This document is derived from the full Core Element Framework for purposes of the Fiscal Years 2010 and beyond Wetland Program Development Grant Request-for-Proposals. This document includes only CEF wetland program development and refinement actions and activities, which are eligible for WPDG funding. The Full CEF for wetland program development and implementation actions and activities can be found on EPA's Wetlands website.

Appendix A: Program Development and Refinement Activities

What are the Core Elements of a Wetland Program?

The core elements are basic program functions that form the foundation of wetlands management and protection.
These include:

1. **Monitoring and Assessment;**
2. **Regulatory activities including 401 certification;**
3. **Restoration and Protection;**
4. **Water Quality Standards for Wetlands.**

In the past, the EPA has endorsed six core elements of a wetland program: Regulation, Monitoring and Assessment, Restoration, Waters Quality Standards, Public-Private Partnerships, and Coordination among state/tribal/local government and federal agencies. The EPA has also referred to Outreach and Education as an overarching element. The EPA streamlined this list to focus on the basic program functions. Partnerships, interagency coordination, and outreach are approaches that, among others, support these basic program functions

This Appendix specifically lists actions and activities that are program development activities. These actions and activities are grouped under the recently streamlined Core Elements.

Please note that the EPA is encouraging the development of Wetland Program Plans by states and tribes. The content of WPPs, and the intent behind them, is described in an October 2009 memorandum sent by the EPA to state and tribal wetland programs. **Development of WPPs is considered a grant-eligible activity.**

I. Core Element: MONITORING AND ASSESSMENT
Activities and Actions for Program Development

Overall Objective: Develop a monitoring and assessment strategy consistent with *Elements of a State Water Monitoring and Assessment Program for Wetlands* (EPA, 2006) that an applicant can use to manage wetlands according to their objectives

Set 1.Goals

Actions†	Menu of Activities†
a. Identify program decisions and long-term environmental outcome(s) that will benefit from a wetlands monitoring and assessment program	• Document program's long-term environmental goals • Identify programs that will ultimately use monitoring data, e.g. track trends, 401 certification, restoration, permitting • Collaborate with water quality programs in a state/tribe/local government • Identify how wetland data can be used to implement watershed planning
b. Define wetlands monitoring objectives and strategies	• Coordinate with most relevant partners, for example: federal, state, tribal, and local agencies, universities, regional and national work groups • Examine other sources for monitoring information within the state/tribe/local government • Identify monitoring objectives • Define data needs and uses • Coordinate with your Water Quality Monitoring Program to identify shared goals and activities • Examine how to integrate wetlands monitoring strategy into existing water quality monitoring efforts as feasible • Document wetlands monitoring strategy
c. Develop monitoring design, or an approach and rationale for site selection that best serves monitoring objectives (e.g., census, probabilistic survey, rotating basin)	• Determine the appropriate classification scheme in order to group the type, class, and size of wetlands • Develop and describe site selection process • List universe of wetland resources from which sites could be selected if available • Determine which data are already available.
d. Select a core set of indicators to represent wetland condition or a suite of functions	• Identify indicators that are relevant for established monitoring objectives • Confirm indicators are scientifically defensible • Develop/select field method(s) • Add supplemental indicators if needs dictate and as resources allow

Set 2: Strategy Development

Actions†	Menu of Activities†
a. Ensure the scientific validity of monitoring and laboratory activities	• Develop and draft peer review Quality Management Plan • Develop and draft peer review Quality Assurance Project Plan • Develop and draft peer review Field Operations Manual • Select, prioritize, and peer review candidate assessment indicators
b. Monitor wetland resources by the development of the monitoring tools and specific wetland studies as specified in strategy	• Identify and train staff to monitor for each indicator • Verify monitoring strategy by conducting sufficient number of pilot monitoring projects (small-scale projects to test methods, calibrate, enhance reference network, etc.) • Develop a schedule for monitoring wetland resources • Develop a method to track sites that are monitored
c. Establish reference condition	• Define reference condition (the gradient from unimpaired to impaired) • Define reference standard condition (e.g., Best Attainable Condition, Least Disturbed Condition, Minimally Disturbed Condition, Historical Condition, Best Professional Judgment) • Determine process for measuring reference standard condition (e.g., reference sites, historical data) • Select reference sites using a systematic approach
d. Track monitoring data in a system that is accessible, updated on a timely basis, and integrated with other water quality data	• Design a data management system that supports program objectives • Refine a data system so that it can be used for analysis • Make data system compatible with and regularly update Water Quality Standards • Integrate with other water quality data systems (e.g., watershed planning databases) • Georeference data as it is gathered for reporting • Identify sites to sample repeatedly for a trend network
e. Analyze monitoring data to evaluate wetlands extent and condition/function or to inform decision-making	• Document data analysis and assessment procedures • Develop assessment method to determine condition thresholds relative to reference standard condition (i.e., departure from reference standard condition) • Determine baseline wetland condition • Analyze changes in wetland extent or condition relative to reference conditions • Analyze changes in wetland extent or condition in response to climate change

Set 3 Strategy Refinement

Actions	Menu of Activities
a. Evaluate monitoring program to determine how well it is meeting a jurisdiction's monitoring program objectives	• Develop schedule to evaluate monitoring program • Ensure the assessment method is providing the necessary information • Make changes as necessary to the program • Review other wetlands program elements (e.g., restoration, regulation, water quality standards) • Modify other aspects of wetlands program as needed based on review of monitoring data
b. Evaluate the environmental consequences of a federal or state/tribal/local government action or group of actions; modify programs as needed based on M&A data	• Inform state/tribal/local government wetland permit decisions • Inform 401 certification decisions on federal actions • Modify permitting or 401 certification practices as needed based on assessment information
c. Improve the site-specific management of wetland resources	• Incorporate monitoring and analysis into restoration techniques • Develop and establish methods to establish ecologically-meaningful benchmarks for gauging restoration success • Develop and establish methods to evaluate the performance of compensatory mitigation sites • Develop and establish methods to evaluate the ecosystem services provided by individual wetlands
d. Develop geographically-defined wetland protection, restoration, and management plans	• Identify and prioritize management areas (e.g. identify vulnerable wetlands, prioritize restoration potential) • Incorporate wetlands into a comprehensive Watershed Plan that serves state/tribal/local government water quality management needs and addresses all waters • Evaluate progress toward meeting wetland objectives identified in other projects/programs, for example: State Wildlife Action Plans • Inform broader watershed activities (e.g., reducing erosion, providing floodplain storage, reducing nutrient loading, etc.)

II. Core Element: Regulatory
Activities and Actions for Program Development

ELEMENTS OF A REGULATORY PROGRAM

KEY:
X – These steps form the basics of a successful program.
O – Steps are suggested because they are often found in a successful program, but may not be necessary.
N/A – Step not applicable to this program category.

Overall Objective: Develop a Strategy to Administer Regulatory Activities Efficiently and Consistently

Set 1. Goals

Actions	Activities	Program Categories			
		401 Certification	**SPGP\RGP Permits**	**404 Assumption***	**S\T Permit**
a. Provide clear and comprehensive jurisdictional coverage of aquatic resources	Develop and adopt definition of waters of the state or tribe at least as inclusive as CWA (S/T/LG permit program does not need to be as comprehensive as CWA)	X	X	X	X
	Develop delineation process that will delineate wetlands in a manner that is at least equivalent with the federal program (S/T/LG permit program does not need to be as comprehensive as CWA)	N/A	X	X	X
	Develop and adopt procedure to extend state/tribal/local government jurisdiction to aquatic resources that are not "waters of the US" (e.g., isolated wetlands)	N/A	O	O	O
	Base all water related regulatory programs within a jurisdiction on the same definition of waters of the "State"	O	O	O	O
b. Clearly identify a comprehensive scope of activities to be regulated	Develop and adopt clear definition of regulated activities that is as extensive as CWA (S/T/LG permit program does not need to be as comprehensive as CWA)	N/A	X	X	X
	Coordinate with other CWA or state/tribe/local government aquatic regulatory programs to cover all impact types and methods (e.g., quality vs. quantity, point vs. nonpoint source pollution, classes of activities)	X	X	X	O
		N/A	N/A	O	O
c. Provide clear guidance to public on how to identify jurisdictional waters and activities	Develop clear, publicly accessible guidance and / or training on how to identify waters of the "State" for wetlands, streams, and other waters	O	X	X	X
	Develop clear, publicly accessible guidance on what activities in waters of the "state" require what authorizations	N/A	X	X	X
d. Evaluation	Periodic review of state/tribal/local government program to ensure all potentially regulated activities are addressed, and take appropriate programmatic action	O	X	X	O

* Completion of the CWA §404 actions in this table does not constitute CWA §404 assumption. The requirements for assumption can be found at http://www.epa.gov/owow/wetlands/pdf/40cfrPart233.pdf.

Set 2: Strategy Development

Actions	Activities	Program Categories			
		401 Certification	SPGP\RGP Permits	404 Assumption*	S\T Permit
a. Adopt regulations or rules to implement state/tribal/local government and/or federal water quality statutes	Develop and adopt guidance to implement statutes as appropriate	X	X	X	X
	Develop and adopt regulations that identify agency goals and responsibilities for all water quality statutes	O	X	X	X
b. Develop procedures to operate according to a clear and effective set of criteria for reviewing and responding to applications	Develop and adopt publicly accessible criteria for applying for and agency review of applications	X	X	X	X
	Establish reasonable timelines for initially responding to applications in regulatory guidelines	O	X	X	X
	Establish reasonable timelines for providing final responses to applications in regulatory guidelines	X	X	X	X
	Develop internal procedures for responding to federal actions on permits	X	N/A	N/A	N/A
c. Actively review proposed impacts to waters of the "state"		X	X	X	X
	Develop standard practices or general authorizations for like projects impacting similar aquatic resources	N/A	O	O	O
d. Determine and adopt comprehensive project review criteria	Adapt and adopt 404(b)(1) Guidelines or comparable review criteria for assessing and minimizing impacts	O	X	X	O
	Develop and adopt more stringent review criteria than the 404(b)(1) Guidelines	O	O	O	O

* Completion of the CWA §404 actions in this table does not constitute CWA §404 assumption. The requirements for assumption can be found at http://www.epa.gov/owow/wetlands/pdf/40cfrPart233.pdf.

Actions	Activities	Program Categories			
		401 Certification	**SPGP\RGP Permits**	**404 Assumption***	**S\T Permit**
e. Coordinate among agencies, programs, and industry groups to reduce duplicative efforts by the programs and the regulated public	Develop clear guidelines for roles, responsibilities, and procedures for review of permits for activities that require approval from more than one state/tribal/local government agency	O	O	O	O
f. Require effective mitigation for authorized impacts	Develop and establish minimum requirements and review criteria for mitigation proposals	O	O	O	O
g. Track / Evaluate	Program Development: • Development and adoption of state, tribal, or municipal rules to protect wetlands	O	O	O	O
	Develop program tracking system to measure: • # of 401 certifications waived without review • # of applications reviewed • # of permits/certifications issued annually • % applications responded to on schedule • % projects whose impacts changed from initial application to issuance/certification • Ratio of impacted aquatic resources to mitigation required by aquatic resource type (e.g. wetland acres, stream linear feet)	O	O	O	O

Set 3: Strategy Refinement

Actions	Activities	Program Categories			
		401 Certification	SPGP\RGP Permits	404 Assumption*	S\T Permit
a. Enforce aquatic resource protections	Develop enforcement and compliance mechanisms to monitor compliance and deter violations	X	X	X	X
	Set timeframe for sites to come into compliance	O	O	O	O
b. Ensure impact assessments and mitigation crediting lead to replacement of aquatic resources with similar structural, functional or condition attributes	Develop and adopt functional or condition assessment methodologies	O	O	O	O
	Develop and establish performance standards and success criteria for mitigation	X	X	X	X
	Develop methods to evaluate mitigation against reference and pre-impact sites regularly; revise performance standards, review criteria, and/or functional/condition assessment methods accordingly	O	O	O	O
	Develop and improve a process to coordinate regulatory programs with other entities conducting restoration to share best practices, mitigation/restoration priorities, and/or assessment methodologies	O	O	O	O
c. Incorporate the watershed approach into the regulatory decision-making process	Develop and establish methods for determining cumulative impacts to aquatic resources within a watershed	O	O	O	O
d. Perform public education and outreach about wetland protection, regulated waters and activities, and authorization process	Make education/outreach documents or activities available on important programmatic topics such as: • Importance of aquatic resources • Regulatory program requirements • How to identify protected waters • Listing regulated activities • Regulatory program performance • Opportunities for public participation in the protection of aquatic resources	O	O	O	O
	Make program information available through readily accessible outlets (hotline, website, brochures, etc.)	X	X	X	X

* Completion of the CWA §404 actions in this table does not constitute CWA §404 assumption. The requirements for assumption can be found at http://www.epa.gov/owow/wetlands/pdf/40cfrPart233.pdf.

Actions	Activities	Program Categories			
		401 Certification	**SPGP\RGP Permits**	**404 Assumption***	**S\T Permit**
e. Develop process to measure Environmental Results	Develop a process to track: • % permitted sites that are inspected per year • % permits in compliance • % non-compliant sites where enforcement actions taken • % non-compliant sites brought into compliance within timeframe • # of unauthorized impacts brought into compliance (annual tracking) • % mitigation sites monitored • % mitigation sites established • % mitigation sites meeting performance goals	O	O	O	O

III. Core Element: VOLUNTARY RESTORATION AND PROTECTION

Activities and Actions for Program Development

Overall Objective: Develop a clear and consistent strategy for restoration and protection and link to existing watershed plans (both quantity and quality focused) and critical environmental area plans when available.

Set 1: Goals

Key Actions	Program Building Activities
a. Establish goals that are consistent or compatible across relevant agencies	Coordinate with relevant agencies that outline restoration/protection goals and strategies and timeframes Develop multi-agency body to coordinate restoration/ protection efforts Gather information on wetland location, class and condition/functions by carrying out specific wetland surveys and studies Set restoration goals based on agency objectives and available information
b. Consider watershed planning, wildlife habitat, and other objectives when developing your selection process restoration/ protection sites	Identify rare, vulnerable, or important wetlands by carrying out specific wetland surveys and studies and prioritize for restoration/protection Apply tools (GIS, color-infrared photography, mapping, modeling, field inspection of soil, vegetation, and hydrologic conditions) to develop methodology to identify and prioritize restorable wetlands Develop tools to integrate restoration/protection efforts on a watershed or landscape scale, e.g., prioritize restoration sites within a watershed Share restoration/protection efforts on a watershed or landscape scale, e.g., prioritize restoration sites within a watershed Share priorities with other organizations involved in wetland protection and restoration, e.g., wildlife bureaus, agriculture/conservation agencies, land trusts, mitigation banks Share priorities with other water quality protection programs, e.g., identify riparian restoration projects that would reduce sediment and nutrient loadings to streams

c. Provide clear guidance on appropriate restoration and management techniques and success measures	Develop restoration and management guidance specific to wetland types and location (e.g. urban vs. rural) Develop and establish measures of restoration success, e.g., adopt functional and/or condition indicators and field methods Develop and establish performance standards based on reference wetland site in a relatively undisturbed condition Through guidance, encourage restoration outcomes that recreate natural self-sustaining systems and reduce the need for ongoing management Develop a process to verify restoration techniques with site visits and adapt as necessary Train restoration partners to use guidance techniques

Set 2: Develop Strategy for Protection

Actions	Program Building Activities †
a. Establish partnerships to leverage additional protection	Share protection priorities with partners Develop management plans for protected wetlands Develop a system to track: • Number of stewardship agreements • Acres of wetlands protected through partnerships • Acres of vulnerable wetlands protected through partnerships
b. Establish and Institutionalize long term protection, using mechanisms such as incentives, purchase of land title or easements to protect wetlands	Develop management plans for protected wetlands. Develop a system to track: • Acres of wetlands protected • Acres of vulnerable wetlands protected

Set 3: Develop Strategy for Restoration

Actions	Program Building Activities
a. Increase wetland acreage through restoration (re-establishment)	Develop restoration and management plans for re-established wetlands consistent with restoration guidance Develop a system to track: • Acres of wetlands re-established • Restoration sites using techniques that comply with guidance • Level of function/condition based on indicators Provide technical assistance to re-establishment projects as needed
b. Improve natural wetland conditions and functions through restoration (rehabilitation)	Develop restoration and management plans for rehabilitated wetlands consistent with restoration guidance Develop a system to track: • Acres of wetlands rehabilitated • Improvement on function/condition indicators • Net change in water quality, flood control, or habitat Provide technical assistance to restoration projects as needed
c. Establish partnerships to leverage more restoration	Share restoration and protection priorities with partners Develop restoration and management plans for restored wetlands consistent with restoration guidance Develop a system to track: • Number of restoration agreements • Acres of wetlands restored through partnerships • Acres of priority wetlands restored through partnerships Provide technical assistance to partners as needed

Set 4: Refine Protection and Restoration Strategies

Actions	Program Building Activities
a. Develop and evaluate restoration/protection projects	Develop and populate accessible tracking database for restoration/protection sites Administer and update tracking database regularly • Consider % of total acres of restoration/protection sites throughout state or tribal territory or local government jurisdiction that are in database • Track projects by watershed or other relevant spatial unit
b. Monitor restoration/protection sites to ensure that they are implemented and managed correctly and linked to relevant watershed planning efforts	Monitor effectiveness of all or a sample of sites representative of wetland class, type, and size using adopted indicators and methods Develop a system to track acres or numbers of restored/protected wetlands that are comprehensively monitored for $\geq$ 3 years Develop, select, or refine a subset of indicators (core indicators) to monitor effectiveness of all restoration and protection sites Monitor effectiveness of restoration/protection sites through wetland surveys or studies using core indicators Develop a system to track: • Acres or % of restored/protected wetlands monitored for $\geq$ 3 years using core indicators • Acres or % meeting established performance goals based on function/condition indicators Share wetland restoration/protection efforts to relevant entities (other agencies, public, etc.)
c. Develop a process to modify restoration/protection techniques as needed	Develop process to review restoration and protection methods and modify as needed Develop process to review restoration and protection sites as needed and plan for follow-up site maintenance, restoration, and protection activities

IV. Core Element: Water Quality Standards for Wetlands
Activities and Actions for Program Development

Overall Objective: Develop, adopt, and incorporate water quality standards into wetlands programs

Set 1: Goals and Definitions

Actions	Menu of Activities
a. Develop and adopt an appropriate definition of wetlands	• Include wetlands in state/tribal/local government legal definition of waters • Ensure legal definition of waters is at least as inclusive as the CWA definition. • Remove any regulatory language excluding defined wetlands from water quality standards
b. Ensure the appropriate wetlands definition is included in WQS	• Include appropriate definition of wetlands in state/ tribal/local government policy or regulations authorizing water quality standards program (e.g., wetland size, type, ownership)

Set 2: Strategy Development

Actions	Menu of Activities
a. Gather and analyze monitoring data and other information that will become basis of water quality standards	• Define wetland types/classes • Establish reference conditions for defined wetland types in terms of functional/condition performance and other physical measurements
b. Establish and adopt appropriate wetland-specific designated uses to be achieved and protected	• Define designated uses for different wetland types (e.g., recreation, wildlife habitat,) • Locate where designated uses apply
c. Establish and adopt narrative criteria that qualitatively describe the condition or suite of functions that must be achieved to support a designated use	• Develop and establish narrative physical criteria (e.g., fill material not present; no hydrologic alterations) • Develop and establish narrative biologic criteria (e.g., species composition, population dynamics, structure) • Develop technical documents to support the narrative criteria with numerical data. This document describes the types of narrative and numerical data that will be used in determining attainment of the standard
d. Develop and adopt numeric criteria representing wetland specific values for chemical, physical, and biological parameters that may not be exceeded, must be exceeded, or some combination to protect or restore designated uses	• Develop and establish numeric criteria for biological attributes based on wetland type and location (e.g., plant or macroinvertebrate indices, algae) • Develop and establish numeric criteria for chemical constituents based on wetland type and location (e.g., nutrients) • Develop and establish numeric criteria for physical parameters based on wetland type and location (e.g., buffer characterizations, micro habitats)
e. Better define state/tribal antidegradation policies for wetlands, requiring full protection of existing uses (functions and/or condition), maintenance of functions/condition in high quality wetlands, and a prohibition against lowering functions/conditions in outstanding national resource waters	• Develop and include wetlands in antidegradation policies • Develop and include restoration potential of wetlands in antidegradation policies • Develop measures to ensure antidegradation is being applied successfully in a manner specific to wetlands

Set 3: Strategy Refinement

Actions	Menu of Activities
a. Develop and evaluate the process to use water quality standards as basis for regulatory decisions	• Develop a system to track wetland impacts avoided or mitigated based on WQS, via permitting actions
b. Develop and evaluate the water quality standards as basis for evaluating restoration/protection projects and mitigation/compensation projects	• Use water quality standards in the development or refinement of restoration guidelines • Develop a system to track restoration/protection projects that are monitored for compliance with water quality standards • Track restoration/protection sites that meet water quality standards • Identify remedial measures for sites that do not meet wetland WQS
c. Incorporate water quality standards into monitoring and assessment program	• Update monitoring strategy and methods based on water quality standards • Develop a system to track acres monitored for compliance with water quality standards