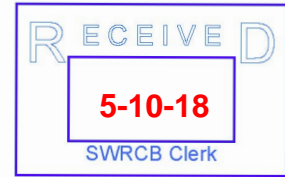




May 10, 2018

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814



commentletters@waterboards.ca.gov

Re: **Comment Letter – June 19, 2018 Board Meeting – FFY 2018 CWSRF IUP**

Dear Ms. Townsend:

On behalf of the California Water Association (“CWA”), I am writing to offer comments on the Draft SFY 2018-19 Clean Water State Revolving Fund Intended Use Plan (the “IUP”), issued by the State Water Resources Control Board (“State Water Board”) for public review and comment. CWA represents public water suppliers subject to the jurisdiction of the California Public Utilities Commission (“CPUC”). Its members provide safe, reliable, and high-quality water services to approximately 6 million Californians, including a significant number living in financially disadvantaged communities or who are eligible for low income customer rate assistance programs.

As public utilities defined as such under Section 216 of the Public Utilities Code, and as eligible entities, CWA’s members look forward to applying for grants and loans under the Clean Water State Revolving Fund (“CWSRF”) program. CWA attended the workshop on April 27, 2018 in Sacramento, and submits the following letter for your consideration as you finalize details of the IUP.

Inclusion of CPUC-Regulated Water Utilities

On January 6, 2015 the U.S. Environmental Protection Agency issued a memo (attached) titled “Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act (“WRRDA”) to Titles I, II, V, and VI of the Federal Water Pollution Control Act.” This memo provides interpretive guidance to states in implementing the WRRDA amendments as they apply to the CWSRF. The memo includes a number of changes that affirms the eligibility for privately owned facilities (comparable to “investor-owned” in the case of CWA’s members) in areas that are directly relevant to the CWSRF IUP, including:

- decentralized wastewater treatment projects (see page 9)
- projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water (see page 9)
- projects that develop or implement a eligible watershed pilot projects (see page 10)

Jack Hawks, Executive Director
California Water Association
601 Van Ness Avenue, Suite 2047
San Francisco, CA 94102-6316
415.561.9650
415.561.9652 fax
415.305.4393 cell
jhawks@calwaterassn.com
www.calwaterassn.com

Melissa Dixon, Administrative Director
California Water Association
700 R Street, Suite 200
Sacramento, CA 95811
916.231.2147
916.231.2141 fax
mdixon@calwaterassn.com

CWA President
Lawrence Morales
East Pasadena Water
626.793.6189
lawrence@epwater.com

CWA Vice Presidents
Keith Switzer
Golden State Water Company

Evan Jacobs
California American Water

Ed Jackson
Liberty Utilities Corporation
562.299.5166
edward.jackson@libertyutilities.com

CWA General Secretary and Treasurer
Joel Reiker
11142 Garvey Avenue
El Monte, CA 91733
626.448.6183
jreiker@sgwater.com

CWA Billing Address
California Water Association
700 R Street, Suite 200
Sacramento, CA 95811

CWA Mailing and Shipping Address
California Water Association
601 Van Ness Avenue, Suite 2047
Mail Code: #E3-608
San Francisco, CA 94102-3200

Janine Townsend
May 10, 2018
Page 2 of 2

- projects involving the reuse or recycling of wastewater, stormwater, or subsurface drainage water (see page 11)

CWA respectfully requests that the State Water Board revise the IUP to incorporate these eligibility changes for CPUC-regulated water utilities into the Draft SFY 2018-19 CWSRF Intended Use Plan, as outlined below.

Appendix D: SCG Construction Grant Eligibility

Eligible Applicants: Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Heritage Commission consult list, public utilities

Appendix E: SCG Construction Grant Eligibility Criteria for Septic to Sewer and Regional Projects

Eligible Applicants: Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Heritage Commission consult list, public utilities

Appendix F: Principal Forgiveness

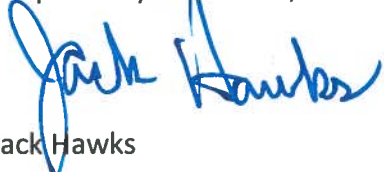
Eligible Applicants: Any municipality, intermunicipal, interstate, or state agency (regardless of population, MHI, or wastewater rates), and public utilities in partnership with other eligible applicants. The Board may want to footnote this eligibility. (See page 17 of the Interpretive Guidance)

Appendix G: SCG Planning Grants Eligibility Criteria

Eligible Applicants: Public agencies, 501(c)(3) non-profit organizations, federally recognized tribes and state tribes on Native American Heritage Commission consult list, public utilities

CWA appreciates the opportunity to provide these comments and recommendations to the State Water Board as program. Please do not hesitate to contact me with any questions you may have at (415) 561-9650.

Respectfully submitted,



Jack Hawks
Executive Director

Attachment: *Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V, and VI of the Federal Water Pollution Control Act*

cc: Members of the State Water Resources Control Board
Eileen Sobek, Executive Director
Karen Larsen, Deputy Director, Division of Water Quality

Interpretive Guidance for Certain Amendments in the Water
Resources Reform and Development Act to Titles I, II, V and VI of
the Federal Water Pollution Control Act



This page intentionally left blank.

Table of Contents

Background 3

Subtitle A: Amended Provisions in Title VI..... 3

 Sec. 5001. General Authority for Capitalization Grants (Section 601) 3

 Section 601(a)..... 3

 Section 5002. Capitalization Grant Agreements (Section 602) 3

 Section 602(b)(6)..... 3

 Section 602(b)(9)..... 4

 Section 602(b)(11)..... 5

 Section 602(b)(12)..... 5

 Section 602(b)(13)..... 6

 Section 602(b)(14)..... 7

 Section 5003. Water Pollution Control Revolving Funds (Section 603) 8

 Section 603(c)..... 8

 Section 603(c)(1-3)..... 9

 Section 603(c)(4) 9

 Section 603(c)(5) 9

 Section 603(c)(6) 10

 Section 603(c)(7) 10

 Section 603(c)(8) 10

 Section 603(c)(9) 11

 Section 603(c)(10) 11

 Section 603(c)(11) 11

 Section 603(d)(1)(A)&(B)..... 12

 Section 603(d)(1)(E)..... 12

 Section 603(d)(7)..... 14

 Section 603(i) 15

 Section 5004. American Iron and Steel (Section 608) 18

 Section 608 18

 Section 5005. Report on the Allotment of Funds..... 20

 Section 5006. Effective date..... 20

Subtitle B: Amended Provisions in Title I, II, and V..... 20

 Section 5011. Watershed Pilot Projects (Section 122)..... 20

 Section 122 20

 Section 5012. Definition of Treatment Works (Section 212) 21

 Section 212(2)(A) 21

 Section 5013. Funding for Indian Programs (Section 518)..... 22

 Section 518 22

APPENDIX I 23

APPENDIX II 27

APPENDIX III..... 28

Background

On June 10, 2014, President Obama signed into law the Water Resources Reform and Development Act of 2014 (WRRDA). Among its provisions are amendments to Titles I, II, V, and VI of the Federal Water Pollution Control Act (FWPCA). Interpretive guidance was issued on September 18, 2014 for those provisions affecting the Clean Water State Revolving Fund (CWSRF) program. This document includes additional supplemental information on section 602(b)(13), as well as several appendices and a set of questions and answers.

Subtitle A: Amended Provisions in Title VI

Sec. 5001. General Authority for Capitalization Grants (Section 601)

Section 601(a)

As amended, the FWPCA section 601(a) now states:

(a) GENERAL AUTHORITY.—Subject to the provisions of this title, the Administrator shall make capitalization grants to each State for the purpose of establishing a water pollution control revolving fund to accomplish the objectives, goals, and policies of this Act by providing assistance for projects and activities identified in section 603(c).

The FWPCA section 601(a) incorporates the expanded list of activities or projects identified in 603(c) as eligible for assistance from a CWSRF. States should make certain when selecting projects for funding that the purpose of the project is consistent with the objectives, goals, and policies of the FWPCA.

Section 5002. Capitalization Grant Agreements (Section 602)

Section 602(b)(6)

As amended, the FWPCA section 602(b)(6) now states:

(6) treatment works eligible under this Act which will be constructed in whole or in part with assistance made available by a State water pollution control revolving fund authorized under this title, or section 205(m) of this Act, or both, will meet the requirements of, or otherwise be treated (as determined by the Governor of the State) under sections 511(c)(1) and 513 of this Act in the same manner as treatment works constructed with assistance under title II of this Act;

The FWPCA section 511(c)(1) applies the National Environmental Policy Act (NEPA) to assistance for the construction of treatment works. The FWPCA section 513 is a prevailing wage provision that requires all laborers and mechanics employed by contractors working on treatment works to be paid prevailing wages as determined by the Secretary of Labor. It is considered a Davis-Bacon related Act.

National Environmental Policy Act Provision

All CWSRF-funded projects involving the construction of treatment works, regardless of the source of the funding (e.g., prior years' appropriations, state match, bond proceeds, interest earnings, principal repayments, etc.), must undergo an environmental review. The Environmental Protection Agency (EPA) has consistently interpreted the statement "with assistance made available by a State water pollution control revolving fund authorized under this title" to mean that the specific requirement identified applies to all CWSRF-funded projects, not just equivalency projects. Consistent with this prior interpretation, any project that is considered a "treatment work" as defined in the FWPCA section 212, now incorporated in FWPCA Section 502(26), must comply with the FWPCA 511(c)(1) regardless of which eligibility it is funded under (*see section 603(c)*).

A State may choose to apply its own "NEPA-like" State environmental review process for complying with the FWPCA section 511(c)(1) provided that the elements in 40 CFR 35.3140(b)(1) through (5) are met.

Davis-Bacon Related Act Provision

The FWPCA section 602(b)(6) permanently applies the prevailing wage (Davis-Bacon) provision of the FWPCA section 513 to any projects for treatment works that are funded by a CWSRF. Consistent with EPA's prior implementation of this provision, application of the Davis-Bacon Act requirements extend not only to assistance agreements funded with capitalization grants, but to all CWSRF-funded projects involving the construction of treatment works regardless of the source of the funding (e.g., prior years' appropriations, state match, bond proceeds, interest earnings, principal repayments, etc.). Any project that is considered a "treatment work" as defined in the FWPCA section 212, now incorporated in FWPCA Section 502(26), must comply with the FWPCA 513, regardless of which eligibility it is funded under (*see section 603(c)*).

Section 602(b)(9)

As amended, the FWPCA section 602(b)(9) now states:

(9) the State will require as a condition of making a loan or providing other assistance, as described in section 603(d) of this Act, from the fund that the recipient of such assistance will maintain project accounts in accordance with generally accepted government accounting standards, including standards relating to the reporting of infrastructure assets;

The State must require assistance recipients to maintain project accounts according to Generally Accepted Accounting Principles (GAAP) as issued by the Governmental Accounting Standards Board (GASB). This provision requires assistance recipients to use standards relating to the reporting of infrastructure assets. The most recent applicable standard is GASB Statement No. 34 (GASB 34), issued in June 1999, which details governmental reporting requirements including standards for reporting of infrastructure assets.¹ Further details on the requirements, as well as the full text of GASB 34, can be obtained through the GASB.

¹ Assistance recipients that follow GAAP standards other than GASB 34 are still required to maintain project accounts according to GAAP and apply GAAP standards for reporting on infrastructure assets.

The State must include language in assistance agreements requiring that recipients' project accounts are GAAP compliant, including GAAP requirements relating to the reporting of infrastructure assets. The State should consult with their State Auditor or equivalent entity to determine whether or not existing CWSRF assistance agreement language meets these requirements. Because of the effective date of GASB 34, the State may find that these requirements are already in place.

Section 602(b)(11)

As amended, the FWPCA now includes section 602(b)(11), which states:

(11) the State will establish, maintain, invest, and credit the fund with repayments, such that the fund balance will be available in perpetuity for activities under this Act;

This provision requires States to manage CWSRFs in such a way that the funds will be available in perpetuity for activities under the FWPCA. The language provides specific authority for States to “invest” funds so that the fund balance will be available in perpetuity.

Section 602(b)(12)

As amended, the FWPCA now includes section 602(b)(12), which states:

(12) any fees charged by the State to recipients of assistance that are considered program income will be used for the purpose of financing the cost of administering the fund or financing projects or activities eligible for assistance from the fund;

Fees considered to be program income may be deposited into the fund and used for administration and other activities eligible for assistance from the fund (i.e., loans, refinancing, insurance, guarantees, etc.). Program income is defined in 40 CFR 31.25(b) as “gross income received by the grantee or subgrantee directly generated by a grant support activity, or earned only as a result of the grant agreement during the grant period.” In the CWSRF program, grant supported activities are those activities funded in an amount equal to the amount of the capitalization grant (i.e., funds directly made available by the capitalization grant). Only fees earned during the grant period from projects directly made available by the capitalization grant (equivalency projects) are program income. The grant period starts with the awarding of the grant and is considered closed once all funds have been disbursed. Fees collected after all funds are disbursed are no longer program income and may be used for water quality purposes.

Fees deposited into the fund may not be used for State match; however, if fees considered as program income are held outside the CWSRF, they may be used for State match in addition to administration and other activities eligible for assistance from the fund.

If program income generated through fees is added to the fund and used for administration, those fees are not considered part of the limit on administrative costs (*see section 603(d)(7)*).

Section 602(b)(13)

As amended, the FWPCA now includes section 602(b)(13), which states:

(13) beginning in fiscal year 2016, the State will require as a condition of providing assistance to a municipality or intermunicipal, interstate, or State agency that the recipient of such assistance certify, in a manner determined by the Governor of the State, that the recipient—

(A) has studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and

(B) has selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account—

(i) the cost of constructing the project or activity;

(ii) the cost of operating and maintaining the project or activity over the life of the project or activity; and

(iii) the cost of replacing the project or activity;

Under the FWPCA section 602(b)(13), Clean Water State Revolving Fund (CWSRF) programs must require all assistance recipients meeting the definition of municipality or intermunicipal, interstate, or State agency to certify that they have conducted the studies and evaluations described in 602(b)(13)(A) and (B), herein referred to collectively as a cost and effectiveness analysis. A cost and effectiveness analysis is an eligible cost, and CWSRFs can provide assistance for planning and/or engineering activities that involve this analysis; however, the certification must be provided before CWSRF assistance is provided for final design or construction. If planning, design, and construction activities are combined into one assistance agreement, the agreement must be conditioned such that the certification is provided before an assistance recipient is allowed to proceed with final design or construction. This provision applies to all types of assistance provided to the public entities described above for which the recipient submits an application² on or after October 1, 2015.

The statute requires that a cost and effectiveness analysis involve, at a minimum:

- the study and evaluation of the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and
- the selection, to the maximum extent practicable, of a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account—
 - the cost of constructing the project or activity;
 - the cost of operating and maintaining the project or activity over the life of the project or activity; and
 - the cost of replacing the project or activity.

² States will determine what constitutes an application and must be consistent.

Each CWSRF program must ensure that assistance recipients complete a cost and effectiveness analysis that meets these minimum requirements. As a best practice, it is recommended that each CWSRF program develop specific criteria and/or guidance for an analysis that meets these minimum requirements. States may consider creating tiered requirements that scale the complexity of the analysis to the size of the project and/or the assistance recipient (e.g., population of a municipality or millions of gallons treated for a utility). States may also consider recognizing within the certification process how certain categories of projects, such as purchasing land and planting trees, are handled.

The State has the discretion to decide how an assistance recipient will certify that it has completed the required cost and effectiveness analysis and that it has selected, to the maximum extent practicable, a project or activity that maximizes the potential for water and energy conservation, as appropriate. A CWSRF must have a consistent process/procedure in place for ensuring compliance with the requirement, and it is recommended that the CWSRF obtain the certification in writing (e.g., a professional engineer's certification or a report with a professional engineer's seal). As a best practice, it is recommended that CWSRFs also review the cost and effectiveness analysis for selected projects, particularly if paid for by the CWSRF.

Section 602(b)(14)

As amended, the FWPCA now includes section 602(b)(14), which states:

(14) a contract to be carried out using funds directly made available by a capitalization grant under this title for program management, construction management, feasibility studies, preliminary engineering, design, engineering, surveying, mapping, or architectural related services shall be negotiated in the same manner as a contract for architectural and engineering services is negotiated under chapter 11 of title 40, United States Code, or an equivalent State qualifications-based requirement (as determined by the Governor of the State).

For any capitalization grant awarded after October 1, 2014, the State must ensure that all architectural and engineering (A/E)³ contracts for projects identified as using funds “directly made available by” a capitalization grant (i.e. equivalency projects) comply with the elements of the procurement processes for A/E services as identified in 40 U.S.C. 1101 *et seq.*, or an equivalent State requirement. New solicitations, significant contractual amendments,⁴ and contract renewals initiated on or after the effective date of October 1, 2014 are subject to this requirement.

To the extent possible, the State should identify all equivalency projects in its Intended Use Plan (IUP). The State should also identify all equivalency projects in its Annual Report and specify whether those projects include any A/E services. Only the SRF-funded contracts for A/E services associated with equivalency projects must comply with this requirement.

³ Applies to contracts for program management, construction management, feasibility studies, preliminary engineering, design, engineering, surveying, mapping, or A/E services as defined in 40 U.S.C. 1102(2)(A-C).

⁴ States shall determine what constitutes a significant amendment using best professional judgment to analyze increases to both scope and cost of work.

The State should also detail in its IUP or Operating Agreement whether it intends to satisfy this requirement through compliance with 40 U.S.C. 1101 *et seq.* or through an equivalent State requirement. In the case of the latter, the source of the requirement (e.g., existing State legislation or regulation, etc.) must be stated, and a certification from the Governor of the State that the State's A/E procurement requirements are equivalent to 40 U.S.C. 1101 *et seq.* must accompany the capitalization grant application. In lieu of a certification from the Governor, the Attorney General's certification submitted with each capitalization grant application may include this certification. The requirements of 40 U.S.C. 1101 *et seq.* are:

- Public announcement of the solicitation (e.g., a Request for Qualifications);
- Evaluation and ranking of the submitted qualifications statements based on established, publicly available criteria (e.g., identified in the solicitation);
 - Evaluation criteria should be based on demonstrated competence and qualification for the type of professional services required (e.g., past performance, specialized experience, and technical competence in the type of work required);
- Discussion with at least three firms to consider anticipated concepts and compare alternative methods for furnishing services;
- Selection of at least three firms considered to be the most highly qualified to provide the services required; and
- Contract negotiation with the most highly qualified firm to determine compensation that is fair and reasonable based on a clear understanding of the project scope, complexity, professional nature, and the estimated value of the services to be rendered;
 - In the event that a contract cannot be negotiated with the most highly qualified firm, negotiation continues in order of qualification.

In the event that the State has no existing equivalent qualifications-based requirement for procurement, the federal requirements in 40 U.S.C. *et seq.* apply.

Section 5003. Water Pollution Control Revolving Funds (Section 603)

Section 603(c)

As amended, the FWPCA section 603(c) now states:

(c) Projects and Activities Eligible for Assistance.—The amounts of funds available to each State water pollution control revolving fund shall be used only for providing financial assistance—

The FWPCA section 603(c) provides the project types eligible for CWSRF assistance. Each of the eleven project types is an independent eligibility with its own criteria and requirements. Treatment works projects, as defined in the FWPCA section 212, now incorporated in FWPCA Section 502(26), are subject to the following three requirements, regardless of which eligibility they are funded under:

- the State must agree to conduct an environmental review of the potential environmental impacts of all treatment works projects;
- the State must apply the prevailing wage provision (Davis-Bacon) to all treatment works projects; and
- the State must apply American Iron and Steel (AIS) to all treatment works projects.

Section 603(c)(1-3)

The FWPCA section 603(c)(1-3) states:

- (1) to any municipality or intermunicipal, interstate, or State agency for construction of publicly owned treatment works (as defined in Section 212);*
- (2) for the implementation of a management program established under section 319;*
- (3) for development and implementation of a conservation and management plan under section 320;*

The projects eligible for assistance under the FWPCA sections 603(c)(1), 603(c)(2), and 603(c)(3) remain unchanged.

Section 603(c)(4)

As amended, the FWPCA now includes section 603(c)(4), which states that each CWSRF may provide financial assistance:

- (4) for the construction, repair, or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage;*

Publicly and privately owned decentralized wastewater treatment projects are eligible. Eligible projects include, but are not limited to, the construction of new decentralized systems (e.g., individual onsite systems and cluster systems), as well as the upgrade, repair, or replacement of existing systems.

Section 603(c)(5)

As amended, the FWPCA now includes section 603(c)(5), which states that each CWSRF may provide financial assistance:

- (5) for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water;*

Publicly and privately owned, permitted and unpermitted projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water are eligible. This language eliminates ownership constraints on regulated stormwater projects. For example, projects that are

specifically required by a Municipal Separate Storm Sewer System (MS4) permit are now eligible, regardless of ownership. Projects may include, but are not limited to green roofs, rain gardens, roadside plantings, porous pavement, and rainwater harvesting.

Section 603(c)(6)

As amended, the FWPCA now includes section 603(c)(6), which states that each CWSRF may provide financial assistance:

(6) to any municipality or intermunicipal, interstate, or State agency for measures to reduce the demand for publicly owned treatment works capacity through water conservation, efficiency, or reuse;

Assistance for water conservation, efficiency, or reuse may be provided to municipalities, intermunicipal, or State agencies. Only the specified public entities are eligible for assistance; however, project activities may take place at publicly or privately owned properties, provided the project reduces demand for publicly owned treatment works (POTW) capacity. For example, a city may receive CWSRF assistance to make loans or grants to city residents for the installation of water efficient appliances. Other eligible projects include, but are not limited to, the installation, replacement, or upgrade of water meters; plumbing fixture retrofits or replacement; and gray water recycling. Water audits and water conservation plans are also eligible. Equipment to reuse effluent (e.g., gray water, condensate, and wastewater effluent reuse systems) is eligible.

Section 603(c)(7)

As amended, the FWPCA now includes section 603(c)(7), which states that each CWSRF may provide financial assistance:

(7) for the development and implementation of watershed projects meeting the criteria set forth in section 122;

Projects that develop or implement a watershed pilot project related to at least one of the six areas identified in section 122 are eligible: watershed management of wet weather discharges, stormwater best management practices, watershed partnerships, integrated water resource planning, municipality-wide stormwater management planning, or increased resilience of treatment works. Assistance recipients may be public or private entities.

Section 603(c)(8)

As amended, the FWPCA now includes section 603(c)(8), which states that each CWSRF may provide financial assistance:

(8) to any municipality or intermunicipal, interstate, or State agency for measures to reduce the energy consumption needs for publicly owned treatment works;

Projects to reduce the energy consumption needs for POTWs are eligible. Only the specified public entities are eligible for assistance; however, project activities may take place at public or private properties, provided the project reduces the energy consumption needs for a POTW. Projects may include, but are not limited to, the installation of energy efficient lighting, HVAC,

process equipment, and electronic equipment and systems at POTWs. Planning activities, such as energy audits and optimization studies are also eligible.

Section 603(c)(9)

As amended, the FWPCA now includes section 603(c)(9), which states that each CWSRF may provide financial assistance:

(9) for reusing or recycling wastewater, stormwater, or subsurface drainage water;

Projects involving the reuse or recycling of wastewater, stormwater, or subsurface drainage water are eligible. This includes, as part of a reuse project, the purchase and installation of treatment equipment sufficient to meet reuse standards. Other eligible projects include, but are not limited to, distribution systems to support effluent reuse, including piping the effluent on the property of a private consumer, recharge transmission lines, injection wells, and equipment to reuse effluent (e.g., gray water, condensate, and wastewater effluent reuse systems). Eligible recipients may be public or private entities.

Section 603(c)(10)

As amended, the FWPCA now includes section 603(c)(10), which states that each CWSRF may provide financial assistance:

(10) for measures to increase the security of publicly owned treatment works;

Security measures for publicly-owned treatment works might include, but are not limited to: vulnerability assessments, contingency/emergency response plans, fencing, security cameras/lighting, motion detectors, redundancy (systems and power), secure chemical and fuel storage, lab equipment, securing large sanitary sewers, and tamper-proof manholes. The CWSRF cannot fund operations and maintenance (O&M) activities. Therefore, maintaining a human presence (i.e. security guards) and monitoring activities are not eligible.

Section 603(c)(11)

As amended, the FWPCA now includes section 603(c)(11), which states that each CWSRF may provide financial assistance:

(11) to any qualified nonprofit entity, as determined by the Administrator, to provide assistance to owners and operators of small and medium publicly owned treatment works
(A) to plan, develop, and obtain financing for eligible projects under this subsection, including planning, design, and associated preconstruction activities;
and
(B) to assist such treatment works in achieving compliance with this Act.

Projects to provide assistance to small and medium POTWs are eligible. The definition of small and medium POTWs shall be determined by the State. Assistance recipients must be a nonprofit entity. A nonprofit entity is one which has Federal tax-exempt status. The CWSRF cannot fund ongoing O&M activities; however, planning and design costs for capital projects, as well as

broader water quality planning projects, are eligible. The development and initial implementation of training activities are also eligible.

Section 603(d)(1)(A)&(B)

As amended, the FWPCA section 603(d)(1)(A)&(B) now states:

- (d) TYPES OF ASSISTANCE.—Except as otherwise limited by State law, a water pollution control revolving fund of a State under this section may be used only—*
- (1) to make loans, on the condition that—*
 - (A) such loans are made at or below market interest rates, including interest free loans, at terms not to exceed the lesser of 30 years and the projected useful life (as determined by the State) of the project to be financed with proceeds of the loan;*
 - (B) annual principal and interest payments will commence not later than one year after completion of any project and loans will be fully amortized upon the expiration of the term of the loan;*

Loan terms may extend up to 30 years, but must not exceed the useful life of the project. Existing CWSRF loans may be restructured to reflect the change to loan terms. For example, an existing 20 year loan with 10 years left to maturity could be restructured to add another 10 years to the maturity date provided the useful life of the project is 30 years or more. For a CWSRF project that has multiple components each with a different useful life, the State may use a weighted average of the components in determining the useful life of the project.

Section 603(d)(1)(E)

As amended, the FWPCA now includes section 603(d)(1)(E), which states:

- (E) for a treatment works proposed for repair, replacement, or expansion, and eligible for assistance under subsection (c)(1), the recipient of a loan shall—*
- (i) develop and implement a fiscal sustainability plan that includes—*
 - (I) an inventory of critical assets that are a part of the treatment works;*
 - (II) an evaluation of the condition and performance of inventoried assets or asset groupings;*
 - (III) a certification that the recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan; and*
 - (IV) a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities; or*
 - (ii) certify that the recipient has developed and implemented a plan that meets the requirements under clause (i);*

The FWPCA section 603(d)(1)(E) requires a recipient of a loan for a project that involves the repair, replacement, or expansion⁵ of a publicly owned treatment works to develop and

⁵ FSPs are not required for new treatment works (unless they are physically replacing an existing treatment works or expanding the treatment capacity of an existing system) or for projects involving an upgrade that does not involve repair/replacement or expand the treatment capacity (e.g., adding advanced treatment).

implement a fiscal sustainability plan (FSP) or certify that it has developed and implemented such a plan. This provision applies to all loans for which the borrower submitted an application⁶ on or after October 1, 2014.

FSPs should be treated as “living documents” that are regularly reviewed, revised, expanded, and implemented as an integral part of the operation and management of the system. From this perspective, there may be no final deadline for the completion of an FSP; however, it is necessary to set a date for submission of an FSP certification in order to ensure compliance with this provision. An FSP certification is a certification by the borrower that the FSP has been developed and is being implemented. For systems that self-certify under the FWPCA section 603(d)(1)(E)(ii), certification is due at the time of loan closing. For systems developing an FSP under the FWPCA section 603(d)(1)(E)(i), the requirement to develop and implement an FSP must be a condition of the loan agreement, which must also specify when the FSP certification is due. CWSRF programs may establish a program-wide deadline or a unique deadline for each project relative to the borrower’s size, ability, and experience with fiscal sustainability planning. It is recommended that CWSRFs require borrowers to submit the FSP certification before the final disbursement is approved.

The statute requires that FSPs include, at a minimum:

- an inventory of critical assets that are part of the treatment works;
- an evaluation of the condition and performance of inventoried assets or asset groupings;
- a certification that the assistance recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan; and
- a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities.

Each CWSRF program must develop specific criteria for the contents of the FSP that meet these minimum requirements (*see Appendix I for energy and water conservation resources*). CWSRFs may consider allowing recipients to take a phased approach such that the initial FSP covers only the funded project and closely associated components.⁷ This approach should be applied in such a way that a comprehensive and cohesive plan that covers the entire treatment works eventually results as the utility continues to repair, replace, and expand the system. States may also consider creating tiered requirements that scale the level of complexity of the FSP to the size of the municipality or utility (e.g., population served, millions of gallons treated, etc.).

At a minimum, CWSRFs must require loan recipients to certify that an FSP has been developed and is being implemented and, if deemed necessary, review the FSP. Such a review could occur during an on-site project evaluation; CWSRFs are not required to collect FSPs, but could document this review process with a memorandum to the file, a letter to the loan recipient, or an

⁶ States will determine what constitutes an application and must be consistent.

⁷ The treatment works should be broken down into logical sections using best professional judgment. For a sewer rehabilitation or replacement project, for example, it may be appropriate to segment a large collection system into areas or zones and create an FSP for the affected area only. On the other hand, for a small system it may be more appropriate to create a plan that covers the entire collection system.

evaluation form (e.g., a checklist). An FSP review could include the following elements: ensure the loan recipient developed an FSP, that the FSP has an appropriate level of depth and complexity, and that the recipient is implementing the FSP. Regarding the water and energy efficiency provision, CWSRFs should ensure the statutorily required certification is included in the FSP. It is recommended that the CWSRFs also evaluate whether the recipient has incorporated, to the maximum extent practicable, water and energy efficient approaches into the funded project.

Development of an FSP is an eligible cost. It is recommended that CWSRFs review and accept any FSP developed as a condition of the loan or paid for by the CWSRF, including cases of self-certification where the loan recipient is reimbursed for the cost of developing the equivalent plan. As a best practice, EPA encourages CWSRFs to review all FSPs during the final inspections.

Section 603(d)(7)

As amended, the FWPCA section 603(d)(7) now states:

(7) for the reasonable costs of administering the fund and conducting activities under this title, except that such amounts shall not exceed 4 percent of all grant awards to such fund under this title, \$400,000 per year, or 1/5 percent per year of the current valuation of the fund, whichever amount is greatest, plus the amount of any fees collected by the State for such purpose regardless of the source.

The maximum annual amount of CWSRF money (not including any fees collected that are placed in the fund) that may be used to cover the reasonable costs of administering the fund is the greatest of the following:

- an amount equal to 4 percent of all grant awards received by a State CWSRF less any amounts that have been used in previous years to cover administrative expenses;
- \$400,000; or
- 1/5 percent of the current valuation of the fund.

The current valuation of the fund must be a representation of the equity of the CWSRF that properly takes into account its assets and liabilities. This valuation needs to be verifiable and consistent across the States; therefore, this calculation must be based on the most recent audited financial statements of the CWSRF and must reflect the “Total Net Position,” which is defined by the GASB as the difference between (a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources.⁸ If the “Total Net Position” cannot be derived from audited CWSRF financial statements, a State may still provide a calculation of the current valuation of the fund. However, an auditor must certify that this calculation is accurate and consistent with the definition of “Total Net Position.” The EPA will periodically review and update the definition of the current valuation of the fund to reflect future updates by the GASB.

⁸ For more information, please refer to *Statement No. 63 Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position* and other relevant GASB pronouncements.

Any fees deposited in the fund and used by a State to pay for administering the fund or conducting activities under this title will not count against the maximum amount of CWSRF money that may be used for such purposes.

Section 603(i)

As amended, the FWPCA now includes section 603(i), which states:

(i) ADDITIONAL SUBSIDIZATION.—

(1) IN GENERAL.—In any case in which a State provides assistance to a municipality or intermunicipal, interstate, or State agency under subsection (d), the State may provide additional subsidization, including forgiveness of principal and negative interest loans—

(A) to benefit a municipality that—

(i) meets the affordability criteria of the State established under paragraph (2); or

(ii) does not meet the affordability criteria of the State if the recipient—

(I) seeks additional subsidization to benefit individual ratepayers in the residential user rate class;

(II) demonstrates to the State that such ratepayers will experience a significant hardship from the increase in rates necessary to finance the project or activity for which assistance is sought; and

(III) ensures, as part of an assistance agreement between the State and the recipient, that the additional subsidization provided under this paragraph is directed through a user charge rate system (or other appropriate method) to such ratepayers; or

(B) to implement a process, material, technique, or technology—

(i) to address water-efficiency goals;

(ii) to address energy-efficiency goals;

(iii) to mitigate stormwater runoff; or

(iv) to encourage sustainable project planning, design, and construction.

(2) AFFORDABILITY CRITERIA.—

(A) ESTABLISHMENT.—

(i) IN GENERAL.—Not later than September 30, 2015, and after providing notice and an opportunity for public comment, a State shall establish affordability criteria to assist in identifying municipalities that would experience a significant hardship raising the revenue necessary to finance a project or activity eligible for assistance under subsection (c)(1) if additional subsidization is not provided.

(ii) CONTENTS.—The criteria under clause (i) shall be based on income and unemployment data, population trends, and other data determined relevant by the State, including whether the project or

activity is to be carried out in an economically distressed area, as described in section 301 of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3161).

(B) EXISTING CRITERIA.—If a State has previously established, after providing notice and an opportunity for public comment, affordability criteria that meet the requirements of subparagraph (A)—

(i) the State may use the criteria for the purposes of this subsection; and

(ii) those criteria shall be treated as affordability criteria established under this paragraph.

(C) INFORMATION TO ASSIST STATES.—The Administrator may publish information to assist States in establishing affordability criteria under subparagraph (A).

(3) LIMITATIONS.—

(A) IN GENERAL.—A State may provide additional subsidization in a fiscal year under this subsection only if the total amount appropriated for making capitalization grants to all States under this title for the fiscal year exceeds \$1,000,000,000.

(B) ADDITIONAL LIMITATION.—

(i) GENERAL RULE.—Subject to clause (ii), a State may use not more than 30 percent of the total amount received by the State in capitalization grants under this title for a fiscal year for providing additional subsidization under this subsection.

(ii) EXCEPTION.—If, in a fiscal year, the amount appropriated for making capitalization grants to all States under this title exceeds \$1,000,000,000 by a percentage that is less than 30 percent, clause (i) shall be applied by substituting that percentage for 30 percent.

(C) APPLICABILITY.—The authority of a State to provide additional subsidization under this subsection shall apply to amounts received by the State in capitalization grants under this title for fiscal years beginning after September 30, 2014.

(D) CONSIDERATION.—If the State provides additional subsidization to a municipality or intermunicipal, interstate, or State agency under this subsection that meets the criteria under paragraph (1)(A), the State shall take the criteria set forth in section 602(b)(5) into consideration.

The FWPCA section 603(i) provides a CWSRF with the permanent authority to provide a certain percentage of its total capitalization grant award as additional subsidization under the circumstances outlined in the statute. This authority only applies to capitalization grants made from the FY 2015 and later appropriations; it does not impact any capitalization grant made from the FY 2014 or prior appropriations. Going forward, there is no minimum additional subsidy requirement that CWSRFs must comply with, but CWSRFs that have not met the additional subsidy requirements from previous capitalization grants must still meet those requirements. Any additional subsidization provided from previous capitalization grants is not subject to the restrictions outlined in the WRRDA statute and may still be provided to any eligible recipient of CWSRF assistance.

The maximum percentage that may be provided as additional subsidization will range from 0 percent to 30 percent based on the amount of the total appropriation as follows:⁹

- total appropriation less than or equal to \$1 billion: no additional subsidy authorized;
- total appropriation greater than or equal to \$1.3 billion: additional subsidy up to 30 percent of the capitalization grant authorized;
- total appropriation greater than \$1 billion, but less than \$1.3 billion: a percentage equal to the percentage by which the appropriation exceeds \$1 billion authorized. For example, if the total annual appropriation is \$1.1 billion, the total amount of additional subsidization available for all States would be \$110 million, with each CWSRF able to provide up to 10 percent of its total capitalization grant as additional subsidization.

A CWSRF may only provide additional subsidization to a municipality or intermunicipal, interstate, or State agency; however, eligible recipients of a principal forgiveness or negative interest loan may use a “pass through” loan structure to pass the subsidy along to any eligible recipient of CWSRF assistance for projects that would otherwise be eligible to receive additional subsidization under this subsection, including non-profits and other private entities. This flexibility cannot be extended to additional subsidization that has been provided as a grant.

Additional subsidization may only be provided to eligible recipients for the following:

- to benefit a municipality that meets the State’s affordability criteria as established under the FWPCA section 603(i)(2);¹⁰
- to benefit a municipality that does not meet the State’s affordability criteria but seeks additional subsidization to benefit individual ratepayers in the residential user rate class;¹¹ or
- to implement a process, material, technique, or technology that addresses water or energy efficiency goals; mitigates stormwater runoff; or encourages sustainable project planning, design, and construction.

The FWPCA section 603(i)(2) requires States to develop affordability criteria that will assist them in identifying applicants that would have difficulty financing projects without additional subsidization. Criteria must be established by September 30, 2015 after providing notice and an opportunity for public comment.

⁹ For additional information, please refer to the chart provided in Appendix II.

¹⁰ If a State provides additional subsidization to a municipality or intermunicipal, interstate, or State agency that meets the criteria under the FWPCA section 603(i)(1)(A), the State must consider first using all funds in the fund as a result of capitalization grants to assure maintenance of progress, as determined by the Governor of the State, toward compliance with enforceable deadlines, goals, and requirements of this Act, including the municipal compliance deadline, as set forth in section 602(b)(5).

¹¹ Ibid.

The FWPCA section 603(i)(2)(A) requires that criteria be based on:

- income;
- unemployment data;
- population trends; and
- other data determined relevant by the State.

Income, unemployment data, and population trends must be reflected in State affordability criteria; however, the statute does not prescribe the weight that must be given to each type of criteria. States have the flexibility to determine which of the required criteria are most relevant to their CWSRF programs and may structure their program's criteria accordingly.

If CWSRFs have existing affordability criteria that meet the requirements established in section 603(i)(2)(A), they may continue to use those criteria. Existing criteria must also have undergone the appropriate public notice and comment process within their respective States.

If additional subsidization is being used to benefit individual ratepayers in the residential user rate class of a municipality that does not meet the affordability criteria, then the recipient must demonstrate to the CWSRF's satisfaction that these ratepayers would otherwise experience a significant hardship from the increase in rates necessary to finance the project or activity for which assistance is being sought. Additionally, the assistance agreement between the CWSRF and the recipient must include language indicating that the additional subsidization would be provided to these ratepayers through a user charge rate system or other appropriate method.

Additional subsidization may be provided in the form of principal forgiveness, negative interest loans, or grants. However, additional subsidization provided in the form of grants must comply with certain Federal laws, Executive Orders, and Office of Management and Budget Circulars. A detailed description of these laws, orders, and implementing regulations is available through the Office of Grants and Debarment website at <http://www.epa.gov/ogd/grants/regulations.htm>.¹²

Section 5004. American Iron and Steel (Section 608)

Section 608

As amended, the FWPCA now includes section 608, which states:

SEC. 608. REQUIREMENTS.

(a) IN GENERAL.—Funds made available from a State water pollution control revolving fund established under this title may not be used for a project for the construction, alteration, maintenance, or repair of treatment works unless all of the iron and steel products used in the project are produced in the United States.

(b) DEFINITION OF IRON AND STEEL PRODUCTS.—In this section, the term 'iron and steel products' means the following products made primarily of iron or steel: lined or

¹² More information regarding these requirements is also available in the Additional Subsidies section (IV.B.5) of the *Procedures for Implementing Certain Provisions of EPA's Fiscal Year 2012 Appropriations Affecting the Clean Water and Drinking Water State Revolving Fund Programs*.

unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, construction materials.

(c) APPLICATION.—Subsection (a) shall not apply in any case or category of cases in which the Administrator finds that—

- (1) applying subsection (a) would be inconsistent with the public interest;*
- (2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or*
- (3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.*

(d) WAIVER.—If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public, on an informal basis, a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet site of the Environmental Protection Agency.

(e) INTERNATIONAL AGREEMENTS.—This section shall be applied in a manner consistent with United States obligations under international agreements.

(f) MANAGEMENT AND OVERSIGHT.—The Administrator may retain up to 0.25 percent of the funds appropriated for this title for management and oversight of the requirements of this section.

(g) EFFECTIVE DATE.—This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of enactment of the Water Resources Reform and Development Act of 2014.

The FWPCA section 608 codifies a provision that had recently been included in EPA's SRF appropriations that requires assistance recipients, absent a waiver, to use iron and steel products that are produced in the United States for projects for the construction, alteration, maintenance, and repair of treatment works.

Except for applying the provision only to projects for treatment works that are funded by the CWSRF, the AIS language included in the WRRDA is identical to the AIS language used in the FY 2014 appropriations act. Therefore, EPA intends to interpret the language in the same manner as described in *Implementation of Iron and Steel Provisions of P.L. 113-76, Consolidated Appropriations Act of 2014*.

The effective date for the newly codified provision is the date of enactment of the WRRDA, or June 10, 2014.

Section 5005. Report on the Allotment of Funds

The WRRDA includes the following provision:

(a) Review.—The Administrator of the Environmental Protection Agency shall conduct a review of the allotment formula in effect on the date of enactment of this Act for allocation of funds authorized under title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) to determine whether that formula adequately addresses the water quality needs of eligible States, territories, and Indian tribes, based on—

(1) the most recent survey of needs developed by the Administrator under section 516(b) of that Act (33 U.S.C. 1375(b)); and

(2) any other information the Administrator considers appropriate.

(b) Report.—Not later than 18 months after the date of enactment of this Act, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of the review under subsection (a), including any recommendations for changing the allotment formula.

A review of the CWSRF allotment formula will begin in FY 2015.

Section 5006. Effective date

The WRRDA includes the following provision:

This subtitle, including any amendments made by the subtitle, shall take effect on October 1, 2014.

The amendments to the FWPCA apply to assistance provided after September 30, 2014 unless otherwise stated elsewhere in this document. States that have not met the statutory requirements in previous capitalization grants must still meet those requirements (e.g., the additional subsidy and green project reserve requirements).

Subtitle B: Amended Provisions in Title I, II, and V

Section 5011. Watershed Pilot Projects (Section 122)

Section 122

As amended, the FWPCA section 122 now states:

SEC. 122. WATERSHED PILOT PROJECTS.

(a) IN GENERAL.—The Administrator, in coordination with the States, may provide technical assistance and grants to a municipality or municipal entity to carry out pilot projects relating to the following areas:

(1) WATERSHED MANAGEMENT OF WET WEATHER DISCHARGES.—The management of municipal combined sewer overflows, sanitary sewer overflows,

and stormwater discharges, on an integrated watershed or subwatershed basis for the purpose of demonstrating the effectiveness of a unified wet weather approach.

(2) STORMWATER BEST MANAGEMENT PRACTICES.—The control of pollutants from municipal separate storm sewer systems for the purpose of demonstrating and determining controls that are cost-effective and that use innovative technologies to manage, reduce, treat, recapture, or reuse municipal stormwater, including techniques that utilize infiltration, evapotranspiration, and reuse of stormwater onsite.

(3) WATERSHED PARTNERSHIPS.—Efforts of municipalities and property owners to demonstrate cooperative ways to address nonpoint sources of pollution to reduce adverse impacts on water quality.

(4) INTEGRATED WATER RESOURCE PLAN.—The development of an integrated water resource plan for the coordinated management and protection of surface water, ground water, and stormwater resources on a watershed or subwatershed basis to meet the objectives, goals, and policies of this Act.

(5) MUNICIPALITY-WIDE STORMWATER MANAGEMENT PLANNING.—The development of a municipality-wide plan that identifies the most effective placement of stormwater technologies and management approaches, to reduce water quality impairments from stormwater on a municipality-wide basis.

(6) INCREASED RESILIENCE OF TREATMENT WORKS.—Efforts to assess future risks and vulnerabilities of publicly owned treatment works to manmade or natural disasters, including extreme weather events and sea-level rise, and to carry out measures, on a systemwide or area-wide basis, to increase the resiliency of publicly owned treatment works.

(b) ADMINISTRATION.—The Administrator, in coordination with the States, shall provide municipalities participating in a pilot project under this section the ability to engage in innovative practices, including the ability to unify separate wet weather control efforts under a single permit.

(c) REPORT TO CONGRESS.—Not later than October 1, 2015, the Administrator shall transmit to Congress a report on the results of the pilot projects conducted under this section and their possible application nationwide.

Guidance implementing this section is under development.

Section 5012. Definition of Treatment Works (Section 212)

Section 212(2)(A)

As amended, the FWPCA section 212(2)(A) now states:

(2)(A) The term ‘‘treatment works’’ means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 201 of this act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as

standby treatment units and clear well facilities; and acquisition of the land that will be an integral part of the treatment process (including land use for the storage of treated wastewater in land treatment systems prior to land application) or will be used for ultimate disposal of residues resulting from such treatment and acquisition of other land, and interests in land, that are necessary for construction.

The FWPCA section 212(2)(A) expands the definition of treatment works to include land necessary for construction. For treatment works projects funded under section 603(c), the leasing and fee-simple purchase of land, as specified in section 212(2)(A), is eligible. This includes surface and subsurface easements, a place to store equipment and material during construction, land needed to locate eligible projects, and land integral to the treatment process (e.g., land for effluent application or recharge basins).

Section 5013. Funding for Indian Programs (Section 518)

Section 518

As amended, the FWPCA section 518 now states:

(c) RESERVATION OF FUNDS—

(1) FISCAL YEARS 1987-2014.—The Administrator shall reserve each of fiscal years 1987 through 2014 beginning after September 30, 1986, before allotments to the States under section 1285(e) of this title, one-half of one percent of the sums appropriated under section 1287 of this title.

(2) FISCAL YEAR 2015 AND THEREAFTER.—For fiscal year 2015 and each fiscal year thereafter, the Administrator shall reserve, before allotments to the States under section 604(a), not less than 0.5 percent and not more than 2.0 percent of the funds made available to carry out title VI.

(3) USE OF FUNDS.—Funds reserved under this subsection shall be available only for grants for projects and activities eligible for assistance under section 603(c) to serve—

(A) Indian tribes (as defined in subsection (h));

(B) former Indian reservations in Oklahoma (as determined by the Secretary of the Interior); and

(C) Native villages (as defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602)).

Specific guidance on the FWPCA section 518 program that provides funding for tribal wastewater infrastructure will be included in the forthcoming Clean Water Indian Set Aside program guidance.

APPENDIX I

Supplemental Information for Implementing Section 603(d)(1)(E)(i)(III)

Under Section 603(d)(1)(E)(i)(III) of the Federal Water Pollution Control Act, as amended, a recipient of a Clean Water State Revolving Fund (CWSRF) loan for “repair, replacement, or expansion” of a treatment works must certify that it has evaluated and will be implementing water and energy conservation efforts as part of its fiscal sustainability plan. As stated in *Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V and VI of the Federal Water Pollution Control Act*, the Environmental Protection Agency recommends that the CWSRFs evaluate whether a recipient has selected, to the maximum extent practicable, water and energy efficient approaches in the selected project.

Energy Conservation

One example of how CWSRFs can evaluate the energy portion of the certification is to use information developed by the recipient through energy assessments and audits. Energy assessments help utilities identify the amount of energy being used in various aspects of its operations. Energy audits, in turn, allow utilities to identify and prioritize projects that will result in operational and capital improvements to their infrastructure and operations, cost savings, and other climate-related benefits like reductions in greenhouse gas emissions and the use of renewable energy. EPA encourages CWSRFs to promote the use of these proven and objective methods by CWSRF borrowers.

Energy Use Assessments

A number of tools are available to help utilities conduct energy assessments, including:

- **EPA’s Energy Use Assessment Tool**—this is a free Excel-based tool that can be downloaded and is specifically designed for small and medium sized wastewater and water utilities. It enables utilities to analyze their current energy bills and analyze energy consumption for major pieces of equipment. It also allows the utility to develop a printable summary report outlining current energy consumption and costs, generate graphs depicting energy use over time, and highlight areas of potential improvement in energy efficiency. It is available at http://water.epa.gov/infrastructure/sustain/energy_use.cfm.
- **NYSERDA Energy Benchmarking Tool**—The New York State Energy Research and Development Agency (NYSERDA) has developed a tool to help wastewater utilities assess and benchmark their current energy usage, along with a number of other useful self-audit checklists, available at <http://www.nyserdera.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/Sectors/Municipal-Water-and-Wastewater.aspx>.

Energy Audits

Energy audits can be broadly characterized according to the following three levels:

- Level 1 (Walk Through Audits)
 - Generally last several hours at the facility
 - Usually result in suggestions for low cost improvements in areas like HVAC or lighting
- Level 2 (Energy Survey and Analysis Audits)
 - One or two days in duration, plus additional time to review energy bills, etc.
 - In addition to HVAC/lighting recommendations, usually result in recommendations for equipment upgrades in existing processes (e.g., variable frequency drives, more efficient motors, etc.)
- Level 3 (Process Energy Audit)
 - One or more days at the facility, time to analyze energy bills and pump curves, and time for additional data gathering
 - Audit covers energy use in both existing and alternative processes, potential design modifications, and optimization of processes and equipment
 - Audit suggestions covered detailed operational and process suggestions for both short-term and long-term payback periods as well as capital intensive projects that may require outside funding
 - Most likely to result in significant savings

EPA hosted a webinar in August 2014 describing a number of energy assessment and audit tools available to states and potential recipients of CWSRF funding. The webinar slides are available at <http://water.epa.gov/infrastructure/sustain/upload/NRWA-Energy-Audits-for-Small-Utilities-8-4-14.pdf>.

Tools available to help wastewater utilities obtain or conduct energy audits include:

- **EPA's Energy Use Assessment Tool**—described in more detail above. Available at http://water.epa.gov/infrastructure/sustain/energy_use.cfm.
- **EPRI Energy Audit Manual for Water and Wastewater Facilities**—available at www.cee1.org/ind/mot-sys/ww/epri-audit.pdf.
- **Maine DEP Sample Audit RFP Language**—designed to help utilities obtain assistance for Level 3 Audits, available at http://www.maine.gov/dep/water/grants/SRF/2014/model_energy_audit_rfp.pdf.
- **The Center for Energy Efficiency (CEE) self-audit checklists**—available at www.cee1.org/ind/mot-sys/ww/epri-audit.pdf.

Both energy assessments and audits are eligible for funding under the CWSRF, and a number of organizations can help utilities with these activities, including:

- State Energy Offices (<http://www.naseo.org/members-states>)
- Electric utilities serving wastewater utilities (<http://www.dsireusa.org/>)

- Technical assistance providers like the National Rural Water Association, RCAP, and others
- Department of Energy Industrial Assessment Centers (<http://energy.gov/eere/amo/industrial-assessment-centers-iacs>).

Water Conservation

Water conservation includes efficiency and reuse efforts to not only conserve our raw water supply, but to also reduce flow to wastewater treatment plants. Therefore, one way CWSRF borrowers can fulfill the water conservation requirement is to consider alternative or complementary projects that result in reduced wastewater flows and therefore reduce a treatment works' capacity needs. There are a number of water conservation projects borrowers can consider, including:

- **Water Reuse**—recycling and water reuse projects that replace potable sources with non-potable sources
 - Gray water, condensate, and wastewater effluent reuse systems
 - Extra treatment costs and distribution pipes associated with water reuse
- **Water Efficient Devices**—installing or retrofitting water efficient devices, such as plumbing fixtures and appliances
 - Shower heads, faucets, toilets, urinals, etc.
 - Education and incentive programs to conserve water such as rebates
- **Water Meters**—installing any type of water meter in a previously unmetered area, or replacing existing broken/malfunctioning water meters or upgrading them if rate structure is based on metered use
- **Water Audits and Conservation Plans**—performing audits of entire utilities or individual users (e.g., large corporations) to assess the amount of water being consumed, the need for retrofits, etc.

Utilities can also fulfill this requirement by considering water conservation projects that are not CWSRF eligible.

Water Efficiency Tools

Tools are readily available to help utilities determine how much water is being conserved, including:

- **EPA's WaterSense Program**—Tools and resources to promote water efficiency are available at <http://www.epa.gov/watersense/>. States, local governments, and utilities can partner with WaterSense to get access to additional tools and resources to help them design and implement water efficiency and conservation programs. Partnership is free.

- **EPA's Water Conservation Plan Guidelines**—Helpful recommendations to utilities for creating and implementing a Water Conservation Plan, depending on the size of the population served by the utility, available at <http://epa.gov/watersense/pubs/guide.html>.
- **AWWA Water Audit Software**—Free software specifically designed to help utilities perform water audits, to help quantify and track water losses, and determine areas for improved efficiency. Available at <http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx>.
- **AWE Water Conservation Tracking Tool**—A tool to evaluate water savings, costs, and benefits of conservation programs for a specific water utility, available to AWE members at <http://www.allianceforwaterefficiency.org/tracking-tool.aspx>.
- Many states have guidelines and example plans to help utilities develop water conservation plans. For example:
 - **TWDB Water Conservation Plan**—Texas Water Development Board has developed a set of guidelines, tutorials, and example plans to help utilities create a water conservation plan that can be adopted and utilized by different entities. Available at <http://www.twdb.texas.gov/conservation/municipal/plans/>.

APPENDIX II

Additional Subsidization Projections for Various Annual Appropriations

Annual Appropriation	Additional Subsidization (%)	Additional Subsidization (\$)¹³
\$1,000,000,000 or Less	0%	\$0
\$1,100,000,000	10%	\$110,000,000
\$1,200,000,000	20%	\$240,000,000
\$1,300,000,000	30%	\$390,000,000
\$1,400,000,000	30%	\$420,000,000
\$1,500,000,000	30%	\$450,000,000
\$1,600,000,000	30%	\$480,000,000
\$1,700,000,000	30%	\$510,000,000
\$1,800,000,000	30%	\$540,000,000
\$1,900,000,000	30%	\$570,000,000
\$2,000,000,000	30%	\$600,000,000

¹³ These amounts are approximations. The actual amounts will be less due to the fact that a portion of an annual CWSRF appropriation is used to fund other activities, including direct grants to the tribes and territories.

APPENDIX III

Questions and Answers on the *Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V, and VI of the Federal Water Pollution Control Act*

Section 602(b)(6): Environmental Review and Davis-Bacon

Q1: Can CWSRFs utilize a Tier II State Environmental Review Process (SERP)?

A1: No. CWSRF projects may no longer use a Tier II State Environmental review process.

Prior to the WRRDA, a “NEPA-like” State environmental review process was required for all section 212 publicly-owned treatment works projects constructed “in whole or in part before FY 1995 with funds directly made available” by a capitalization grant (equivalency projects). A “Tier II” State environmental review process could be used for all other section 212 publicly owned treatment works constructed with SRF assistance.

The WRRDA now applies FWPCA section 511(c)(1) to CWSRF assistance for the construction of treatment works; therefore, a “NEPA-like” State environmental review process is now required for all CWSRF-funded treatment works projects. States may no longer accept a “Tier II” environmental review conducted after October 1, 2014. A “Tier II” environmental review conducted before October 1, 2014 is acceptable.

Q2: Do the Davis Bacon Related Act requirements apply to refinanced projects for the construction of treatment works?

A2: Yes. Davis Bacon Related Act requirements apply to the entirety of construction activities for treatment works that are financed or refinanced by the CWSRF on or after October 30, 2009. If a project began construction prior to October 30, 2009, but is refinanced through an SRF assistance agreement executed on or after October 30, 2009, Davis Bacon Related Act requirements will apply to all construction that occurs on or after October 30, 2009, through completion of construction. There is no retroactive application of Davis Bacon where a refinancing occurs for a project that has completed construction prior to October 30, 2009.

Section 602(b)(9): Generally Accepted Accounting Principles (GAAP)

Q3: Are private entities that receive CWSRF assistance required to maintain project accounts in accordance with GAAP?

A3: The Government Accounting Standards Board (GASB) establishes the accounting standards for governmental entities. GASB standards do not apply to the private sector or individuals. The private sector and individuals would be subject to generally accepted

accounting principles (GAAP), promulgated by the American Institute of Certified Public Accountants (AICPA), as applicable.

Section 602(b)(11): Fund Balance

Q4: How does EPA interpret “fund balance”?

A4: “Fund balance” is interpreted to mean the total federal and state contributions less any CWSRF funds used for administrative expenses and additional subsidization.

Section 602(b)(14): Procurement of A/E Services

Q5: If more than one assistance agreement is issued for the same project, can one assistance agreement be considered an equivalency project while the other assistance agreement is not?

A5: Yes. If more than one assistance agreement is issued for the same project, one or more of the assistance agreements may be “equivalency” while the others are not. For example, assistance, such as a loan, for the construction of a project may be considered an equivalency project while assistance for the planning and design of the same project may be considered a non-equivalency project. However, if one assistance agreement is made for the planning, design, and construction of a project, and that agreement is an “equivalency” project, then the recipient must comply with section 602(b)(14). Furthermore, if one or more assistance agreements for a project are rolled into one assistance agreement, and one of the agreements is an “equivalency” project, then the entire project is an “equivalency” project and the recipient must comply with section 602(b)(14).

Q6: Can cost/price be a selection factor for procurement of A/E services covered by section 602(b)(14)?

A6: No. Cost/price cannot be a selection factor under qualifications based selection procedures. Selection must be based on demonstrated competence and qualification only. As such, cost/price cannot be used as a criterion to evaluate, rank, or select the most highly qualified firm. However, 40 USC 1104 allows an assistance recipient to terminate contract negotiations with the most highly qualified firm if an agreement cannot be reached regarding fair and reasonable compensation. In that case, the assistance recipient must formally terminate negotiations and then undertake negotiations with the next most qualified of the selected firms, continuing the process until an agreement is reached.

Q7: What happens if an applicant/assistance recipient follows qualifications based selection procedures, but does not generate interest from at least three firms?

- A7: A procurement of A/E services shall be considered in compliance with section 602(b)(14) even when the Request for Qualification does not generate three responses as long as the applicant/assistance recipient made a good faith effort to publicly advertise and directly solicit participation. On a case by case basis and using best professional judgement, a CWSRF shall determine whether a good faith effort was made.
- Q8: Do A/E services contracts procured via design-build procedures satisfy the section 602(b)(14) requirement?
- A8: No. The 602(b)(14) requirement pertains to the design portion of a design-bid-build process and is not compatible with a design-build process. Because it would be impossible to fully satisfy the 40 USC 1101 *et. seq.* requirements through a design-build procurement, A/E services procured via the design-build methodology cannot comply with section 602(b)(14) and should not be used as equivalency projects.
- Q9: Are CWSRFs required to review borrowers' compliance with section 602(b)(14)? How should CWSRFs document borrowers' compliance?
- A9: CWSRFs do not need to review the actual procurement process of A/E services contracts associated with equivalency projects, but the State must obtain a certification from the assistance recipient that those contracts were procured in accordance with 40 USC 1101 *et. seq.* This certification should be placed in the project file.

Section 603(c): Project Eligibilities

- Q10: Can the CWSRF provide financial assistance for new eligible project types if the costs for the project were incurred prior to October 1, 2014?
- A10: Yes. Project eligibilities that were added by the WRRDA amendments, and not previously eligible in the CWSRF program, are eligible for assistance agreements made after October 1, 2014, even if the cost was incurred prior to October 1, 2014. This includes refinancing and restructuring existing CWSRF assistance agreements.
- Q11: How should states determine which projects are treatment works for the purpose of applying Davis Bacon, AIS, and environmental review?
- A11: States should use best professional judgement to determine whether or not a project is a treatment work, based upon the definition in section 212 of the Federal Water Pollution Control Act (FWPCA). In cases where a project is determined to not be a treatment work, states should document the decision in the project file along with the reason for the determination.

Q12: Are stormwater management practices that do not provide any form of treatment eligible?

A12: Yes, section 603(c)(5) states that CWSRFs may provide financial assistance “for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water.” Practices such as stormwater pipes, designed to manage, but not treat, stormwater are eligible.

Q13: What types of projects are eligible under Section 603(c)(7)?

A13: Section 603(c)(7) states that each CWSRF may provide financial assistance “for the development and implementation of watershed projects meeting the criteria set forth in section 122.” Section 122 provides the following criteria:

- Watershed management of wet weather discharges: The management of municipal combined sewer overflows, sanitary sewer overflows, and stormwater discharges, on an integrated watershed or subwatershed basis for the purpose of demonstrating the effectiveness of a unified wet weather approach.
- Stormwater best management practices: The control of pollutants from municipal separate storm sewer systems for the purpose of demonstrating and determining controls that are cost-effective and that use innovative technologies to manage, reduce, treat, recapture, or reuse municipal stormwater, including techniques that utilize infiltration, evapotranspiration, and reuse of stormwater onsite.
- Watershed partnerships: Efforts of municipalities and property owners to demonstrate cooperative ways to address nonpoint sources of pollution to reduce adverse impacts on water quality.
- Integrated water resource plan: The development of an integrated water resource plan for the coordinated management and protection of surface water, ground water, and stormwater resources on a watershed or subwatershed basis to meet the objectives, goals, and policies of this Act.
- Municipality-wide stormwater management planning: The development of a municipality-wide plan that identifies the most effective placement of stormwater technologies and management approaches, to reduce water quality impairments from stormwater on a municipality-wide basis.
- Increased resilience of treatment works: Efforts to assess future risks and vulnerabilities or publicly owned treatment works to manmade or natural disasters, including extreme weather events and sea-level rise, and to carry out measures, on a systemwide or area-wide basis, to increase the resiliency of publicly owned treatment works.

Q14: What types of projects are eligible under Section 603(c)(11)?

A14: Section 603(c)(11) states that each CWSRF may provide financial assistance “to any qualified nonprofit entity... to provide assistance to owners and operators of small and medium publicly owned treatment works (A) to plan, develop, and obtain financing for

eligible projects under this subsection, including planning, design, and associated preconstruction activities; and (B) to assist such treatment works in achieving compliance with this Act.” Assistance may include, but is not limited to, support with project planning (i.e. evaluation of technological alternatives, development of fiscal sustainability plans, etc.), development and initial implementation of training activities, and help with project financing (i.e. rate analysis, etc). Under this eligibility, only technical assistance activities are eligible. Assistance cannot be provided to a nonprofit entity for capital improvements or operations and maintenance at a POTW.

Q15: Can a CWSRF use administrative funds to hire a nonprofit to provide technical assistance to small systems/projects under section 603(c)(11)?

A15: Yes, but CWSRFs will need to include this as a line item in their administrative budget submitted with their capitalization grant application and, if federal funds are used, CWSRFs must comply with the Part 31 procurement regulations when procuring the nonprofit.

Section 603(d)(1)(A)&(B): Loan Terms

Q16: Does the restriction under section 603(d)(1)(A) limiting the terms of CWSRF loans to the lesser of 30 years and the useful life of the project also apply when a CWSRF is buying or refinancing debt obligations under section 603(d)(2)?

A16: Yes. A CWSRF may only purchase debt obligations where the term of the debt is the lesser of 30 years and the useful life of the project. In addition, a CWSRF can only refinance an existing debt obligation to the extent that the term does not exceed the lesser of 30 years and the useful life of the project. For example, if a CWSRF decided to refinance an outstanding 20-year municipal bond, it could only extend the term by either 10 years or to the end of the useful life of the project, whichever is sooner.

Q17: Can a CWSRF provide a loan that exceeds the useful life of a project?

A17: No. Section 603(d)(1)(A) as amended now restricts the terms of CWSRF loans to the lesser of 30 years or the useful life of the project.

Q18: Does the state need to provide documentation of the useful life of the project?

A18: Yes. Documentation of the useful life of the project should be included as part of the project file.

Q19: What impact does the new flexibility to provide up to 30 year loans under section 603(d)(1)(A) have on EPA's draft guidance on the approval of Extended Term Financing (ETF) proposals by CWSRFs?

A19: CWSRFs no longer need to submit a proposal for EPA's approval to offer this type of assistance. In addition, CWSRFs that have previously been approved to offer ETF may now provide this type of assistance to any eligible recipient and are no longer required to report annually to EPA on the financial impacts on the fund.

Section 603(d)(1)(E): Fiscal Sustainability Plans

Q20: To what types of assistance and assistance recipients does the section 603(d)(1)(E) fiscal sustainability planning (FSP) provision apply?

A20: Per the statute, the FSP requirement applies only to loans and only to projects eligible under section 603(c)(1); therefore, FSPs are required for loans involving the repair, replacement, or expansion of a publicly owned treatment works.

Section 603(i): Additional Subsidization and Affordability Criteria

Q21: If a CWSRF chooses not to provide additional subsidization from their capitalization grants are they still required to establish affordability criteria?

A21: Yes. CWSRFs must establish affordability criteria in accordance with WRRDA no later than September 30, 2015. Criteria must be established regardless of whether the CWSRF plans to distribute additional subsidization.

Q22: If a CWSRF chooses not to use affordability criteria to distribute additional subsidization do they still need to develop criteria?

A22: Yes. CWSRFs must establish affordability criteria in accordance with WRRDA no later than September 30, 2015. Criteria must be established regardless of how a CWSRF plans to distribute additional subsidization.

Q23: Will EPA Regions be required to approve CWSRF affordability criteria?

A23: No. The establishment of affordability criteria will be left to the CWSRFs' discretion. Beyond the statutory requirements regarding affordability criteria CWSRFs have the flexibility to establish and weight criteria according to their needs.

Section 608: American Iron and Steel

Q24: Does the American Iron and Steel requirement apply to refinanced projects?

A24: Yes. If a project began construction, financed from a non-SRF source, prior to June 10, 2014, but is refinanced through an SRF assistance agreement executed on or after October 1, 2014, AIS requirements will apply to all construction that occurs on or after June 10, 2014, through completion of construction, unless engineering plans and specifications were approved by a responsible state agency prior to June 10, 2014. For projects funded on or after October 1, 2014, there is no retroactive application of the AIS requirements where a refinancing occurs for a project that has completed construction prior to June 10, 2014.

Q25: Are projects for which plans and specifications were approved prior to the enactment of WRRDA exempt from complying with the American Iron and Steel requirement?

A25: Yes. Section 608(g) of the FWPCA, as amended, specifically exempts projects for which the plans and specifications were approved prior the date of enactment of WRRDA (June 10, 2014). This applies to projects funded on or after October 1, 2014.

General

Q26: How does DBE apply?

A26: DBE is an equivalency requirement. WRRDA does not present any basis to apply DBE differently from what is currently done.

Q27: What are the federal cross-cutters?

A27: Federal cross-cutters are requirements of other federal laws and Executive Orders that apply in federal financial assistance programs. In the CWSRF program, the cross-cutting requirements only apply to projects and activities receiving funds “directly made available by” capitalization grants. However, all CWSRF projects and activities are subject to federal anti-discrimination laws, including Civil Rights Act of 1964, section 504 of the Rehabilitation Act of 1973, section 13 of the Federal Water Pollution Control Act Amendments of 1972 and Executive Order 11246 on affirmative action in federal contracting. Below is a list of the current cross-cutters. This list can change by revisions to existing laws and/or the enactment of new laws.

Archeological and Historic Preservation Act
Clean Air Act
Coastal Barrier Resources Act
Coastal Zone Management Act
Endangered Species Act
Protection and Enhancement of the Cultural Environment
Floodplain Management
Protection of Wetlands
Farmland Protection Policy Act

Fish and Wildlife Coordination Act
National Historic Preservation Act
Safe Drinking Water Act
Wild and Scenic Rivers Act
Demonstration Cities and Metropolitan Development Act
Women's and Minority Business Enterprise
Uniform Relocation and Real Property Acquisition Policies Act
Debarment and Suspension
Migratory Bird Act
Magnuson-Stevens Act – Essential Fish Habitat
Environmental Justice

Q28: Can federal cross-cutters be banked?

A28: No, federal cross-cutters cannot be banked. Cross-cutters are requirements of other federal laws and Executive Orders. EPA does not have the authority to allow cross-cutters to be banked. Also, the Federal Funding Accountability and Transparency Act (FFATA) of 2010 requires SRF programs to report on recipients that receive federal funds into the FFATA reporting systems. In the SRF program, projects that receive federal funds or an amount equal to the capitalization grant (equivalency), are considered federal projects and all federal projects must comply with federal cross-cutters.

APPENDIX IV

Supplemental Information for Implementing Section 602(b)(13)

Under Section 602(b)(13) of the Federal Water Pollution Control Act, as amended, any municipality or intermunicipal, interstate, or State agency that is a recipient of Clean Water State Revolving Fund (CWSRF) assistance must certify that it has studied and evaluated the cost and effectiveness of the proposed project or activity and that it has selected, to the maximum extent practicable, a project or activity that maximizes the potential for water and energy conservation, as appropriate. As stated in *Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Title VI of the Federal Water Pollution Control Act*, each CWSRF must ensure that applicants complete a cost and effectiveness analysis that meets the minimum statutory requirements. It is further recommended that each CWSRF program develop specific criteria and/or guidance for an analysis that meets these minimum requirements. This appendix contains examples, resources, and background information on some possible approaches to this type of analysis.¹⁴

Introduction

Analyzing the cost and effectiveness of a proposed project or activity will usually involve comparing a set of alternatives¹⁵ that achieve a given water quality objective or address a given need based on a common set of monetary and nonmonetary factors. Monetary factors are often evaluated using a present worth analysis. Nonmonetary factors are influenced by National, Regional, State, and/or local considerations and priorities and may include climate-related considerations, stormwater management priorities, specific contaminants of concern, socioeconomic factors, and others.

Monetary Analysis

Present worth analysis offers a standard method for calculating and comparing the costs over time of alternative approaches, including capital, operations and maintenance (O&M) costs, and the salvage value of the system/asset at the end of the projected useful life. Other costs may also be relevant, such as mitigation costs and cost savings associated with energy and water efficiency.

One State that has already established guidance for this type of analysis is Oregon. Oregon's guidelines for facilities planning¹⁶ provide a list of the elements found in a comprehensive life cycle cost present worth analysis (adapted):

1. The analysis converts all costs to present day dollars:

¹⁴ None of the examples, resources, or background information should be interpreted as endorsing or requiring a particular approach.

¹⁵ Generally, at least three mutually exclusive alternatives, including a "do nothing" alternative, are considered. Mutually exclusive alternatives are independent alternatives to a proposed project.

¹⁶ <http://www.deq.state.or.us/wq/loans/docs/FacilitiesPlansGuidelines.pdf>

2. The planning period is normally 20 years, but may be any period determined reasonable by the engineer and concurred on by the State or federal agency, particularly if the useful life of the project or the loan terms vary;
3. The discount rate is from an accepted authority;
4. The total capital cost includes both construction plus non-construction costs;
5. Annual O&M costs are converted to present day dollars using a uniform series present worth (USPW) calculation;
6. The salvage value of the constructed project is estimated using the anticipated life expectancy of the constructed items using straight line depreciation calculated at the end of the planning period and converted to present day dollars;
7. The present worth of the salvage value is subtracted from the present worth costs;
8. The net present value (NPV) is calculated for each technically feasible alternative as the sum of the capital cost (C) plus the present worth of the uniform series of annual O&M (USPW (O&M)) costs minus the single payment present worth of the salvage value (SPPW(S)):

$$NPV = C + USPW (O\&M) - SPPW (S)$$

9. A table of the capital cost, annual O&M cost, salvage value, present worth of each of these values, and the NPV is developed for each alternative;
10. Short lived asset costs should also be included in the life cycle cost analysis if determined appropriate by the consulting engineer or State. Life cycles of short-lived assets can be tailored to the facilities being constructed and be based on generally accepted design life. Different features in the system may have different life cycles.

Pennsylvania's *Handbook for PENNVEST Wastewater Projects*¹⁷ contains example present worth analyses for wastewater treatment plant, decentralized system, and land application projects.

Nonmonetary Factors

Nonmonetary factors are used to analyze each alternative's maximization of positive and/or minimization of negative technical, environmental, and socioeconomic outcomes. Such an analysis can also incorporate National, Regional, State, and local objectives. Examples of some nonmonetary factors are listed below.¹⁸ Not all of these will apply to every State, project type, or community; this list is intended to provide ideas only.

National, Regional, State, or Local Priorities

- Current National priorities defined by the U.S. EPA, such as sustainability and climate resilience
- Region-specific considerations, including water quality objectives/initiatives
- Other State-specific or local priorities
 - Consolidation/regionalization
 - Contaminants of concern

¹⁷ <http://www.eLibrary.dep.state.pa.us/dsweb/Get/Document-47480/381-5511-113.pdf>

¹⁸ Some nonmonetary factors, such as energy savings through conservation, also have a monetary component.

Technical Factors

- Project location and physical aspects
- Project reliability
- Project feasibility and operability
 - Presence of qualified personnel to operate and maintain infrastructure
 - Flexibility and adaptability to future conditions and demographics
 - Project's compatibility with current infrastructure

Environmental Factors

- Opportunities for water conservation, reuse, and/or recapture
- Opportunities for energy conservation, including alternative energy sources
- Opportunities to recover and recycle other resources (e.g., nutrients)
- Use of green infrastructure
- Other environmental impacts, including:
 - Land use impacts
 - Impacts to wildlife and/or habitat
 - Impacts to wetlands or other critical water bodies
 - Impacts on air/water quality

Socioeconomic Factors

- Specific industries using or served by the infrastructure or project type
- Local trends and/or demographics affecting need or demand
- Environmental justice considerations
- Project acceptability/affordability

Other Factors

- Other factors considered relevant by the State

Integrating Cost and Effectiveness

There is no requirement that communities select the least-cost alternative. In developing specific criteria and/or guidance for evaluating cost and effectiveness, CWSRF programs should identify how much emphasis is placed on monetary versus nonmonetary factors. Given the water and energy conservation provision in section 602(b)(13)(B), these specific considerations should be emphasized in the cost and effectiveness analysis (*see Appendix I for energy and water conservation resources*).

Integrating cost and effectiveness can be approached qualitatively or quantitatively, or through a combination of both. Some ideas for each approach are provided below.

Qualitative Assessment

While an analysis of monetary factors will always be quantitative, it will not always be possible or desirable to quantify nonmonetary factors. Therefore, an integrative analysis of monetary and nonmonetary factors is necessary. A qualitative assessment might involve a cost summary of the

alternatives plus a description of the nonmonetary factors, including significance and impact on project selection.

Quantitative Assessment

Nonmonetary factors can be evaluated using a numerical scoring system that assigns a maximum point value to each nonmonetary factor and then scoring each alternative accordingly. Cost could be evaluated within the same scoring system or separately. An overall score could be calculated for each alternative and compared to the other alternatives.