

SECTION 4: VOLUNTARY RESTORATION AND PROTECTION

Introduction

The following sections are to help Tribes and States develop a voluntary restoration and protection program. First, is a section defining the critical elements of a voluntary restoration and protection program. Second, are identified actions and activities to be considered when developing a plan and/or applying for a WPDG. The final section provides additional resource links.

Definition

Wetland restoration is the manipulation of a former or degraded wetland's physical, chemical, or biological characteristics to return to its natural functions. Restoration practices include:

- Re-establishment, the rebuilding of a former wetland,
- Rehabilitation, repairing the functions of a degraded wetland,

Wetland protection removes a threat or prevents wetland conditions decline. Voluntary protection, although not required, can secure and protect lands from development through legally binding agreements, such as conservation easements. Conservation easements can be held by Federal, Tribal, State, or local resource agencies, nonprofit conservation organizations, or private land managers. Other types of voluntary yet legally binding instruments to provide protection include title transfers, restrictive covenants, and working with partners, such as landowners and community groups, to develop science-based long-term stewardship plans.

Voluntary restoration and protection refer to activities not required by statutes or regulations. Examples include:

- Land trusts purchasing titles or easements to wetland areas.
- Community groups remove invasive species and plant native vegetation.
- Conservation programs pay landowners to change practices such as cultivation or grazing that alter wetland areas.

Generally, a voluntary restoration and protection plan should communicate how Tribes and States plan to implement, support, or coordinate Tribal, Federal, State, and local restoration and protection efforts. When developing a formal or informal program, it is essential to consider relevant programs' goals, sources of funding, wetland data needs, critical habitat protection priorities, and potential partners. When creating a formal program, consider using legislative actions, executive orders, proclamations, or other legal processes to dedicate regular funding sources for restoration and protection activities.

If possible, connect the program to an official "no net loss of wetlands" Tribal or State goal to potentially improve the chances of receiving sustainable funding. An important use of sustainable funding is to build the capacity of local governments and community groups to conduct effective restoration and protection and provide support for citizen -ed long-term

stewardship activities. Additionally, locating the program in an office or agency within a Tribe or State with dedicated funding may help institutionalize support for the program.

Voluntary Restoration and Protection Program

In general, a well-designed and executed wetland voluntary restoration and protection program can be a critical tool for Tribes and States to use to better manage and protect their wetland resources. For example, a voluntary restoration and protection program can allow Tribes and States to set aside important (or unique) wetland resources. Voluntary restoration and protection are important to maintain critical wildlife habitat, to meet state and tribal watershed goals, to contribute to economic well-being, to protect wetlands with cultural value, to restore or protect wetlands and aquatic resources that are home to plant and animal species traditionally harvested (e.g. wild rice, fish, and waterfowl) and/or protect wetlands that provide plants used for medicinal and ceremonial purposes that are culturally relevant to Tribes and local communities. Voluntary restoration and protection can work in tandem to help stem the loss and create a gain in natural wetlands and their associated functions. Over time, Tribes and States can detect changes and make appropriate decisions to protect their resources.

EPA recommends that Tribes and States first identify their program specific voluntary restoration and protection needs. After the needs are outlined for the program, then program goals can be identified. The program goals can be used to determine which phase to enter. For example, if the goal is to determine program needs or to develop a more comprehensive and/or formal program, Phase 1 actions and activities are the starting point. If implementation is the focus, then start with Phase 2. If program refinement or decision-making is the focus, then start with Phase 3.

EPA recommends that you design and build your program to address your specific needs, which could result in a blending of some activities from the same phase or of different phases. The phases are as follows (Tables 7 – 9):

Table 7. Phase 1: Voluntary Restoration and Protection Planning Considerations

Actions	Menu of Activities
<p>a. Establish or become an active partner in a state or tribal voluntary restoration and protection program</p>	<ul style="list-style-type: none"> • Determine if the state or tribal has a formal “no net loss” of wetland acreage or function policy • Determine if the state or tribal has a formal aquatic resource/wetlands protection and restoration program • Investigate Tribal or State environmental justice policies and demographic mapping information • Examine Tribal or State agencies that have aquatic resource protection and restoration in their mission; consider objectives related to forestry, wildlife management, nonpoint source pollution, equitable access to ecosystem services, natural heritage, flood control, historic preservation, parks and recreation, climate adaptation and coastal zone management • Develop a multi-agency stakeholder group to coordinate restoration/ protection efforts and share wetland restoration priorities; include climate adaptation programs, community based environmental justice organizations, and overburdened or underserved communities • Develop a comprehensive restoration and protection strategy • Consider different partnership models: <ul style="list-style-type: none"> ○ Various programs within one agency ○ Multi-agency body ○ Federal Land Management Agencies ○ Stakeholders ○ Other • Develop formal goals that are consistent or compatible across relevant agencies • Outline benefits or steps to establish “no-net loss of wetland acreage” policy • Evaluate wetland restoration and protection in existing state or tribal watershed planning efforts • Determine inclusion of aquatic resource protection in state or tribal conservation planning • Determine inclusion of aquatic resource protection in state or tribal environmental justice initiatives • Gather information on wetland location, class, and condition/functions and socioeconomic data
<p>b. Collect and enhance wetland information as a foundation for a restoration and protection actions, strategy, or program</p>	<ul style="list-style-type: none"> • Inventory science- based tools used in Tribal or State wetland restoration and conservation planning • Enhance wetland data for informing restoration decisions, consider using various types of Tribal/State specific information such as: <ul style="list-style-type: none"> ○ Aquatic resource mapping data ○ Color-infrared photography

Actions	Menu of Activities
	<ul style="list-style-type: none"> ○ Wetland monitoring and assessment data ○ Field inspection of soil, vegetation, and hydrologic conditions) to identify and prioritize restorable wetlands ○ Functional assessment methods ● Develop a needs assessment for wetland restoration decision making tools (i.e., monitoring protocols, functional assessment, restoration prioritization methods) ● Identify or collect Tribal/State information related to rare, vulnerable, culturally important wetlands ● Identify or collect information on cultural practices that are dependent on wetlands ● Identify and collect information on economic trends, resiliency and activities that are dependent on specific wetland complexes in your Tribe or State ● Pursue other specific information on how wetlands contribute to quality of life in your Tribe or State ● Identify local decision makers and key stakeholders involved in wetland conservation and restoration. ● Identify opportunities for local decisionmakers and key stakeholders to support wetland restoration and protection goals ● Develop a targeted communication strategy for sharing data on restoration priorities, high value wetlands, vulnerable wetlands, and aquatic resources in your Tribe or State with special considerations given to communities with environmental justice concerns. Consider developing communication and outreach products in various languages ● Increase accessibility of Tribal or State data, information and assessment tools used to prioritize areas for protection and restoration ● Establish data sharing partnerships to leverage additional wetlands restoration and protection ● Evaluate gaps and utility in Tribal or State data and assessment tools used to prioritize areas for protection and restoration. Evaluate gaps in information related to overburdened and underserved communities.
<p>c. Consolidate and provide guidance on Tribal and State restoration and protection management techniques and success measures</p>	<ul style="list-style-type: none"> ● Implement communications strategy to share restoration and protection information and priorities with stakeholders ● Provide wetland and aquatic resource data layers to existing state-level GIS and land-use decision making tools ● Develop and promote model approaches to incorporating wetlands protection and restoration in comprehensive watershed plans, e.g., prioritize restoration sites within a watershed ● Actively promote the use of Tribal or State data and assessment tools in Tribal or State conservation plans

Actions	Menu of Activities
	<ul style="list-style-type: none"> • Provide clear guidance for wetlands restoration to address climate adaptation, flood protection, coastal resiliency. • Develop long-term management plans for protected wetlands. Maintain an inventory of voluntary wetland protection and restoration projects. Consider tracking: <ul style="list-style-type: none"> ○ Large scale conservation programs active in the Tribal/State lands, ○ Demonstrations connecting wetland restoration to regulatory requirements and reporting (e.g., WQS, TMDLs, CZRA) ○ Specific projects demonstrating wetlands' role in landscape scale watershed planning and water quality improvements. ○ Projects that utilized innovative sustainable financing ○ Projects in communities with environmental justice concerns • Develop restoration and management guidance specific to wetland types, locations, census tracts (e.g., urban vs. rural) • Establish ecological benchmarks for gauging restoration success • Establish measures of restoration success, (e.g., adopt functional and/or condition indicators and field methods) • 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 • Verify restoration techniques with site visits and adapt as necessary • Train restoration partners to use guidance techniques

Table 8. Phase 2: Voluntary Restoration and Protection Data Collection, and Assessments Considerations

Actions	Menu of Activities
<p>a. Increase wetland acreage through restoration (reestablishment)</p>	<ul style="list-style-type: none"> • Develop restoration and management plans for reestablished wetlands consistent with restoration guidance. Consider tracking: <ul style="list-style-type: none"> ○ 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
<p>b. Improve natural wetland conditions and functions through restoration (rehabilitation)</p>	<ul style="list-style-type: none"> • Develop restoration and management plans for rehabilitated wetlands consistent with restoration guidance. Consider tracking: <ul style="list-style-type: none"> ○ Acres of wetlands rehabilitated ○ Improvement on function/condition indicators ○ Net change in water quality, flood control, or habitat ○ Acres of wetlands rehabilitated, improvement on function/condition indicators, net change in water quality, flood control, habitat access to recreation in underserved communities • Provide technical assistance to restoration projects as needed • Share restoration and protection priorities with partners • Develop restoration and management plans for restored wetlands consistent with restoration guidance. Consider tracking: <ul style="list-style-type: none"> ○ Number of restoration agreements ○ Acres of wetlands restored through partnerships ○ Acres of priority wetlands restored through partnerships • Provide technical assistance to partners as needed
<p>c. Establish and institutionalize long-term protection, through Tribal/State support and assistance using mechanisms such as incentives, purchase of land title or easements to protect wetlands</p>	<ul style="list-style-type: none"> • Develop or identify guidance and resources for protecting Tribal/State wetlands through land acquisition and conservation easements • Identify and promote model local ordinances for open space protection, wetland conservation, flood control, nature-based solutions/green infrastructure • Develop inventory of wetland conservation efforts - Consider tracking: <ul style="list-style-type: none"> ○ Number of partnerships created for wetland protection and restoration ○ Number of stewardship agreements

Actions	Menu of Activities
	<ul style="list-style-type: none"> ○ Acres of wetlands protected through partnerships ○ Acres of vulnerable wetlands protected through partnership ● Develop long-term management plans for protected wetlands. Consider tracking: <ul style="list-style-type: none"> ○ Acres of wetlands protected, with focus on benefits to communities with environmental justice concerns ○ Acres of vulnerable wetlands protected, with a focus on benefits to communities with environmental justice concerns

Table 9. Phase 3: Voluntary Restoration and Protection Refinement and Management Decision-making

Actions	Menu of Activities
<p>a. Track restoration/protection projects over time using short-term and long-term benchmarks of success</p>	<ul style="list-style-type: none"> ● Develop and populate accessible tracking database for restoration/protection sites ● Administer and update tracking database regularly. Consider Tracking: <ul style="list-style-type: none"> ○ % of total acres of restoration/protection sites throughout state or tribal lands that are in database ○ Track projects by watershed or another relevant spatial unit
<p>b. Monitor restoration/protection sites to ensure that they are managed correctly, contribute to meeting water quality goals and ecological health</p>	<ul style="list-style-type: none"> ● Monitor effectiveness of all or a sample of sites representative of wetland class, type, and size using adopted indicators and methods. ● Track acres or numbers of restored/protected wetlands that are comprehensively monitored for ≥ 3 years ● Select subset of indicators (core indicators) to monitor effectiveness of all restoration and protection sites ● Monitor effectiveness of restoration/protection sites using core indicators-Consider: <ul style="list-style-type: none"> ○ Acres or % of restored/protected wetlands monitored for ≥ 3 years using core indicators ○ Acres or % meeting established performance goals based on function/condition indicators ● Update monitoring and performance records regularly ● Regularly report wetland restoration/protection efforts to relevant entities (other agencies, public, etc.)

<p>c. Modify restoration/protection techniques as needed</p>	<ul style="list-style-type: none"> • 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, particularly for sites in overburdened or underserved communities
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Resource Links

EPA Wetland Restoration Fact Sheet:

- https://www.epa.gov/sites/default/files/2021-01/documents/wetland_restoration.pdf

EPA Partnering with Land Trusts Fact Sheet:

- https://www.epa.gov/sites/default/files/2021-01/documents/wetlands_protection_partnering_with_land_trusts.pdf

EPA Wetland Program Development Grants [Tribal] Case Studies:

- <https://www.epa.gov/wetlands/wetland-program-development-grants-case-studies>

APPENDIX A: EPA WEBSITE RESOURCES

EPA Basic Information about Wetland Restoration and Protection:

- <https://www.epa.gov/wetlands/basic-information-about-wetland-restoration-and-protection>

EPA Core Elements of Effective State and Tribal Wetlands Program document.

- https://www.epa.gov/sites/default/files/2015-10/documents/2009_03_10_wetlands_initiative_cef_full.pdf

EPA National Guidance Water Quality Standards for Wetlands:

- <https://www.epa.gov/cwa-404/national-guidance-water-quality-standards-wetlands>

EPA Partnering with Land Trusts Fact Sheet:

- https://www.epa.gov/sites/default/files/2021-01/documents/wetlands_protection_partnering_with_land_trusts.pdf

EPA Templates for Developing Wetland Water Quality Standards:

- <https://www.epa.gov/wqs-tech/templates-developing-wetland-water-quality-standards>

EPA Wetland Monitoring and Assessment Information:

- <https://www.epa.gov/wetlands/wetlands-monitoring-and-assessment>

EPA Wetlands Program Development Grants:

- <https://www.epa.gov/wetlands/wetland-program-development-grants-and-epa-wetlands-grant-coordinators>

EPA Wetland Program Development Grants [Tribal] Case Studies:

- <https://www.epa.gov/wetlands/wetland-program-development-grants-case-studies>

EPA Wetland Program Plans:

- <https://www.epa.gov/wetlands/developing-state-or-tribal-wetland-program-plan>
- <https://www.epa.gov/climate-adaptation/climate-adaptation-plans>
- <https://www.epa.gov/environmentaljustice/resources-creating-healthy-sustainable-and-equitable-communities>

EPA Wetland Restoration Fact Sheet:

- https://www.epa.gov/sites/default/files/2021-01/documents/wetland_restoration.pdf

APPENDIX B: BIBLIOGRAPHIC RESOURCES LINKS

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