			\$2,200,000	23	CSO Correction	Green Infrastructure	Yes
3	203	2011-083	21117125	Northern Kentucky Sanitation District #1	Church Street CSO Reduction Project	\$5,290,000	\$4,320,000	\$8,920,000	46,467			\$1,148,330	20	CSO Elimination	Green Infrastructure	No
4	197	2011-134	21195121	Southern Water and Sewer District	Harold Sewer Project	\$2,500,000	\$850,000	\$9,770,000	21,168	\$255,000	\$255,000		0	Package WWTP Elimination		
5	180	2011-065	21065005	Irvine Municipal Utilities	Estill County Regional Wastewater System	\$17,892,005	\$4,030,005	\$13,800,005	20,286	\$1,209,002	\$1,464,002		0	New WWTP		
6	175	2011-024	21069003	City of Flemingsburg	Flemingsburg Wastewater Treatment Plant	\$8,906,000	\$8,906,000	\$22,706,005	23,708	\$2,671,800	\$4,135,802	\$1,910,000	5	WWTP Expansion	Energy Efficiency	Yes
7	170	2011-014	21007011	City of Barlow	Barlow New Wastewater Treatment Facility and Collection System Rehab	\$4,024,856	\$662,856	\$23,368,861	23,333	\$198,857	\$4,334,658	\$369,421	5	WWTP Replacement	Environment ally Innovative	No
8	168	2011-080	21117123	Northern Kentucky Sanitation District #1	Lakeview Pump Station Improvements	\$4,400,000	\$3,780,000	\$27,148,861	46,467			\$1,475,000	15	Sewer System Improvements	Energy Efficiency	No
9	165	2011-135	21133008	City of Whitesburg	Mayking Area Sewer Extension	\$3,000,000	\$3,000,000	\$30,148,861	28,750				0	Sewer Extension		
10	158	2011-047	21069007	Fleming County Fiscal Court	Hillsboro Sewer System	\$5,550,000	\$4,194,000	\$34,342,861	27,990				0	Wastewater Collection		
11	158	2011-076	21037111	Northern Kentucky Sanitation District #1	Ash Street Pump Station	\$6,250,000	\$4,983,500	\$39,326,361	46,467			\$2,313,000	28	CSO Elimination	Green Infrastructure , Water Efficiency, Energy Efficiency and Environment ally Innovative	No
12	153	2011-082	21117126	Northern Kentucky Sanitation District #1	Dry Creek WWTP-Headworks, Hydraulics and Odor Control Improvements	\$18,000,000	\$16,000,000	\$55,326,361	46,467				0	WWTP Upgrade		
13	153	2011-139	Pending	Louisville-Jefferson County MSD	South Central West Green Infrastructure Focus	\$1,500,000	\$1,500,000	\$56,826,361	39,457			\$1,500,000	13	CSO Correction	Green Infrastructure	Yes
14	150	2011-077	21037110	Northern Kentucky Sanitation District #1	Ash Street Force Main and Collectors	\$12,750,000	\$10,204,000	\$67,030,361	46,467			\$1,033,000	20	CSO Elimination	Green Infrastructre and Energy Efficiency	No
15	148	2011-032	21013151	City of Pineville	Virginia Avenue Utility Replacement	\$6,000,000	\$6,000,000	\$73,030,361	12,435	\$1,800,000	\$6,134,658		0	CSO Elimination		

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
16	147	2011-048	21077110	Gallatin County Fiscal Court	Craig's Creek Sanitary Sewer Improvements	\$1,900,000	\$1,100,000	\$74,130,361	36,422				0	Package WWTP Elimination		
17	143	2011-137	Pending	Louisville-Jefferson County MSD	Central Business Focus Area - Phase II	\$1,900,000	\$1,900,000	\$76,030,361	39,457			\$1,900,000	13	CSO Correction	Green Infrastructure	Yes
18	143	2011-142	Pending	Louisville-Jefferson County MSD	Northwest Green Focus Area	\$1,200,000	\$1,200,000	\$77,230,361	39,457			\$1,200,000	13	CSO Correction	Green Infrastructure	Yes
19	143	2011-144	Pending	Louisville-Jefferson County MSD	Maple Street Water Quality Improvements	\$1,100,000	\$1,100,000	\$78,330,361	39,457			\$1,100,000	13	CSO Correction	Green Infrastructure	Yes
20	143	2011-145	Pending	Louisville-Jefferson County MSD	Park Hill Focus Area	\$2,200,000	\$2,200,000	\$80,530,361	39,457			\$2,200,000	13	CSO Correction	Green Infrastructure	Yes
21	140	2011-008	21029015	Bullitt County Sanitation District	Willabrook Wastewater Treatment Plant Expansion	\$3,000,000	\$2,500,000	\$83,030,361	45,106			\$1,000,000	5	WWTP Replacement	Energy Efficiency	Yes
22	140	2011-027	21007015	City of LaCenter	Wastewater Plant Improvements	\$895,000	\$895,000	\$83,925,361	27,188				0	Sewer System Improvements		
23	140	2011-062	21047021	Hopkinsville Water Environmental Authority	HWEA-Purchase of Oak Grove WWTP and Collection System	\$7,300,000	\$7,300,000	\$91,225,361	30,419				0	Sewer System Improvements		
24	135	2011-079	21117124	Northern Kentucky Sanitation District #1	Lakeside Park Public & Private Source I/I Removal & Sewer Rehabilitation	\$5,812,000	\$4,648,000	\$95,873,361	46,467			\$4,400,000	5	Sewer System Improvements	Green Infrastructure and Energy Efficiency	Yes
25	133	2011-078	21037105	Northern Kentucky Sanitation District #1	Vernon Lane Public & Private Source I/I Removal & Sewer Rehabilitation	\$3,760,000	\$3,130,000	\$99,003,361	46,467			\$3,700,000	5	Sewer System Improvements	Green Infrastructure and Energy Efficiency	Yes
26	132	2011-011	21019073	City of Ashland	Thirty Seventh Street Pump Station & Forcemain Replacement	\$4,500,000	\$4,500,000	\$103,503,361	30,309			\$3,950,000	5	CSO Correction	Energy Efficiency	Yes
27	130	2011-081	21015206	Northern Kentucky Sanitation District #1	Kentucky Aire Pump Station Elimination	\$3,766,000	\$3,181,000	\$106,684,361	46,467			\$1,600,000	10	Sewer System Improvements	Energy Efficiency	No
28	128	2011-025		City of Hardinsburg	O'Connell Park Road Sewer Collection Rehab	\$400,000	\$400,000	\$107,084,361	26,447	\$120,000	\$6,254,658		0	Sewer System Improvements		
29	127	2011-096	21145172	Paducah McCracken Joint Sewer Agency	Massac Creek Pump Station and Force Main	\$14,323,800	\$10,000,000	\$117,084,361	30,001				0	Wastewater Collection System Improvement		
30	125	2011-063	21047023	Hopkinsville Water Environmental Authority	Oak Grove Village Sewer Project	\$7,600,000	\$7,600,000	\$124,684,361	30,419				0	WWTP Expansion		

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
31	123	2011-061	21047020	Hopkinsville Water Environmental Authority	HWEA-SRF Phase VII Sewer project	\$26,641,000	\$26,641,000	\$151,325,361	30,419				0	Sewer Extension		
32	123	2011-074	21167012	Mercer County Sanitation District	City of Burgin Sanitary Sewer Improvements and Septic tanks Elimination	\$9,200,000	\$3,000,000	\$154,325,361	35,555				0	Wastewater Collection		
33	123	2011-140	Pending	Louisville-Jefferson County MSD	South Central East Infrastructure Projects	\$1,800,000	\$1,800,000	\$156,125,361	39,457			\$1,800,000	13	CSO Correction	Green Infrastructure	Yes
34	123	2011-141	Pending	Louisville-Jefferson County MSD	Southwest Greenway & Parkway Focus Area	\$1,800,000	\$1,800,000	\$157,925,361	39,457			\$1,800,000	13	CSO Correction	Green Infrastructure	Yes
35	122	2011-099	21135014	Vanceburg Electric Plant Board	CSO Renovate	\$4,775,000	\$2,500,000	\$160,425,361	15,938	\$750,000	\$7,004,658		0	CSO Elimination		
36	120	2011-029		City of Louisa	Rehab/Replacement of Substandard Manholes and Pump Stations	\$3,000,000	\$1,000,000	\$161,425,361	16,690	\$300,000	\$7,304,658		0	CSO Elimination		
37	120	2011-030	21127020	City of Louisa	Five Forks/Route 3 Sewers	\$1,000,000	\$400,000	\$161,825,361	16,690	\$120,000	\$7,424,658		0	Sewer Extension		
38	120	2011-115	21059014	Regional Water Resource Agency	Masonville Area Sewer Extensions	\$1,130,000	\$1,130,000	\$162,955,361	36,813				0	Package WWTP Elimination		
39	117	2011-064	21047017	Hopkinsville Water Environmental Authority	CCFC/HWEA Greenville Road Sewer Extension	\$500,000	\$500,000	\$163,455,361	30,419				0	Sewer Extension		
40	115	2011-013	21179019	City of Bardstown	Bardstown-Bloomfield Sewer Connection	\$1,800,000	\$1,800,000	\$165,255,361	31,497				0	Wastewater Collection		
41	115	2011-028	21149008	City of Livermore	Livermore Rehabilitation Project	\$2,080,000	\$1,080,000	\$166,335,361	23,086	\$324,000	\$7,748,658	\$1,493,840	5	Sewer System Improvements	Energy Efficiency	No
42	115	2011-105	21049005	Winchester Municipal Utilities	Forest Park Sanitary Sewer Improvements	\$1,500,000	\$750,000	\$167,085,361	31,254			\$750,000	5	SSO Elimination	Energy Efficiency	No
43	113	2011-084	21151038	Northern Madison County SD	Fort Boonsboro Force Main & Pump Stations	\$2,000,000	\$2,000,000	\$169,085,361	32,861				0	Wastewater Collection		
44	110	2011-044	21235232	City of Williamsburg	Ball Park Pump Station/Force Main Replacement Project	\$942,500	\$942,500	\$170,027,861	18,114	\$282,750	\$8,031,408		0	SSO Elimination		
45	110	2011-106	21049010	Winchester Municipal Utilities	Bel Air Sanitary Sewer Improvements	\$900,000	\$900,000	\$170,927,861	31,254			\$900,000	5	SSO Elimination	Energy Efficiency	No
46	107	2011-007	21019013	Boyd County SD 4	Phase I - Route 5 Sewer Project (KY 716 to Ike Patton Dr.)	\$972,000	\$972,000	\$171,899,861	32,749				0	Wastewater Collection		
47	107	2011-091	21185024	Oldham County Sewer District	Crestwood/Pewee Valley Wastewater Phase II	\$6,285,960	\$6,285,960	\$178,185,821	63,229				0	Wastewater Collection		
48	105	2011-009	21039001	Carlisle County Sanitation District # 1	Carlisle County Plant Improvements	\$800,000	\$800,000	\$178,985,821	30,087				0	Sewer System Improvements		

									Principal Forgiveness Amount (30%)		Cumulative Principal Forgiveness		GPR Amount		Green Score		Project Description		Green Category		Categorically Green
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green					
49	105	2011-104	21059040	Owensboro-Daviess Regional Water Resource Agency	Veteran's Boulevard Combined Sewer Upgrade	\$1,250,000	\$1,250,000	\$180,235,821	36,813				0	CSO Elimination							
50	105	2011-125	21059034	Regional Water Resource Agency	Dublin Lane Tunnel Sewer Outfall Reconstruction	\$3,000,000	\$3,000,000	\$183,235,821	36,813				0	Sewer System Improvements							
51	103	2011-046		Farmdale Sanitation District	Gravity Trunk Line & New 0.75 MGD WWTP	\$9,929,000	\$8,479,000	\$191,714,821	40,011				0	WWTP							
52	103	2011-060	21093012	Hardin County Water District No. 2	Nolin Wastewater Collection (Glendale)	\$16,000,000	\$16,000,000	\$207,714,821	37,744				0	Wastewater Collection							
53	102	2011-022		City of Crestwood	Meadow Stream Pump Station and Force Main Expansion	\$3,170,000	\$2,196,000	\$209,910,821	42,619			\$176,100	5	SSO Elimination	Green Infrastructure and Energy Efficiency	No					
54	102	2011-097	21145107	Paducah McCracken Joint Sewer Agency	Paducah-McCracken JSA-Massac Creek Interceptor Phase II	\$3,200,000	\$2,800,000	\$212,710,821	30,001				5	Wastewater Collection System Improvement							
55	100	2011-016	21179008	City of Bloomfield	Bloomfield Pump Station and Force Main to Bardstown	\$4,641,000	\$2,541,000	\$215,251,821	33,393				0	Wastewater Collection							
56	100	2011-019	21203316	City of Brodhead	Brodhead Sewer Rehabilitation	\$2,000,000	\$2,000,000	\$217,251,821	17,500	\$600,000	\$8,631,408		5	Sewer System Improvements							
57	97	2011-093	21185037	Oldham County Sewer District	Covered Bridge WWTP Decommissioning	\$500,000	\$500,000	\$217,751,821	63,229				0	Package WWTP Elimination							
58	97	2011-103	21125322	Wood Creek Water District	WCWD Unserved Customers in Lake Watershed	\$5,700,000	\$5,700,000	\$223,451,821	27,015				0	Wastewater Collection							
59	95	2011-043	21175013	City of West Liberty	Liberty Road Sewer Line Extension	\$5,500,000	\$4,000,000	\$227,451,821	21,429	\$1,200,000	\$9,831,408		5	Sewer Extension							
60	95	2011-107	21209009	City of Sadieville	Sadieville Sewer Improvement Project	\$700,000	\$350,000	\$227,801,821	39,583				0	WWTP Elimination							
61	95	2011-117	21059031	Regional Water Resource Agency	Sunrise Drive Area Sewer Extension	\$616,500	\$616,500	\$228,418,321	36,813				0	Wastewater Collection							
62	95	2011-126		City of Fulton	Free Water Surface (FWS) Constructed Wetland	\$745,900	\$745,900	\$229,164,221	23,345	\$223,770	\$10,055,178		15	WWTP Upgrade							
63	90	2011-017	21179007	City of Bloomfield	Bloomfield Sewer Rehabilitation Project	\$300,000	\$300,000	\$229,464,221	33,393				0	Sewer System Improvements							
64	90	2011-026	21075007	City of Hickman	Sewer Rehabilitation	\$1,050,000	\$250,000	\$229,714,221	21,655	\$75,000	\$10,130,178		0	Sewer System Improvements							
65	90	2011-095	21185036	Oldham County Sewer District	Ash Avenue WWTP Improvements	\$5,000,000	\$5,000,000	\$234,714,221	63,229				0	WWTP Upgrade							

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
66	90	2011-100	21125200	West Laurel Water Association	WLWA-Wastewater Line Extension # 1 & Wastewater Treatment Plant	\$4,633,779	\$4,633,779	\$239,348,000	27,015				0	New WWTP		
67	90	2011-108	21141035	City of Russellville	Russellville Hwy. 431 South Sewer Project	\$4,150,000	\$4,150,000	\$243,498,000	25,647	\$1,245,000	\$11,375,178		0	Wastewater Collection		
68	88	2011-110	21113024	City of Nicholasville	Rose Hill Lift Station Elimination Project	\$101,000	\$100,000	\$243,598,000	37,465				5	Sewer System Improvements		
69	88	2011-127	21047026	Hopkinsville Water Environmental Authority	HWEA- Ft. Campbell Wastewater Interconnect	\$21,000,000	\$21,000,000	\$264,598,000	30,419				0	WWTP Expansion		
70	87	2011-094	21185038	Oldham County Sewer District	I&I Program	\$2,000,000	\$2,000,000	\$266,598,000	63,229				0	Sewer System Improvements		
71	85	2011-015	21157033	City of Benton	Wastewater Collection System Rehabilitation-Phase II	\$3,000,000	\$3,000,000	\$269,598,000	35,250				5	Sewer System Improvements		
72	85	2011-020	21217009	City of Campbellsville	Snow Lane & Steeple Chase Sewer System Extensions	\$941,000	\$941,000	\$270,539,000	22,922	\$282,300	\$11,657,478		0	Sewer Line Extension		
73	83	2011-018	21203317	City of Brodhead	Brodhead Wastewater Treatment Plant Upgrade and Improvements	\$3,500,000	\$3,500,000	\$274,039,000	17,500	\$1,050,000	\$12,707,478		3	WWTP Rehabilitation		
74	83	2011-031	21047025	City of Oak Grove	Oak Grove Storm Water Project	\$1,000,000	\$1,000,000	\$275,039,000	32,235				0	Strom Water		
75	83	2011-039		City of Versailles	Sanitary Sewer Rehabilitation-Phase I	\$1,677,000	\$1,677,000	\$276,716,000	35,052				5	Sewer System Improvements		
76	83	2011-058	21093019	Hardin County Water District No. 2	Rineyville Collector Sewers and e-One Grinder Pumps	\$28,000,000	\$28,000,000	\$304,716,000	37,744				0	Wastewater Collection		
77	83	2011-059		Hardin County Water District No. 2	Rineyville Trunk Sewer, Pump Station and Force Main Route	\$14,489,000	\$4,887,580	\$309,603,580	37,744				0	Wastewater Collection		
78	83	2011-075	21181003	Nicholas County Sanitation District Number 2	Lake Carnico Sanitary System Project	\$3,224,000	\$1,723,500	\$311,327,080	29,886				5	New WWTP		
79	80	2011-001	21189003	Booneville Water and Sewer	Highway 11 Sewer Extensions	\$2,194,432	\$2,194,432	\$313,521,512	15,833	\$658,330	\$13,365,808		0	Sewer Extension		
80	80	2011-067	21113016	Jessamine South Elkhorn Water District	Crosswoods, Unit 3 Sewer Collection System	\$300,000	\$300,000	\$313,821,512	40,096				0	Wastewater Collection		
81	80	2011-113	21059026	Regional Water Resource Agency	Woodlands South Subdivision Area Sewer Extension	\$550,000	\$550,000	\$314,371,512	36,813				0	Wastewater Collection		
82	80	2011-136		Winchester Municipal Utilities	Industrial Park Non-Potable Water Line	\$1,250,000	\$1,250,000	\$315,621,512	31,254				5	Water Recycle		
83	78	2011-023	21191105	City of Falmouth	Hwy 330 Extension	\$389,885	\$389,885	\$316,011,397	25,114	\$116,966	\$13,482,773		0	Sewer Extension		

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
84	78	2011-038	21199020	City of Somerset	Pitman Creek WWTP Expansion/Upgrade-Phase II Interceptor	\$3,996,960	\$3,996,960	\$320,008,357	22,362	\$1,199,088	\$14,681,861		0	WWTP Expansion		
85	78	2011-123	21227066	Bowling Green Municipal Utilities	Telemetry to Pump Stations	\$500,000	\$500,000	\$320,508,357	29,047				5	Sewer System Improvements		
86	75	2011-049	21081308	Grant County Sanitary Sewer District	Bullock Pen Lake Sewer Extension	\$722,290	\$722,290	\$321,230,647	38,438				0	Sewer Extension		
87	73	2011-002	21227068	Bowling Green Municipal Utilities	Sewer Pump Station Rehabilitation	\$300,000	\$300,000	\$321,530,647	29,047				0	Sewer System Improvements		
88	73	2011-003	21227069	Bowling Green Municipal Utilities	Sewer Line Rehabilitation	\$500,000	\$500,000	\$322,030,647	29,047				0	Sewer System Improvements		
89	73	2011-004	21227070	Bowling Green Municipal Utilities	Electrical Quick Connections to Pump Stations	\$400,000	\$400,000	\$322,430,647	29,047				0	Sewer System Improvements		
90	73	2011-045	21113003	City of Wilmore	Wastewater Treatment Plant Expansion	\$13,500,000	\$13,500,000	\$335,930,647	31,500				0	WWTP Expansion		
91	73	2011-073	21147019	McCreary County Water District	MCWD-Stearns to Smithtown Sewer System	\$2,043,000	\$2,043,000	\$337,973,647	19,348	\$612,900	\$15,294,761		0	Wastewater Collection		
92	73	2011-088	21151039	Northern Madison County SD	Madison Village Collection System Rehab	\$1,275,000	\$1,275,000	\$339,248,647	32,861				0	Wastewater Collection		
93	73	2011-090	21151001	Northern Madison County SD	I-75 Area-Simpson Lane Force Main	\$900,000	\$900,000	\$340,148,647	32,861				0	Wastewater Collection		
94	73	2011-122	21227063	Bowling Green Municipal Utilities	CCTV Assessment of Sewer Basins	\$2,500,000	\$2,500,000	\$342,648,647	29,047				0	Sewer System Improvements		
95	73	2011-130	21143007	City of Eddyville	Wastewater System Evaluation and Rehabilitation	\$1,500,000	\$1,500,000	\$344,148,647	28,472				0	Sewer System Improvements		
96	70	2011-005	21227071	Bowling Green Municipal Utilities	Old Mall Pump Station Upgrade	\$600,000	\$600,000	\$344,748,647	29,047				0	Sewer System Improvements		
97	70	2011-010	21053008	City of Albany	Sludge Handling, Sludge Collection and Transport System	\$2,857,000	\$2,857,000	\$347,605,647	14,558	\$857,100	\$16,151,861		0	WWTP Rehabilitation		
98	70	2011-021	21085001	City of Caneyville	Wastewater Treatment Plant Improvements	\$800,000	\$260,000	\$347,865,647	17,273	\$78,000	\$16,229,861		0	WWTP Rehabilitation		
99	70	2011-040	21239008	City of Versailles	UV Disinfection and Improvements at the Wastewater Treatment Plant	\$2,000,000	\$1,000,000	\$348,865,647	35,052				5	WWTP Upgrade		
100	70	2011-041	21093013	City of Vine Grove	Wastewater Treatment Plant Upgrade and Expansion	\$8,865,000	\$8,865,000	\$357,730,647	38,581				0	WWTP Expansion		
101	70	2011-042	21225013	City of Waverly	Sanitary Sewer Rehabilitation	\$500,000	\$500,000	\$358,230,647	33,438				5	Sewer System Improvements		

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
102	70	2011-109	21141036	City of Russellville	Franklin Road Sewer Project	\$1,020,000	\$1,020,000	\$359,250,647	25,647	\$306,000	\$16,535,861		0	Wastewater Collection		
103	70	2011-119	21227048	Bowling Green Municipal Utilities	Emergency Generator for Jennings Creek Lift Station	\$125,000	\$125,000	\$359,375,647	29,047				0	Sewer System Improvements		
104	70	2011-120	21227049	Bowling Green Municipal Utilities	Emergency Generator for Old Mall Lift Station	\$125,000	\$125,000	\$359,500,647	29,047				0	Sewer System Improvements		
105	70	2011-121	21227062	Bowling Green Municipal Utilities	Jennings Creek Interceptor Rehabilitation	\$250,000	\$250,000	\$359,750,647	29,047				0	Sewer System Improvements		
106	68	2011-085	21151043	Northern Madison County SD	Shady Hills & Cherry Trace Wastewater Collection System Extension	\$2,100,000	\$2,100,000	\$361,850,647	32,861				0	Wastewater Collection		
107	65	2011-006	21227072	Bowling Green Municipal Utilities	Odor Control Upgrade (Nashville Road)	\$500,000	\$500,000	\$362,350,647	29,047				0	Sewer System Improvements		
108	65	2011-033		City of Raceland	Sanitary Sewer SSOP, Phase I Study	\$150,000	\$150,000	\$362,500,647	31,500				0	Sewer System Improvements		
109	65	2011-036		City of Raceland	Sanitary Sewer SSOP, Phase III, Williams Avenue Pump Station Rehabilitation	\$175,000	\$175,000	\$362,675,647	31,500				0	Sewer System Improvements		
110	65	2011-037		City of Raceland	Sanitary Sewer SSOP, Phase II, Collection System Rehabilitation	\$750,000	\$750,000	\$363,425,647	31,500				0	Sewer System Improvements		
111	65	2011-055	21093022	Hardin County Water District No. 1	Boone Trace Wastewater Improvements	\$2,000,000	\$2,000,000	\$365,425,647	37,744				5	Sewer System Improvements		
112	65	2011-056	21093023	Hardin County Water District No. 1	Miscellaneous System Wide Pump Station Upgrades	\$1,200,000	\$1,200,000	\$366,625,647	37,744				5	Sewer System Improvements		
113	65	2011-057	21093024	Hardin County Water District No. 1	Radcliff Rehabilitated Sewer Lines	\$1,370,000	\$1,370,000	\$367,995,647	37,744				5	Sewer System Improvements		
114	65	2011-101	21125202	West Laurel Water Association	WLWA- Wastewater Line Extension #3 (inpart)	\$678,170	\$678,170	\$368,673,817	27,015				0	Sewer Extension		
115	65	2011-102	21125151	Wood Creek Water District	Wood Creek Wastewater Treatment Facilities	\$4,000,000	\$4,000,000	\$372,673,817	27,015				0	New WWTP		
116	65	2011-114	21059025	Regional Water Resource Agency	Locust Hill subdivision Sewer Extension	\$450,000	\$250,000	\$372,923,817	36,813				0	Wastewater Collection		
117	65	2011-133		City of Louisa	Meadowbrook/Berg Stormwater Correction Project	\$400,000	\$400,000	\$373,323,817	16,690	\$120,000	\$16,655,861		0	Storm Water		
118	63	2011-128	21233012	City of Providence	Olive Street and Leeper Lane Sewer Line Extension	\$3,127,000	\$2,727,000	\$376,050,817	27,400				0	Wastewater Collection		
119	62	2011-092		Oldham County Sewer District	Kentucky State Reformatory WWTP Rehab-Phases 1 & 2	\$2,500,000	\$2,500,000	\$378,550,817	63,229				0	WWTP Upgrade		

									Principal Forgiveness							
Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
120	60	2011-053	21093011	Hardin County Water District No. 1	Radcliff Standby Generator Project	\$1,597,200	\$1,597,200	\$380,148,017	37,744				0	Sewer System Improvements		
121	60	2011-054	21093021	Hardin County Water District No. 1	WWTP Generator Rebuild and Mobilization	\$50,000	\$50,000	\$380,198,017	37,744				0	Sewer System Improvements		
122	60	2011-068	21113019	Jessamine South Elkhorn Water District	Vincewood Estates Sewer Collection System	\$450,000	\$450,000	\$380,648,017	40,096				0	Wastewater Collection		
123	60	2011-071	21113020	Jessamine South Elkhorn Water District	Cedar Hill Estates Sewer Collection System	\$1,000,000	\$1,000,000	\$381,648,017	40,096				0	Wastewater Collection		
124	60	2011-087	21151037	Northern Madison County SD	Terrill Wastewater Collection System Extension	\$383,000	\$383,000	\$382,031,017	32,861				0	Wastewater Collection		
125	60	2011-111	21113023	City of Nicholasville	Carolyn Lane Sewer Main Extension	\$1,000,000	\$1,000,000	\$383,031,017	37,465				0	Wastewater Collection		
126	60	2011-112	21113022	City of Nicholasville	Vincewood Drive Sewer Main Extension	\$450,000	\$450,000	\$383,481,017	37,465				0	Sewer Extension		
127	58	2011-086	21151002	Northern Madison County SD	Expanded I-75 Service Area	\$5,908,000	\$5,908,000	\$389,389,017	32,861				0	Wastewater Collection		
128	55	2011-050	21081305	Grant County Sanitary Sewer District	Surge Tank at Wastewater Treatment Plant	\$600,000	\$60,000	\$389,449,017	38,438				0	WWTP Upgrade		
129	55	2011-052	21093020	Hardin County Water District No. 1	WWTP New Influent Grinder and Primary Building	\$200,000	\$200,000	\$389,649,017	37,744				0	WWTP Upgrade		
130	55	2011-070	21113018	Jessamine South Elkhorn Water District	Windhaven Drive Sewer Collection Sewers	\$325,000	\$325,000	\$389,974,017	40,096				0	Wastewater Collection		
131	55	2011-089	21151017	Northern Madison County SD	Executive Park Sewer Improvements Project	\$150,000	\$150,000	\$390,124,017	32,861				0	WWTP Expansion		
132	55	2011-116	21059038	Regional Water Resource Agency	Pleasant View Estates Sewer Extension Project	\$400,000	\$400,000	\$390,524,017	36,813				0	Sewer Extension		
133	53	2011-069	21113001	Jessamine South Elkhorn Water District	Keene Pump Station and Collection System	\$2,000,000	\$2,000,000	\$392,524,017	40,096				0	Wastewater Collection		
134	50	2011-124	21227074	Bowling Green Municipal Utilities	Industrial Drive Interceptor	\$8,000,000	\$8,000,000	\$400,524,017	29,047				0	Wastewater Collection		
135	50	2011-129		Oldham County Sewer District	Ashbrooke Subdivision Stormwater Corrections	\$984,000	\$984,000	\$401,508,017	63,229				0	Strom Water		
136	48	2011-072	21113021	Jessamine South Elkhorn Water District	Ichthus Pump Station and Forcemain	\$1,100,000	\$1,100,000	\$402,608,017	40,096				0	Wastewater Collection		
137	48	2011-131		Martin County Utility District	Lovely Storm Water	\$1,017,000	\$1,017,000	\$403,625,017	18,279	\$305,100	\$16,960,961		0	Strom Water		
138	48	2011-132	21071903	Southern Water and Sewer District	Solids Handling Facilities at Wayland WWTP	\$400,000	\$400,000	\$404,025,017	21,168	\$120,000	\$17,080,961		0	WWTP Improvements		
139	45	2011-034	21089018	City of Raceland	Caroline Road/Lost Canyon Sewer Extension, Phase II	\$550,000	\$550,000	\$404,575,017	31,500				0	Sewer Extension		
140	45	2011-035	21089017	City of Raceland	Cherokee Road Sewer Extension	\$500,000	\$500,000	\$405,075,017	31,500				0	Sewer Extension		

Rank	Score	CWSRF#	WRIS#	Applicant	Project name	Total Project Cost	Requested Loan Amount	Cumulative Requested Amount	MHI	Principal Forgiveness Amount (30%)	Cumulative Principal Forgiveness	GPR Amount	Green Score	Project Description	Green Category	Categorically Green
141	45	2011-098		Springfield Water and Sewer Commission	US 150/KY 555 Business Park Sewer	\$950,000	\$950,000	\$406,025,017	24,430	\$285,000	\$17,365,961		0	Wastewater Collection		
142	20	2011-118	21227041	Bowling Green Municipal Utilities	Design for Industrial Drive Interceptor	\$600,000	\$600,000	\$406,625,017	29,047				0	Wastewater Collection		
143	10	2011-051	21093025	Hardin County Water District No. 1	WWTP Perimeter Fencing	\$135,000	\$135,000	\$406,760,017	37,744				0	WWTP Upgrade		
144	10	2011-066	21113017	Jessamine South Elkhorn Water District	Sewer Master Plan with Asset Management	\$100,000	\$100,000	\$406,860,017	40,096				0	Sewer System Improvements		

APPENDIX B
CALL FOR PROJECTS LETTERS



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

October 26, 2009

Dear Sir or Madam:

If you have a wastewater, stormwater, or nonpoint source project that will need funding during the 2011 state fiscal year (July 1, 2010 thru June 30, 2011), we want to hear from you as your project may be eligible to receive funding from the Clean Water State Revolving Fund (CWSRF). The CWSRF is a competitive program. To be qualified to apply for a low interest CWSRF loan, your project **MUST** be ranked and listed on the SRF Priority List developed by the Division of Water (DOW). **NOTE: FOR THE 2011 PRIORITY LIST, THERE WILL BE NO CARRY OVER FROM THE 2010 PRIORITY LIST.**

It is easy to submit your project for inclusion on the SRF Priority list. All potential recipients must complete a Project Questionnaire and send it to DOW. The DOW has made some revisions to the Project Questionnaire and ranking criteria since last year to direct future SRF allocations to projects that address Kentucky's highest water quality problems. Previous versions of the Project Questionnaire document WILL NOT be accepted. The questionnaire, a Word document, can be downloaded from DOW's website (<http://www.water.ky.gov/publicassistance/funding/cwsrf/Intended+Use+Plan.htm>) or the Kentucky Infrastructure Authority's (KIA) website (www.kia.ky.gov).

DOW will use the *Kentucky Integrated Project Priority Ranking System (IPPRS)* to rank all eligible projects that are submitted. DOW strongly encourages you to read the Priority System Guidance Document before you begin completing the questionnaire form as you might acquire some useful ideas for improving your project's overall score. **Additionally, only those projects that can start construction by December 31, 2011 will be considered for funding.**

Completed Project Questionnaires must be received by the DOW no later than 4:30 PM eastern time, on **January 6, 2010**. All hardcopies may be mailed to: CWSRF COORDINATOR, DIVISION OF WATER, WATER INFRASTRUCTURE BRANCH, 200 FAIR OAKS, 4th FLOOR, FRANKFORT, KENTUCKY 40601. If submitting a hardcopy only, please allow additional time for mailing before the deadline. **AGAIN, PLEASE NOTE: THERE WILL BE NO CARRY OVER FROM THE 2010 INTENDED USE PLAN. All interested projects must complete the revised Project Questionnaire form which may be obtained from KIA's or DOW's website.**

If selected for funding, your project may be eligible for a low interest loan to partially or even fully fund your next clean water project. CWSRF loans can be used to match grants from Community Development Block Grant (CDBG), Appalachian Regional Commission (ARC) and the Environmental Protection Agency (EPA). We also partner on projects that have U.S. Rural Development (RD) funds and state appropriation line items.



KENTUCKY INFRASTRUCTURE AUTHORITY

Steven L. Beshear
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<http://kia.ky.gov>

John E. Covington, III
Executive Director

Projected interest rates for the program will be identified in the 2011 CWSRF Intended Use Plan (IUP) which will be available late spring, 2010. Rates identified in the IUP are subject to change by approval of the KIA Board. Currently, KIA offers three interest rates for the CWSRF program. The standard rate of 3% is available for borrowers with a median household income (MHI) at or above \$33,672, the MHI of the Commonwealth from the 2000 Census. A 2% rate is offered to borrowers whose MHI is between \$33,672 and \$26,937 (80% of the Commonwealth MHI). The 2% 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 1% rate, the borrower must have a MHI less than \$26,937.

Attached to this mailing is a brochure highlighting the Sustainable Infrastructure (SI) initiative launched last year by EPA and the Kentucky Division of Water. Projects that incorporate some of the practices and recommendations described in the SI brochure may receive additional points, resulting in a higher ranking on the CWSRF Project Priority List. The DOW encourages you to contact them with any questions or feedback regarding the SI initiative.

If you have questions about completing the questionnaire, please contact Shafiq Amawi or Anshu Singh of DOW at Shafiq.Amawi@ky.gov or anshu.singh@ky.gov or at (502) 564-3410. For more information on loan requirements, terms or eligibility of the program contact Kasi White or Sandy Williams of KIA at kasi.white@ky.gov or sandy.williams@ky.gov or at (502) 573-0260.

Sincerely,

Handwritten signature of John E. Covington, III.

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

Handwritten signature of Sandra L. Gruzesky.

Sandra L. Gruzesky, Director
Division of Water



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

February 25, 2010

Dear Sir or Madam:

The Clean Water State Revolving Fund (CWSRF) Call for Projects for the 2011 funding cycle has been extended to March 12, 2010, due to program changes initiated by Congress relating to Green Projects and Additional Subsidization. KIA estimates funding availability between \$40 million and \$60 million for the 2011 state fiscal year. At least \$5,186,400 *must* be used for green projects and between \$3,883,791 and \$12,945,969 *must* be provided as Additional Subsidization that will likely be principal forgiveness for qualifying projects. Additionally, Davis/Bacon federal wage rate requirements will apply to all SRF funded projects.

To be eligible to apply for a low interest CWSRF loan with the possibility of principal forgiveness, your project must be ranked and listed on the SRF Priority List developed by the Division of Water (DOW). No projects will be carried over from previous Priority Lists ***If you submitted a new 2011 Project Questionnaire form after October 1, 2009, you do not have to submit another form to receive CWSRF consideration for your project.***

It is easy to submit your project for inclusion on the SRF Priority list. All potential recipients must complete a Project Questionnaire and send it to DOW. The DOW has made some revisions to the Project Questionnaire and ranking criteria since last year to direct future SRF allocations to projects that address Kentucky's highest water quality problems. Previous versions of the Project Questionnaire document WILL NOT be accepted. The questionnaire, a Word document, can be downloaded from DOW's website (<http://www.water.ky.gov/publicassistance/funding/cwsrf/Intended+Use+Plan.htm>) or the Kentucky Infrastructure Authority's (KIA) website (www.kia.ky.gov).

DOW will use the *Kentucky Integrated Project Priority Ranking System (IPPRS)* to rank all eligible projects that are submitted. DOW strongly encourages you to read the Priority System Guidance Document before completing the questionnaire form as you might acquire some useful ideas for improving your project's overall score. **Please note: only those projects that can start construction by December 31, 2011 will be considered for funding.**



KENTUCKY INFRASTRUCTURE AUTHORITY

Steven L. Beshear
Governor

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Fax (502) 573-0157
<http://kia.ky.gov>

John E. Covington, III
Executive Director

Completed Project Questionnaires must be received by the DOW no later than 4:30 PM eastern time, on March 12, 2010. All hardcopies may be mailed to: CWSRF COORDINATOR, DIVISION OF WATER, WATER INFRASTRUCTURE BRANCH, 200 FAIR OAKS, 4th FLOOR, FRANKFORT, KENTUCKY 40601. If submitting a hardcopy only, please allow additional time for mailing before the deadline. **AGAIN, PLEASE NOTE: THERE WILL BE NO CARRY OVER FROM THE 2010 INTENDED USE PLAN. All interested projects must complete the revised Project Questionnaire form which may be obtained from KIA's or DOW's website.**

Projected interest rates for the program will be identified in the 2011 CWSRF Intended Use Plan (IUP) which will be available late spring, 2010. Rates identified in the IUP are subject to change by approval of the KIA Board. Currently, KIA offers three interest rates for the CWSRF program. The standard rate of 3% is available for borrowers with a median household income (MHI) at or above \$33,672, the MHI of the Commonwealth from the 2000 Census. A 2% rate is offered to borrowers whose MHI is between \$33,672 and \$26,937 (80% of the Commonwealth MHI). The 2% 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 1% rate, the borrower must have a MHI less than \$26,937.

If you have questions about completing the questionnaire, please contact Shafiq Amawi or Anshu Singh of DOW at Shafiq.Amawi@ky.gov or anshu.singh@ky.gov at (502) 564-3410. For more information on loan requirements, terms or eligibility of the program contact Sandy Williams or Kasi White of KIA at sandy.williams@ky.gov or kasi.white@ky.gov at (502) 573-0260.

Sincerely,

Handwritten signature of John E. Covington, III.

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

Handwritten signature of Sandra L. Gruzesky.

Sandra L. Gruzesky, Director
Division of Water

APPENDIX C

INTEGRATED PROJECT PRIORITY RANKING SYSTEM (IPPRS)

KENTUCKY INTEGRATED PROJECT PRIORITY RANKING SYSTEM

For Wastewater, Stormwater and Nonpoint Source Projects
Eligible To Be Funded By The

KENTUCKY CLEAN WATER STATE REVOLVING FUND

Revised October 2009



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
www.water.ky.gov

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Kentucky Integrated Project Priority Ranking System

I. Introduction

The Federal Water Pollution Control Act of 1956 provided a strong role for the federal government in the construction of publicly owned wastewater treatment works. The amendments enacted in 1972, commonly referred to as the Clean Water Act (CWA), expanded the level of federal aid and increased the federal grant share in an effort by Congress to speed up the pace of construction of wastewater treatment facilities and eliminate the backlog of needed facilities. The 1977 Amendments to the Clean Water Act directed the Environmental Protection Agency (EPA) to delegate most of its construction grants management functions to the states. EPA continued to provide funds for grants to local governments to construct wastewater treatment facilities through federal fiscal year (FFY) 1990. The Water Quality Act of 1987, which amended the CWA, authorized EPA to make capitalization grants to each state for the purpose of establishing a water pollution control revolving fund for providing financial assistance for projects that protect and restore water quality, including publicly owned treatment works (POTWs), nonpoint source pollution control and estuary management. EPA made capitalization grants beginning in FFY 1987; however, when federal funding ends, the Clean Water State Revolving Fund (CWSRF) is to be maintained in perpetuity by the state to replace the previous federal participation.

The Kentucky General Assembly enacted House Bill 217 during the 1988 legislative session, which established the CWSRF as an enduring and viable fund. This fund is intended to allow the Commonwealth of Kentucky to qualify for the federal CWSRF capitalization grants. The CWA requires in section 602 a state match to be deposited into the CWSRF of an amount equal to at least 20 percent of the total amount of all capitalization grants which will be made to the State.

The CWSRF may fund projects for construction of publicly owned treatment works as defined in section 212 of the Clean Water Act, including stormwater projects. The CWSRF may also fund nonpoint source pollution control activities which implement the U.S. EPA-approved *Kentucky Nonpoint Source Management Program - 2.0* (Kentucky Division of Water, 2002) required under Section 319 of the Clean Water Act, which lists specific activities for controlling nonpoint source pollution impacts and identifies responsible implementing agencies and potential/available funding sources.

The purpose of this document is to outline the Division of Water's (DOW) project selection and ranking criteria which shall be used to establish project priority ranking in the annual CWSRF Intended Use Plan (IUP). This document, entitled the *Integrated Project Priority Ranking System (IPPRS)*, complies with EPA's *Integrated Planning and Priority Setting in the Clean Water State Revolving Fund* guidance (EPA-832-R-01-002 March 2001), which states, "An integrated planning and priority setting system is effective if it ensures that CWSRF-funded projects address high priority water quality problems. Four actions are key to its success: identifying water quality priorities, assessing the CWSRF role, undertaking outreach efforts, and selecting priority projects."

DOW is committed to reassessing the Integrated Project Priority Ranking Criteria and Points System upon the completion of the initial review and ranking process and development of the 2007 Project Priority List. Modifications may be made to the criteria and points system if it is determined that this process does not meet EPA's guidance for utilizing the CWSRF to address the high priority water quality problems.

Kentucky Integrated Project Priority Ranking System

II. Identifying and Ranking Water Quality Priorities

According to the March 2001 EPA IPPS guidance:

“Water quality priorities provide a context for the activities of the CWSRF program. CWSRF resources should address these priorities in the most efficient manner possible. State water quality priorities also provide a valuable standard against which a state can measure the success of its water quality programs, i.e., has the state used its resources to address its highest water quality priorities?”

A state’s water quality program should be the CWSRF’s major resource in identifying the state’s water quality priorities. A water quality program has typically developed its understanding of the state’s priorities by considering water quality information from many sources. Familiarity with these sources of water quality information is also useful to the CWSRF during the development of project ranking systems.”

DOW operates several water quality programs that have been used to identify criteria for ranking projects in the context of CWSRF funding priority.

All surface waters in Kentucky are assessed based on a five-year, rotating watershed basin cycle. Assessment data and narrative explanations are compiled into the 305(b) Report to Congress. Section 303(d) of the CWA requires each state to list those waters within its boundaries for which technology based effluent limitations are not stringent enough to protect any water quality standard applicable to such waters. The 303(d) List of Waters identifies all waters assessed as "impaired" for one or more pollutants, and are therefore waters not "meeting the water quality standard." Listed waters are prioritized with respect to designated use classifications and the severity of pollution. The 305(b) report and 303(d) list are now published together in the *2008 Integrated Report to Congress on Water Quality in Kentucky* (Kentucky DOW, December 2008).

Kentucky is required to develop TMDLs for those water bodies that are not meeting water quality standards. The TMDL process establishes the allowable loadings of pollutants or other quantifiable parameters for a waterbody based on the relationship between point and nonpoint pollution sources and in-stream water quality conditions. See the following website for approved TMDLs <http://www.water.ky.gov/sw/tmdl/Approved+TMDLs.htm>.

As required in 200 KAR 17:050, the cabinet shall determine the priority for funding eligible projects to be included on the Project Priority List based on criteria established pursuant to 33 U.S.C. 1296, which states that projects should be designed to achieve optimum water quality management consistent with public health and water quality goals, and the following:

A. Project Needs

A project is awarded points based on the importance of the need in addressing a water quality or public health problem. Each of the need categories are defined in this section.

Criterion #1: Combined Sewer Overflow (CSO) Correction- Correction measures used to achieve water quality objectives by preventing or controlling periodic discharges of a mixture of storm water and untreated wastewater (combined sewer overflows) that occur when the capacity of a sewer system is exceeded during a rainstorm.

If the project is needed for Combined Sewer Overflow (CSO) Correction it receives 40 points.

Kentucky Integrated Project Priority Ranking System

Criterion #2: Sanitary Sewer Overflow (SSO) Correction- Control of sanitary sewer overflows caused by excessive infiltration and inflow into the sanitary sewer collection system. The problem of water penetration into a sewer system from the ground through such means as defective pipes or manholes (infiltration) or from sources such as drains, storms sewers, and other improper entries into the systems (inflow). Sanitary sewer overflow refers to overflow, spill, release, or discharge of untreated or partially treated wastewater from a sanitary sewer system. If the project is needed for correcting SSO resulting from I/I, it will receive 20 points.

Criterion #3: Replacement or Rehabilitation of Aging Infrastructure, including correction of moderate infiltration and inflow (i.e., no associated SSO)- Reinforcement or reconstruction of structurally deteriorating interceptor or collector sewers and pipes used to collect and convey wastewater by gravity or pressure flow to a common point. Projects that propose to correct moderate infiltration and inflow (i.e., no associated SSO) go under this criterion. If the project is needed for Replacement or Rehabilitation of Aging Infrastructure it will receive 10 points.

Criterion #4: New Treatment Plant- Construction of a new facility including any devices and systems used in the storage, treatment, recycling or reclamation of municipal sewage, sewage sludge, and biosolids, or industrial waste. If the project is needed for a New Treatment Plant Sewer System Replacement/Rehabilitation it will receive 20 points.

Criterion #5: New Collector Sewers and Appurtenances- Install new pipes used to collect and carry wastewater from a sanitary or industrial wastewater source to an interceptor sewer that will convey the wastewater to a treatment plant. If the project is needed for New Collector Sewers and Appurtenances it will receive 10 points.

Criterion #6: Decentralized Wastewater Treatment Systems- This includes onsite, mound, and/or cluster treatment systems that process household and commercial sewage that may include, but are not limited to, septic systems, disposal beds and packaged wastewater treatment plants configured to treat and dispose of the wastewater without offsite discharge. Usually the wastewater is percolated into the soil through infiltration beds or trenches or is disposed by irrigation or other means. If the project is needed for Decentralized Wastewater Treatment Systems it will receive 10 points.

Criterion #7: Upgrade to Advanced Treatment- Upgrade of a facility to a level of treatment that is more stringent than secondary treatment or produces a significant reduction in nonconventional pollutants. If the project is needed for Upgrade to Advanced Treatment it will receive 15 points.

Criterion #8: Upgrade/Expansion of Existing Treatment Plant- Upgrades, improvements, or expansion of existing treatment plant. If the project is needed for Upgrade Existing Plant it will receive 10 points.

Criterion #9: New Interceptors and Appurtenances- Install new major sewer lines receiving wastewater flows from collector sewers. The interceptor sewer carries wastewater directly to the treatment plant or another interceptor. If the project is needed for New Interceptors and Appurtenances it will receive 10 points.

Kentucky Integrated Project Priority Ranking System

Criterion #10: Storm Water Control- Storm water is defined as runoff water resulting from precipitation. Includes activities to plan and implement municipal storm water management programs with environmental benefits pursuant to National Pollutant Discharge Elimination System permits for discharges from municipal separate storm sewer systems.

If the project is needed for Storm Water Control it will receive 10 points.

Criterion #11: Nonpoint Source (NPS) Pollution Control- NPS project may include, but not limited to, stream restoration, Best Management Practices, and land purchases.

If the project is needed for Nonpoint Source (NPS) Pollution Control it will receive 5 points.

Criterion #12: Recycled Water Distribution- Project that may include, but are not limited to, the recycling of nonpotable water or reclaimed water for irrigation and other nonpotable uses.

If the project is needed for Recycled Water Distribution it will receive 10 points.

Criterion #13: Planning- Developing plans to address water quality and water quality-related public health problems that are supported by sound science and appropriate technology. Examples included Watershed-Based Plan, Total Maximum Daily Load Implementation Plans and Long-term Control Plans for Combined Sewer Overflow (CSO).

If the project is needed for Planning it will receive 10 points.

Criterion #14: Other- If any project that does not meet the list of project needs definitions and/or standards provided above. If it does meet the Other category please list a project need.

If the project is needed for Other, it will receive points based on a sliding scale of 5 to 10 points.

B. Regionalization/Decentralization

1. Criterion #1: Will this project provide regionalization and/or consolidation of wastewater treatment systems?

This question addresses regionalized wastewater treatment approaches which may significantly minimize wastewater impacts. Regionalization occurs when smaller systems integrate part or all of their wastewater management systems to reduce costs, improve service, and maintain regulatory compliance. Smaller systems, regardless of ownership status, lack economics of scale and are having an increasingly difficult time finding the capital and human resources required to comply with stringent water quality standards to remain viable. Large wastewater systems are generally encouraged to acquire smaller systems in an effort to address the growing number of unviable water/ wastewater systems. Regionalized wastewater treatment approach may significantly minimize wastewater impacts, resulting in a reduced number of NPDES discharges. This includes projects that will combine and/or eliminate one or more existing treatment plants, result in the abandonment of one or more wastewater treatment plants and connection to an existing wastewater treatment plant, acquisitions of smaller systems by larger systems, mergers between utilities.

The project will receive 20 points if it results in a reduced number of KPDES discharges.

Kentucky Integrated Project Priority Ranking System

2. Criterion #2: Will this project provide an on-site and/or clustered decentralized wastewater treatment system with sub-surface discharge?

This question addresses decentralized treatment systems which are potentially affordable, viable, long-term alternatives to centralized wastewater treatment, particularly in small-town, rural, and suburban areas. These include onsite, mound, and/or cluster treatment systems that treat and disperse relatively small volumes of wastewater from individual or small numbers of residential and commercial buildings. These systems may include, but are not limited to, septic systems with drainfields, mounds, cluster systems and packaged wastewater treatment plants configured to treat and dispose of the wastewater without offsite discharge. Usually the wastewater is percolated into the soil through infiltration beds or trenches or is disposed by irrigation or other means.

The project will receive 10 points if it eliminates or prevents failing on-site septic tanks or straight pipes through decentralized wastewater treatment systems.

C. Compliance and Enforcement

Criterion #1: Is the project necessary to achieve full or partial compliance with a court order, or a judicial or administrative consent decree?

A project receives 30 points if it is necessary for achieving full or partial compliance with a court order, or a judicial or administrative consent decree.

Criterion #2: Will the project achieves voluntary compliance (violation with no order)?

This question refers to when the facility/system is out of compliance before the project and will be in compliance at project completion. A project will receive 25 points if it is necessary for achieving voluntary compliance.

Criterion #3: Is the project improvement necessary to allow the system to maintain compliance?

This question refers to when the facility/system is in compliance before the project and has a risk of falling out of compliance without the project. A project will receive 15 points if it is necessary for maintaining compliance.

D. Water Quality

Criterion #1: Will the project implement an approved Total Maximum Daily Load (TMDL) for impaired waterbodies?

This question addresses the TMDL process, which establishes the allowable loadings of pollutants or other quantifiable parameters for a waterbody based on the relationship between point and nonpoint pollution sources and in-stream water quality conditions. See the following website for approved TMDLs <http://www.water.ky.gov/sw/tmdl/Approved+TMDLs.htm>. A project will receive 10 points if it answers "Yes" to this question.

Criterion #2: Will the project implement any part of an approved Watershed Plan?

A project will receive 10 points if it answers "Yes." Contact the DOW Watershed Management Branch at (502) 564-3410 for more information on accepted Watershed Plans.

Kentucky Integrated Project Priority Ranking System

Criterion #3: Will the project make reasonable progress towards eliminating identified pollutant sources for waterbodies that appear on the 2008 Integrated Report to Congress on Water Quality in Kentucky?

This question addresses the state's goal to improve water quality in impaired waterbodies. The 2008 Integrated Report and maps available on DOW's website. <http://www.water.ky.gov/sw/swmonitor/305b/default.htm>. The reports list the impaired waterbodies with the pollutants of concern and probable sources of the pollutants. The project will receive 20 points for each pollutant water-body combination it will address.

Criterion #4: Does the project eliminate existing or potential sources of pollution in groundwater sensitivity areas?

This question considers the importance of groundwater as one of Kentucky's vital resources as a source of drinking water, a source for industrial and agricultural use, and the source of sustained base flow in most streams. Groundwater is classified across the state on a scale from 1 (lowest) to 5 (highest) sensitivity. The project will receive 15 points if it eliminates existing or potential sources of groundwater contamination within a high sensitivity groundwater (rating 4 or 5) area. The project will receive 10 points if it eliminates existing or potential sources of groundwater contamination within a moderate sensitivity groundwater (rating 2.5 or 3) area. Groundwater data is available for download at <http://kygeonet.ky.gov/metadateexplorer/>.

Criterion #5: Is the project located within an identified SWAPP zone or WHPA?

Each public water supply (PWS) must develop a Source Water Assessment and Protection Plan (SWAPP) which delineates its drinking water source protection area, called SWAPP zones or Wellhead Protection Areas (WHPA), and inventories known and potential sources of contamination within those areas. The project will receive ten (10) points for each SWAPP or WHPA Zone 1, seven (7) points for each SWAPP or WHPA Zone 2, and three (3) points for each SWAPP or WHPA Zone 3 in which the project is located. Look up your SWAPP and WHPA areas in the Watershed Viewer at <http://eppcmapping.ky.gov/website/watershed/viewer.htm>.

Criterion #6: Will the project make reasonable progress towards eliminating identified pollutant sources of water quality impairments within an identified DOW Priority Watershed?

The Division of Water has developed a list of state priority watersheds at the HUC11 level. List each watershed on the Questionnaire Form that is located in the project area and indicate if the watershed is on this list. The project will receive 20 points if a priority watershed is located in the project area. **Please refer to the attached list of Kentucky Division of Water State Priority Watersheds.**

Criterion #7: Will the project have a positive effect on Special Use Waters?

This question considers the importance of protecting special waters in Kentucky. Special Use Waters are rivers, streams and lakes listed in Kentucky Administrative Regulations (<http://www.lrc.state.ky.us/kar/TITLE401.HTM>) as Cold Water Aquatic Habitat (401 KAR 10:031 Section 4), Exceptional Waters (401 KAR 10:030 Section 1), Reference Reach Waters (401 KAR 10:030 Section 1), Outstanding State Resource Waters (401 KAR 10:031 Section 8), Outstanding National Resource Waters (401 KAR 10:030 Section 1), State Wild Rivers (Kentucky Wild Rivers Act of 1972), and Federal Wild and Scenic Rivers (Wild and Scenic Rivers Act, PL 90-542). The project will receive 10 points if the applicant can demonstrate that the project will benefit one or more of these waters. <http://www.water.ky.gov/sw/specialwaters/>

Kentucky Integrated Project Priority Ranking System

Criterion #8: Will the project have a positive impact on drinking water sources within a 5-mile radius of its location?

This question considers the importance of protecting drinking water supplies from potential contaminant sources. The project will receive 10 points if it eliminates existing or potential sources of drinking water contamination within a 5-mile radius of the project location.

Criterion #9: Will the project eliminate failing on-site septic tanks or straight pipes?

This question considers the importance of protecting groundwater and surface water quality from potential contaminant sources. The project will receive 15 points if it eliminates or prevents failing on-site septic tanks or straight pipes.

Criterion #10: Will the project impact water quality of the affected waterbodies that will receive discharge?

This question provides a methodical approach to determining if the water quality of receiving waterbody/waterbodies will be impacted by a project through reduction, maintenance, or increased pollutant loading. The project will receive 10 points if it improves water quality by reducing pollutant loadings; 5 points if it sustains water quality by maintaining current loading; and 0 points if it is Not Applicable or increases loadings or is a new discharge into high quality waters.

E. Financial Need

This section of the project ranking criteria considers the importance or the ability of facilities/systems to acquire and manage sufficient financial resources to achieve and maintain regulatory compliance.

The project will receive 15 points if the project is in an area of Kentucky where the Median Household Income (MHI) is less than \$26,937, and 10 points if the project is in an area where the MHI is between \$26,937 and \$33,672.

F. Sustainable and/or Green Infrastructure

Green infrastructure offers another strategy that may be used to reduce negative environmental impacts. The U.S. Environmental Protection Agency (EPA) defines green infrastructure as “management approaches and technologies that utilize, enhance and/or mimic the natural hydrologic cycle processes of infiltration, evapotranspiration, capture and reuse” (USEPA, 2008). This management approach attempts to keep stormwater onsite and reduce excess flows entering combined or separate sewer systems in combination with, or in lieu of centralized hard infrastructure solutions. It incorporates vegetation and natural resources as much as possible in development and redevelopment. Green Infrastructure has a number of benefits, including reduced runoff, groundwater recharge, higher air quality, better aesthetics, reduces costs, lowers impacts on climate change, and provides environmental benefits that surpass improved water quality. Some methods include, but are not limited to green roofs, rain harvesting, downspout disconnection, planter boxes, trees and tree boxes, rain gardens, porous/permeable pavements, vegetated swale/bioswales, brownfield development, infill and redevelopment, green parking, green streets and highways, pocket wetlands, and riparian buffers which reduce runoff from a site and within parking lots. In addition, environmentally innovative projects would include those that demonstrate new and/or innovative approaches to delivering service and/or managing water resources in a more sustainable way, including projects that achieve public health protection and environmental protection objectives within which life cycle costs (including infrastructure, energy consumption and other operational costs) are minimized.

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Sustainable infrastructure is defined as practices that meet the current needs while ensuring the continued viability of a product or practice well into the future. In considering infrastructure, the U.S. population today benefits from the investments that were made over the past several decades to build our nation's water infrastructure. Looking forward, the EPA wants to promote practices that encourage utilities and their customers to address existing needs so that future generations will not be left to address the eminent wave of infrastructure needs that will result from aging infrastructure. EPA is committed to promotion of sustainable practices that will help to reduce the potential gap between funding needs and spending at the local and national level. The Sustainable Infrastructure Initiative will guide our efforts in changing how the nation views, values, manages, and invests in its water infrastructure. EPA is working with the water industry to identify best practices that have helped many of the Nation's utilities address a variety of management challenges and extend the use of these practices to a greater number of utilities. The EPA believes that collaboration with a coalition of leaders can build a roadmap for the future promotion of sustainable infrastructure (USEPA, 2008).

The following three categories will be considered incentives by the Kentucky Division of Water, and projects that incorporate components from any of the categories will receive bonus points on the project priority ranking for wastewater projects. **If a category is selected, the applicant must provide proof to substantiate claims.**

Criterion #1: Energy Efficiency

The project will receive 3 to 5 points if it incorporates the following components; (a) reduces energy costs and consumption by replacing, reducing and/or controlling high-use operations such as motors, pumps, aeration systems, dewatering systems used in collection, pumping, storage, treatment, reuse/discharge and support systems (e.g., lighting and HVAC); (b) utilizes SCADA (Supervisory Control And Data Acquisition) system, which performs data collection and control at the supervisory level that is placed on top of a real-time control system (multiple Programmable Logic Controls [PLC's]) to reduce energy consumption and enhance process control; (c) facility site planning includes facilities and building components designed to maximize energy efficiency; and/or (d) project/system has conducted an energy audit and/or energy reduction plan.

Criterion #2: Green Infrastructure

The project will receive 5 points if it incorporates the following components; (a) utilizes storm-water capture and/or rain harvesting techniques; (b) construction/enhancement/restoration of wetland(s); (c) protection and enhancement of riparian buffers and floodplains; (d) environmentally innovative technologies/Other (This category will need to be specified); and/or (e) low impact construction technology is used to minimize impacts to the existing surface.

Criterion #3: Asset Management/Full-Cost Pricing

The project will receive 3 to 5 points if it incorporates the following components; (a) system has mapped its wastewater collection and treatment components and analyzed conditions, including risks of failure, expected dates of renewals and ultimate replacements, and sources and amounts of revenues needed to finance operations, maintenance and capital needs (e.g., Capital Improvement Plan); (b) project/system has developed appropriate pricing/rate/affordability standard systems to build, operate, and maintain systems; (c) project/system has specifically allocated funds for the rehabilitation and replacement of aging and deteriorating infrastructure.

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III. Summary of Points System Used to Establish Project Priority Ranking

Priority Ranking Criteria		Possible Points
A. Project Needs Category		
1.	Combined Sewer Overflow (CSO) Correction	40
2.	Sanitary Sewer Overflow (SSO) Correction	20
3.	Replacement or Rehabilitation of Aging Infrastructure, including correction of moderate infiltration and inflow (i.e., no associated SSO).	10
4.	New Treatment Plant	20
5.	New Collector Sewers and Appurtenances	10
6.	Decentralized Wastewater Treatment Systems	10
7.	Upgrade to Advanced Treatment	15
8.	Upgrade Existing Treatment Plant	10
9.	New Interceptors and Appurtenances	10
10.	Storm Water Control	10
11.	Nonpoint Source (NPS) Pollution Control	5
12.	Recycled Water Distribution	10
13.	Planning	10
14.	Other (specify):	5-10
B. Regionalization/Decentralization		
1.	Will this project provide regionalization and/or consolidation of wastewater treatment systems? Proposed project reduces the number of NPDES discharges by regionalization.	20
2.	Will this project provide an on-site and/or clustered decentralized wastewater treatment system with sub-surface discharge?	10
C. Compliance and Enforcement		
1.	Is the project necessary to achieve full or partial compliance with a court order, agreed order, or a judicial or administrative consent decree?	30
2.	Will the project achieves voluntary compliance (violation with no order)?	25
3.	Is the project improvement necessary to allow the system to maintain compliance?	15
D. Water Quality		
1.	Will the project allow the system to address existing or projected Total Maximum Daily Load (TMDL)?	10

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2.	Will the project allow the system to address an approved Watershed Management Plan?	10
3.	Will the project make reasonable progress towards eliminating identified pollutant sources for waterbodies that appear on the <i>2008 Integrated Report to Congress on Water Quality in Kentucky</i> ?	20 points for each pollutant-waterbody combination
4.	Does the project eliminate existing or potential sources of pollution in groundwater sensitivity areas?	15 points for high or highest sensitivity 10 points for moderate sensitivity
5.	Is the project located within an identified SWAPP zone or WHPA?	10 for each Zone 1 7 for each Zone 2 3 for each Zone 3
6.	Will the project make reasonable progress towards eliminating identified pollutant sources of water quality impairments within an identified DOW Priority Watershed?	20 points
7.	Will the project have a positive effect on Special Use Waters?	10 points
8.	Will the project have a positive impact on drinking water sources within a 5-mile radius of its location?	10
9.	Will the project eliminate failing on-site septic tanks or straight pipes?	15
10.	Will the project impact water quality of the affected waterbodies that will receive discharge?	
	a. Improvement (Reduces pollutant loading to affected waterbody)	10
	b. Maintenance (Sustains current water quality)	5
	c. Not Applicable (New WWTP discharging into high quality water)	0
E. Financial Need		
1.	Borrowers with a MHI Less than \$26,937	15
2.	Borrowers with a MHI Between \$26,937 and \$33,672	10
F. Green and/or Sustainable Infrastructure- Incentive/Bonus Points		
1.	Energy Reduction	
	a. Project reduces energy costs and consumption by replacing, reducing and/or controlling high-use operations such as motors, pumps, aeration systems, dewatering systems used in collection, pumping, storage, treatment, reuse/discharge and support systems (e.g., lighting and HVAC).	5
	b. Project utilizes SCADA (Supervisory Control And Data Acquisition) system, which performs data collection and control at the supervisory level that is places on top of a real-time control system (multiple Programmable Logic Controls [PLC's]) to reduce energy consumption and enhance process control.	5

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	c. Facility site planning includes facilities and building components designed to maximize energy efficiency.	3
	d. Project/System has conducted an energy audit and/or energy reduction plan.	5
	Green Infrastructure	
2.	a. Project utilizes storm-water capture and/or rain harvesting techniques.	5
	b. Construction/enhancement/restoration of wetland(s).	5
	c. Protection and enhancement of riparian buffers and floodplains.	5
	d. Environmentally Innovative Technologies/Other (Specify):	5
	e. Low impact construction technology is used to minimize impacts to the existing surface.	5
	Asset Management/Full-Cost Pricing	
3.	a. System has mapped its wastewater collection and treatment components and analyzed conditions, including risks of failure, expected dates of renewals and ultimate replacements, and sources and amounts of revenues needed to finance operations, maintenance and capital needs (e.g., Capital Improvement Plan).	5
	b. Project/System has developed appropriate pricing/rate/affordability standards to build, operate, and maintain systems.	3
	c. Project/System has specifically allocated funds for the rehabilitation and replacement of aging and deteriorating infrastructure.	5

IV. Developing and Updating the Project Priority List and Intended Use Plan

In order for a project to be considered for funding from the CWSRF, it must appear on the Comprehensive Project Priority List for the state fiscal year in which the project will receive a binding commitment. To be included in this list, an eligible project applicant must submit a completed *KY CWSRF Project Questionnaire Form* to DOW during the annual Call for Projects period. A copy of the questionnaire may be found on DOW's CWSRF website. www.water.ky.gov/publicassistance/funding/CWSRF/. Once the questionnaire is received, DOW staff will evaluate the project based on the ranking system discussed above and assign the project a numeric score. Eligible projects will then be added to the next Comprehensive Project Priority List. Those projects with the same numerical score will be ranked based on the date the completed *KY CWSRF Project Questionnaire Form* is received. If the project is only for accommodating future growth and will not address an existing water quality or public health need, and therefore does not receive any points from the above criteria, the project will be still included on the Comprehensive Project Priority List if it is eligible for CWSRF funding.

DOW and the Kentucky Infrastructure Authority (KIA) will prepare an annual Intended Use Plan (IUP) that will describe how the state intends to use the funds in the Kentucky CWSRF for each state fiscal year, and how those uses support the objectives of the CWA. DOW will publish and maintain the IUP and Project Priority List on its CWSRF website. Each IUP will include an updated Comprehensive Project Priority List and a Fundable List of projects that are anticipated to receive funding during that state fiscal year. Applicants are encouraged to complete the Project Schedule information on the Project Questionnaire Form and to contact the DOW or KIA as early in the process as possible to discuss the project and the loan process. Once the IUP has been drafted, notice will be given to the public that the draft IUP is available for review and comment for a period of at least 30 days. After the comment period has ended DOW and KIA will review any comments received and make changes to the IUP as appropriate. Both the draft and final IUPs will be available on DOW's CWSRF website.

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www.water.ky.gov/publicassistance/funding/CWSRF/

V. Eligible Project Applicants

Any governmental agency shall be eligible to apply for financial assistance for planning, design and construction of eligible projects.

VI. References

Kentucky Division of Water website: www.water.ky.gov

Kentucky Division of Water CWSRF website: www.water.ky.gov/publicassistance/funding/CWSRF/

Kentucky Infrastructure Authority website: <http://kia.ky.gov/>

U.S. EPA 2009 website: <http://www.epa.gov/waterinfrastructure/>

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VII. Kentucky Division of Water State Priority Watersheds

	HUC	Watershed
1	05110001150	Bacon Creek
2	05100101290	Banklick
3	08010201050	Bayou de Chien
4	05140101250	Beargrass Creek (St. Matthews)
5	05090201130	Cabin Creek
6	06040006040	Clarks River
7	05130205260	Claylick Creek
8	05140205090	Clear Creek, near Madisonville
9	05130101330	Clear Fork
10	05130101055	Clover Fork
11	05130205290	Cumberland River, below Vicksburg
12	05100205190	Dix River: Clarks Run
13	05100205180	Dix River: Hanging Fork
14	05100205170	Dix River: Herrington Lake
15	05100205410	Eagle Creek
16	05130101350	Elk Fork Creek
17	05100101200	Fleming Creek
18	05140102190	Floyds Fork
19	05140102180	Floyds Fork
20	05110001130	Green River at Munfordville
21	05070202020	Jonican Branch near Fish Trap Lake
22	05130101450	Laurel River
23	05070203170	Levisa Fork near Louisa
24	05100101010	Licking River (headwaters)
25	05110005040	Long Falls
26	05130101340	Mud Creek
27	05100205020	Muddy Creek
28	05100201	North Fork Kentucky River
29	05110005110	Panther Creek, North Fork
30	05070203040	Prater Creek near Banner
31	05100204120	Red River Gorge
32	05130206090	Red River, at Oakville
33	05110004040	Rough River Lake
34	05130102090	Sinking Creek, of Rockcastle
35	05140104250	Sinking Creek at Hardinsburg
36	05100205270	South Elkhorn Creek
37	05100102030	Strodes Creek
38	05100102050	Townsend Creek
39	05140205050	Tradewater, below Dawson Springs

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VIII. 319h Funded Watershed-Based Plans in Kentucky

Project Year	Basin	Project Name	Status
2002	Kentucky	Dix River/ Herrington Reservoir	Should be accepted by 12/31/2009
2002	Cane Creek	Four Rivers	Under Development
2002	Upper East Fork Clarks River	Four Rivers	Should be accepted by 12/31/2009
2004	Floyds Fork	Salt	Contract not renewed Partial plan completed
2004	Corbin City/Laurel River	Upper Cumberland	Accepted May 2007
2004	Darby Creek of Harrods Creek	Salt	Should be accepted by 12/31/2009
2004	Dry Creek of Triplett Creek	Licking	Should be accepted by 12/31/2009
2004	Town Branch of Fleming Creek	Licking	Should be accepted by 12/31/2009
2004	Hancock Creek of Strodes Creek	Licking	Should be accepted by 12/31/2009
2005	Bacon Creek	Green	Under Development
2005	Pleasant Grove Creek	Four Rivers	Under Development
2005	Ten Mile Creek of Eagle Creek	Kentucky	Accepted November 2005
2005	Pleasant Run	Green	Accepted January 2005
2005	Benson Creek (Goose Creek)	Kentucky	Under Development
2006	Curry's Fork	Salt	Under Development
2006	Big South Fork Subwatersheds- Bear Creek, Roaring Paunch, Big Creek	Upper Cumberland	Under Development
2006	Cane Run	Kentucky	Should be accepted by 12/31/2009
2006	Rock Creek	Upper Cumberland	Accepted April 2008
2007	Banklick Creek	Licking	Under Development
2007	Elkhorn Creek	Big Sandy	Contract not renewed Data collection complete
2008	Triplett Creek	Licking	Under Development
2008	Hinkston Creek	Licking	Under Development
<i>The following projects were selected for funding in 2009. Projects are not under contract.</i>			
2009	Red River	Kentucky	Not Yet Funded
2009	Gunpowder Creek	Licking	Not Yet Funded
2009	Wolf Run	Kentucky	Not Yet Funded

APPENDIX D
GREEN RESERVE GUIDANCE

**2010 Clean Water and Drinking Water State Revolving Fund
20% Green Project Reserve:
Guidance for Determining Project Eligibility**

April 21, 2010

- I. Introduction: The Fiscal Year (FY) 2010 Appropriation Law (P.L. 111-88) included additional requirements affecting both the Clean Water and the Drinking Water State Revolving Fund (SRF) programs. This attachment is included in the *Procedures for Implementing Certain Provisions of EPA’s Fiscal Year 2010 Appropriation Affecting the Clean Water and Drinking Water State Revolving Fund Programs* dated April 21, 2010. Because of differences in project eligibility for each program, the Clean and Drinking Water SRFs have separate guidance documents that identify specific goals and eligibilities for green infrastructure, water and energy efficient improvements, and environmentally innovative activities. Part A includes the details for the Clean Water SRF program, and Part B the Drinking Water SRF program.

Public Law 111-88 included the language “Provided, that for fiscal year 2010, to the extent there are sufficient eligible project applications, not less than 20 percent of the funds made available under this title to each State for Clean Water State Revolving Fund capitalization grants and not less than 20 percent of the funds made available under this title to each State for Drinking Water State Revolving Fund capitalization grants shall be used by the State for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities.” These four categories of projects are the components of the Green Project Reserve (GPR).

- II. GPR Goals: Congress’s intent in enacting the GPR is to direct State investment practices in the water sector to guide funding toward projects that utilize green or soft-path practices to complement and augment hard or gray infrastructure, adopt practices that reduce the environmental footprint of water and wastewater treatment, collection, and distribution, help utilities adapt to climate change, enhance water and energy conservation, adopt more sustainable solutions to wet weather flows, and promote innovative approaches to water management problems. Over time, GPR projects could enable utilities to take savings derived from reducing water losses and energy consumption, and use them for public health and environmental enhancement projects. Additionally, EPA expects that green projects will help the water sector improve the quality of water services without putting additional strain on the energy grid, and by reducing the volume of water lost every year.
- III. Background: EPA used an inclusive approach to determine what is and is not a „green“ water project. Wherever possible, this guidance references existing consensus-based industry practices to provide assistance in developing green projects. Input was solicited from State-EPA and EPA-Regional workgroups and the water sector. EPA staff also reviewed approaches promoted by green practice advocacy groups and water associations, and green infrastructure implemented by engineers and managers in the water sector. EPA also assessed existing „green“ policies within EPA and received input

from staff in those programs to determine how EPA funds could be used to achieve shared goals.

The 2010 SRF GPR Guidance provides States with information needed to determine which projects count toward the GPR requirement. The intent of the GPR Guidance is to describe projects and activities that fit within the four specific categories listed in the 2010 Appropriations Act. This guidance defines each category of GPR projects and lists projects that are clearly eligible for GPR, heretofore known as categorically eligible projects. For projects that do not appear on the list of categorically projects, they may be evaluated for their eligibility within one of the four targeted types of GPR eligible projects based upon a business case that provides clear documentation (see the *Business Case Development* sections in Parts A & B below).

GPR may be used for planning, design, and/or building activities. Entire projects, or the appropriate discrete components of projects, may be eligible for GPR. Projects do not have to be part of a larger capital project to be eligible. All projects or project components counted toward the GPR requirement must clearly advance one or more of the objectives articulated in the four categories of GPR discussed below.

The Green Project Reserve sets a new precedent for the SRFs by targeting funding towards projects that States “ may not have funded in prior years. Water quality benefits from GPR projects rely on proper operation and maintenance to achieve the intended benefits of the projects and to achieve optimal performance of the project. EPA encourages states and funding recipients to thoroughly plan for proper operation and maintenance of the projects funded by the SRFs, including training in proper operation of the project. It is noted, however, that the SRFs cannot provide funding for operation and maintenance costs, including training, in the SRF assistance agreements. Some of these costs may, however, be funded through appropriate DWSRF set-asides under limited conditions.

PART A – CWSRF GPR SPECIFIC GUIDANCE

CWSRF 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 must otherwise be eligible for CWSRF funding. The GPR requirement does not create new funding authority beyond that described in Title VI of the CWA. Consequently, a subset of 212, 319 and 320 projects will count towards the GPR. The principles guiding CWSRF funding eligibility include:
 - 0.2 All Sec 212 projects must be consistent with the definition of “treatment works” as set forth in section 212 of the Clean Water Act (CWA).
 - 0.2-1 All section 212 projects must be publicly owned, as required by CWA section 603(c)(1).
 - 0.2-2 All section 212 projects must serve a public purpose.
 - 0.2-3 POTWs as a whole are utilized to protect or restore water quality. Not all portions of the POTW have a direct water quality impact in and of themselves (i.e. security fencing). Consequently, POTW projects are not required to have a direct water quality benefit, though most of them will.
 - 0.3 Eligible nonpoint source projects implement a nonpoint source management program under an approved section 319 plan or the nine element watershed plans required by the 319 program.
 - 0.3-1 Projects prevent or remediate nonpoint source pollution.
 - 0.3-2 Projects can be either publicly or privately owned and can serve either public or private purposes. For instance, it is acceptable to fund land conservation activities that preserve the water quality of a drinking water source, which represents a public purpose project. It is also acceptable to fund agricultural BMPs that reduce nonpoint source pollution, but also improve the profitability of the agricultural operation. Profitability is an example of a private purpose.
 - 0.3-3 Eligible costs are limited to planning, design and building of capital water quality projects. The CWSRF considers planting trees and shrubs, purchasing equipment, environmental cleanups and the development and initial delivery of education programs as capital water quality projects. Daily maintenance and operations, such as expenses and salaries are not considered capital costs.
 - 0.3-4 Projects must have a direct water quality benefit. Implementation of a water quality project should, in itself, protect or improve water quality. States should be able to estimate the quantitative and/or qualitative water quality benefit of a nonpoint source project.
 - 0.3-5 Only the portions of a project that remediate, mitigate the impacts of, or prevent water pollution or aquatic or riparian habitat degradation should be funded. Where water quantity projects improve water quality (e.g. reduction of flows from impervious surfaces that adversely affect stream health, or the modification of

irrigation systems to reduce runoff and leachate from irrigated lands), they would be considered to have a water quality benefit. In many cases, water quality protection is combined with other elements of an overall project. For instance, brownfield revitalization projects include not only water quality assessment and cleanup elements, but often a redevelopment element as well. Where the water quality portion of a project is clearly distinct from other portions of the project, only the water quality portion can be funded by the CWSRF.

- 0.3-6 Point source solutions to nonpoint source problems are eligible as CWSRF nonpoint source projects. Section 319 Nonpoint Source Management Plans identify sources of nonpoint source pollution. In some cases, the most environmentally and financially desirable solution has point source characteristics and requires an NPDES discharge permit. For instance, a septage treatment facility may be crucial to the proper maintenance and subsequent functioning of decentralized wastewater systems. Without the septage treatment facility, decentralized systems are less likely to be pumped, resulting in malfunctioning septic tanks.

0.4 Eligible projects under section 320 implement an approved section 320 Comprehensive Conservation Management Plan (CCMP).

- 0.4-1 Section 320 projects can be either publicly or privately owned.
- 0.4-2 Eligible costs are limited to capital costs.
- 0.4-3 Projects must have a direct benefit to the water quality of an estuary. This includes protection of public water supplies and the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on water, and requires the control of point and nonpoint sources of pollution to supplement existing controls of pollution.
- 0.4-4 Only the portions of a project that remediate, mitigate the impacts of, or prevent water pollution in the estuary watershed should be funded.

0.5 GPR projects must meet the definition of one of the four GPR categories. The Individual GPR categories do not create new eligibility for the CWSRF. The projects that count toward GPR must otherwise be eligible for CWSRF funding.²

0.6 GPR projects must further the goals of the Clean Water Act.

² Drinking Water Utilities can apply for CWSRF funding

CWSRF Technical Guidance

The following sections outline the technical aspects for the CWSRF 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 INFRASTRUCUTRE

1.1 Definition: Green stormwater infrastructure includes a wide array of practices at multiple scales that manage wet weather and that maintain and restore 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

- 1.2-1 Implementation of green streets (combinations of green infrastructure practices in transportation rights-of-ways), for either new development, redevelopment or retrofits including: permeable pavement³, bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
- 1.2-2 Wet weather management systems for parking areas including: permeable pavement², bioretention, trees, green roofs, and other practices such as constructed wetlands that can be designed to mimic natural hydrology and reduce effective imperviousness at one or more scales. Vactor trucks and other capital equipment necessary to maintain green infrastructure projects.
- 1.2-3 Implementation of comprehensive street tree or urban forestry programs, including expansion of tree boxes to manage additional stormwater and enhance tree health.
- 1.2-4 Stormwater harvesting and reuse projects, such as cisterns and the systems that allow for utilization of harvested stormwater, including pipes to distribute stormwater for reuse.
- 1.2-5 Downspout disconnection to remove stormwater from sanitary, combined sewers and separate storm sewers and manage runoff onsite.

³ The total capital cost of permeable pavement is eligible, not just the incremental additional cost when compared to impervious pavement.

- 1.2-6 Comprehensive retrofit programs designed to keep wet weather discharges out of all types of sewer systems using green infrastructure technologies and approaches such as green roofs, green walls, trees and urban reforestation, permeable pavements and bioretention cells, and turf removal and replacement with native vegetation or trees that improve permeability.
- 1.2-7 Establishment or restoration of permanent riparian buffers, floodplains, wetlands and other natural features, including vegetated buffers or soft bioengineered stream banks. This includes stream day lighting that removes natural streams from artificial pipes and restores a natural stream morphology that is capable of accommodating a range of hydrologic conditions while also providing biological integrity. In highly urbanized watersheds this may not be the original hydrology.
- 1.2-8 Projects that involve the management of wetlands to improve water quality and/or support green infrastructure efforts (e.g., flood attenuation).⁴
 - 1.2-8a Includes constructed wetlands.
 - 1.2-8b May include natural or restored wetlands if the wetland and its multiple functions are not degraded and all permit requirements are met.
- 1.2-9 The water quality portion of projects that employ development and redevelopment practices that preserve or restore site hydrologic processes through sustainable landscaping and site design.
- 1.2-10 Fee simple purchase of land or easements on land that has a direct benefit to water quality, such as riparian and wetland protection or restoration.

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.
- 1.3-6 Hardening, channelizing or straightening streams and/or stream banks.
- 1.3-7 Street sweepers, sewer cleaners, and vactor trucks unless they support green infrastructure projects.

⁴ Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, vernal pools, and similar areas.

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 that capture, treat, infiltrate, or evapotranspire water on the parcels where it falls and does not result in interbasin 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 are available at:
<http://cfpub.epa.gov/npdes/greeninfrastructure/munichandbook.cfm> and
<http://cfpub.epa.gov/npdes/greeninfrastructure/technology.cfm> and

1.5 Examples of Projects Requiring A Business Case

- 1.5-1 Fencing to keep livestock out of streams and stream buffers. Fencing must allow buffer vegetation to grow undisturbed and be placed a sufficient distance from the riparian edge for the buffer to function as a filter for sediment, nutrients and other pollutants.

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 -- shower heads, toilets, urinals and other plumbing devices
 - 2.2-1b Where specifications exist, WaterSense labeled products should be the preferred choice (<http://www.epa.gov/watersense/index.html>).
 - 2.2-1c Implementation of incentive programs to conserve water such as rebates.
- 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, or upgrading existing meters, with:
 - 2.2-3a Automatic meter reading systems (AMR), for example:
 - 2.2-3.a(i) Advanced metering infrastructure (AMI)
 - 2.2-3.a(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 detection equipment to existing meters (not replacing the meter itself).

- 2.2-5 Water audit and water conservation plans, which are reasonably expected to result in a capital project.
- 2.2-6 Recycling and water reuse projects that replace potable sources with non-potable sources,
 - 2.2-6a Gray water, condensate and wastewater effluent reuse systems (where local codes allow the practice)
 - 2.2-6b Extra treatment costs and distribution pipes associated with water reuse.
- 2.2-7 Retrofit or replacement of existing landscape irrigation systems to more efficient landscape irrigation systems, including moisture and rain sensing controllers.
- 2.2-8 Retrofit or replacement of existing agricultural irrigation systems to more efficient agricultural irrigation systems.

2.3 Projects That Do Not Meet the Definition of Water Efficiency

- 2.3-1 Agricultural flood irrigation.
- 2.3-2 Lining of canals to reduce water loss.
- 2.3-3 Replacing drinking water distribution lines. This activity extends beyond CWSRF eligibility and is more appropriately funded by the DWSRF.
- 2.3-4 Leak detection equipment for drinking water distribution systems, unless used for reuse distribution pipes.

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 POTW, since less water would need to be collected and treated; therefore, there are also energy and financial savings.

2.5 Examples of 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 Projects that result from a water audit or water conservation plan
- 2.5-3 Storage tank replacement/rehabilitation to reduce loss of reclaimed water.
- 2.5-4 New water efficient landscape irrigation system.
- 2.5-5 New water efficient agricultural irrigation system.

3.0 ENERGY EFFICIENCY

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

3.2 Categorical Projects

- 3.2-1 Renewable energy projects such as wind, solar, geothermal, micro-hydroelectric, and biogas combined heat and power systems (CHP) that provide power to a POTW. (<http://www.epa.gov/cleanenergy>). Micro-hydroelectric projects involve capturing the energy from pipe flow.
 - 3.2-1a POTW owned renewable energy projects can be located onsite or offsite.
 - 3.2-1b Includes the portion of a publicly owned renewable energy project that serves POTW'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 Projects that achieve a 20% reduction in energy consumption are categorically eligible for GPR⁵. Retrofit projects should compare energy used by the existing system or unit process⁶ to the proposed project. The energy used by the existing system should be based on name plate data when the system was first installed, recognizing that the old system is currently operating at a lower overall efficiency than at the time of installation. New POTW projects or capacity expansion projects should be designed to maximize energy efficiency and should select high efficiency premium motors and equipment where cost effective. Estimation of the energy efficiency is necessary for the project to be counted toward GPR. If a project achieves less than a 20% reduction in energy efficiency, then it may be justified using a business case.
- 3.2-3 Collection system Infiltration/Inflow (I/I) detection equipment
- 3.2-4 POTW 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 a capital project are eligible. Guidance to help POTWs develop energy management programs, including assessments and audits is available at http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymanagement.pdf.

3.3 Projects That Do Not Meet the Definition of Energy Efficiency

- 3.3-1 Renewable energy generation that is *privately* owned or the portion of a publicly owned renewable energy facility that does not provide power to a POTW, either through a connection to the grid that the utility draws from and/or a direct connection to the POTW.
- 3.3-2 Simply replacing a pump, or other piece of equipment, because it is at the end of its useful life, with something of average efficiency.
- 3.3-3 Facultative lagoons, even if integral to an innovative treatment process.

⁵ The 20% threshold for categorically eligible CWSRF energy efficiency projects was derived from a 2002 Department of Energy study entitled *United States Industrial Electric Motor Systems Market Opportunities Assessment, December 2002* and adopted by the Consortium for Energy Efficiency. Further field studies conducted by Wisconsin Focus on Energy and other States programs support the threshold.

⁶ A unit process is a portion of the wastewater system such as the collection system, pumping stations, aeration system, or solids handling, etc.

3.3-4 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 Project must be cost effective. An evaluation must identify energy savings and payback on capital and operation and maintenance costs that does not exceed the useful life of the asset.

http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymangement.pdf

3.4-2 The business case must describe how the project maximizes energy saving opportunities for the POTW or unit process.

3.4-3 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/cupss>) to document current energy usage and track anticipated savings.

3.5 Examples of Projects Requiring a Business Case

3.5-1 POTW projects or unit process projects that achieve less than a 20% energy efficiency improvement.

3.5-2 Projects implementing recommendations from an energy audit that are not otherwise designated as categorical.

3.5-3 Projects that cost effectively eliminate pumps or pumping stations.

3.5-4 Infiltration/Inflow (I/I) correction projects that save energy from pumping and reduced treatment costs and are cost effective.

3.5-4a Projects that count toward GPR cannot build new structural capacity. These projects may, however, recover existing capacity by reducing flow from I/I.

3.5-5 I/I correction projects where excessive groundwater infiltration is contaminating the influent requiring otherwise unnecessary treatment processes (i.e. arsenic laden groundwater) and I/I correction is cost effective.

3.5-6 Replacing pre-Energy Policy Act of 1992 motors with National Electric Manufacturers Association (NEMA) premium energy efficiency motors.

3.5-6a NEMA is a standards setting association for the electrical manufacturing industry (<http://www.nema.org/gov/energy/efficiency/premium/>).

3.5-7 Upgrade of POTW lighting to energy efficient sources such as metal halide pulse start technologies, compact fluorescent, light emitting diode (LED).

3.5-8 SCADA systems can be justified based upon substantial energy savings.

3.5-9 Variable Frequency Drive can be justified based upon substantial energy savings.

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 likely to result in a capital project.
- 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)
 - 4.2-3a Note: GHG Inventory and mitigation plan is eligible for CWSRF funding.
 - 4.2-3b EPA Climate Leaders:
<http://www.epa.gov/climateleaders/basic/index.html>
Climate Registry: <http://www.theclimateregistry.org/>
- 4.2-4 Planning activities by a POTW to prepare for adaptation to the long-term effects of climate change and/or extreme weather.
 - 4.2-4a Office of Water – Climate Change and Water website:
<http://www.epa.gov/water/climatechange/>
- 4.2-5 Construction of US Building Council LEED certified buildings or renovation of an existing building on POTW facilities.
 - 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 U.S. Green Building Council website
<http://www.usgbc.org/displaypage.aspx?CategoryID=19>
- 4.2-6 Decentralized wastewater treatment solutions to existing deficient or failing onsite wastewater systems.
 - 4.2-6a Decentralized wastewater systems include individual onsite and/or cluster wastewater systems used to collect, treat and disperse relatively small volumes of wastewater. An individual onsite wastewater treatment system is a system relying on natural processes and/or mechanical components, that is used to collect, treat and disperse or reclaim wastewater from a single dwelling or building. A cluster system is a wastewater collection and treatment system under some form of common ownership that collects wastewater from two or more dwellings or buildings and conveys it to a treatment and dispersal system located on a suitable site near the dwellings or buildings. Decentralized projects may include a combination of these systems. EPA recommends that decentralized systems be managed under a central management entity with enforceable program requirements, as stated in the *EPA Voluntary Management Guidelines*.
http://www.epa.gov/owm/septic/pubs/septic_guidelines.pdf

4.2-6b Treatment and Collection Options: A variety of treatment and collection options are available when implementing decentralized wastewater systems. They typically include a septic tank, although many configurations include additional treatment components following or in place of the septic tank, which provide for advanced treatment solutions. Most disperse treated effluent to the soil where further treatment occurs, utilizing either conventional soil absorption fields or alternative soil dispersal methods which provide advanced treatment. Those that discharge to streams, lakes, tributaries, and other water bodies require federal or state discharge permits (see below). Some systems promote water reuse/recycling, evaporation or wastewater uptake by plants. Some decentralized systems, particularly cluster or community systems, often utilize alternative methods of collection with small diameter pipes which can flow via gravity, pump, or siphon, including pressure sewers, vacuum sewers and small diameter gravity sewers. Alternative collection systems generally utilize piping that is less than 8 inches in diameter, or the minimum diameter allowed by the state if greater than 8 inches, with shallow burial and do not require manholes or lift stations. Septic tanks are typically installed at each building served or another location upstream of the final treatment and dispersal site. Collection systems can transport raw sewage or septic tank effluent. Another popular dispersal option used today is subsurface drip infiltration. Package plants that discharge to the soil are generally considered decentralized, depending on the situation in which they are used. While not entirely inclusive, information on treatment and collection processes is described, in detail, in the “Onsite Wastewater Treatment Technology Fact Sheets” section of the EPA Onsite Manual http://www.epa.gov/owm/septic/pubs/septic_2002_osdm_all.pdf and on EPA’s septic system website under Technology Fact Sheets. http://cfpub.epa.gov/owm/septic/septic.cfm?page_id=283

4.3 Projects That Do Not Meet the Definition of Environmentally Innovative

- 4.3-1 Air scrubbers to prevent nonpoint source deposition.
- 4.3-2 Facultative lagoons, even if integral to an innovative treatment processes.
- 4.3-3 Surface discharging decentralized wastewater systems where there are cost effective soil-based alternatives.
- 4.3-4 Higher sea walls to protect POTW from sea level rise.
- 4.3-5 Reflective roofs at POTW 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 or 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;

- 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 Examples of Projects Requiring a Business Case

- 4.5-1 Constructed wetlands projects used for municipal wastewater treatment, polishing, and/or effluent disposal.
 - 4.5-1a Natural wetlands, as well as the restoration/enhancement of degraded wetlands, may not be used for wastewater treatment purposes and must comply with all regulatory/permitting requirements.
 - 4.5-1b Projects may not (further) degrade natural wetlands.
- 4.5-2 Projects or components of projects that result from total/integrated water resource management planning consistent with the decision criteria for environmentally innovative projects and that are Clean Water SRF eligible.
- 4.5-3 Projects that facilitate adaptation of POTWs to climate change identified by a carbon footprint assessment or climate adaptation study.
- 4.5-4 POTW upgrades or retrofits that remove phosphorus for beneficial use, such as biofuel production with algae.
- 4.5-5 Application of innovative treatment technologies or systems that improve environmental conditions and are consistent with the Decision Criteria for environmentally innovative projects such as:
 - 4.5-5a Projects that significantly reduce or eliminate the use of chemicals in wastewater treatment;
 - 4.5-5b 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. (National Biosolids Partnership, 2010; *Advances in Solids Reduction Processes at Wastewater Treatment Facilities Webinar*; http://www.e-wef.org/timssnet/meetings/tnt_meetings.cfm?primary_id=10WCAP2&Action=LONG&subsystem=ORD%3cbr).
 - 4.5-5b(i) Includes composting, class A and other sustainable biosolids management approaches.
- 4.5-6 Educational activities and demonstration projects for water or energy efficiency.
- 4.5-7 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>).
- 4.5-8 Sub-surface land application of effluent and other means for ground water recharge, such as spray irrigation and overland flow.
 - 4.5-8a Spray irrigation and overland flow of effluent is not eligible for GPR where there is no other cost effective alternative.

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 2010 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 must address the decision criteria for the category of project
- 5.0-2 Business cases should be adequate, but not exhaustive.
 - 5.0-2a There are many formats and approaches. EPA does not require any specific one.
 - 5.0-2b Some projects will require detailed analysis and calculations, while others many not require more than one page.
 - 5.0-2c Limit the information contained in the business case to only the pertinent „green“ information needed to justify the project.
- 5.0-3 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 Quantifiable water and/or energy savings or water loss reduction for water and energy efficiency projects should be included.
- 5.1-2 The cost and financial benefit of the project should be included, along with the payback time period where applicable. (NOTE: Clean Water SRF requires energy efficiency projects to be cost effective.)

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/>.

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 Bioretention
 - 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 Moisture and rain sensing irrigation 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,
 - 2.2-2a 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.

3.0 ENERGY 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 Projects⁷

- 3.2-1 Renewable energy projects, which are part of a larger 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.

⁷ 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.

- 3.2-1b 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://www.epa.gov/waterinfrastructure/bettermanagement_energy.html).
 - 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.
- 3.5-5 Upgrade of lighting to energy efficient sources (such as metal halide pulse start technologies, compact fluorescent, light emitting diode, etc).
- 3.5-6 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, for example:
 - 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: [add alleviate demand comment from American Rivers]

- 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 2010 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/>.