

## Chapter 2



*Mudflats*

# The Comprehensive Conservation Planning Process

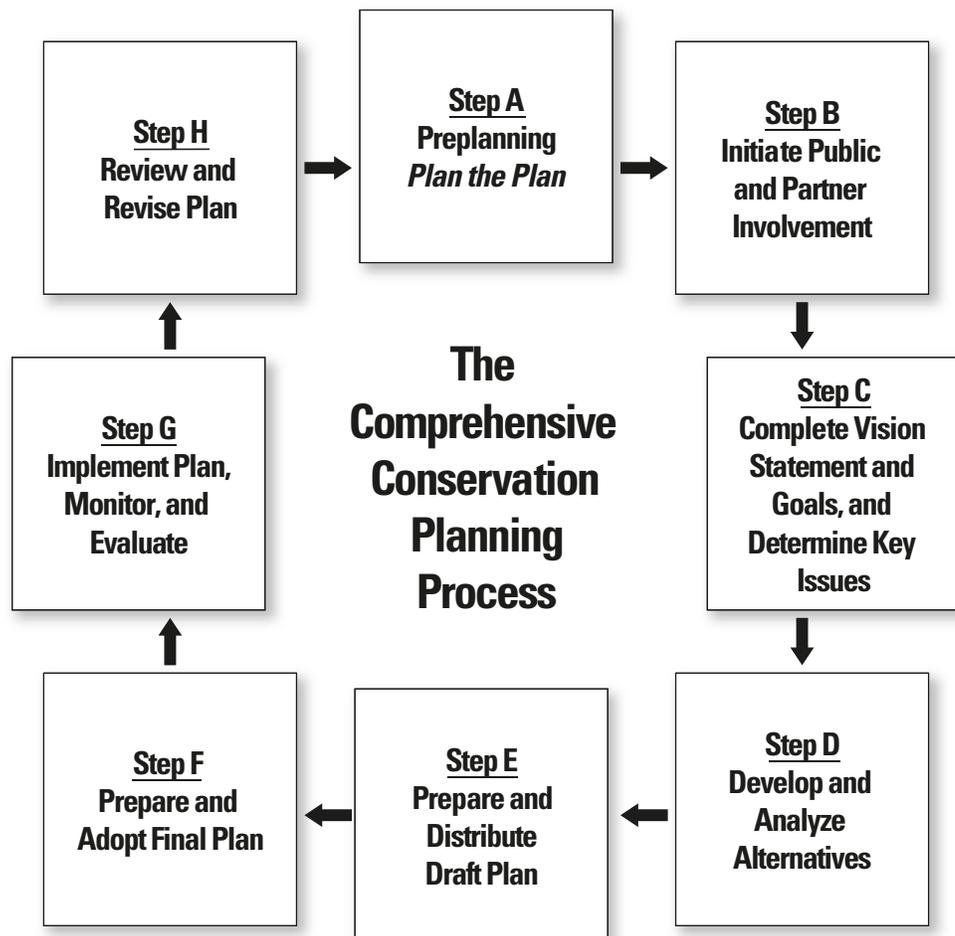
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## 2.1 Introduction

Service policy (602 FW 3) establishes an eight-step planning process that also facilitates compliance with NEPA (see figure 2.1). The full text of the policy and a detailed description of the planning steps can be viewed at: <http://policy.fws.gov/602fw3.html> (accessed January 2012). The specific process implemented by John Heinz NWR's planning team in developing this CCP is described below.

Since 1972, we have focused on conserving lands within the approved refuge boundary; facilitating wildlife-dependent public uses; managing habitat for several focal species, such as waterfowl and waterbirds; and establishing relationships with the community and our partners.

**Figure 2.1. The Comprehensive Conservation Planning Process**



## 2.2 Steps in the Planning Process

### Step A: Initial Planning

We began formally developing a CCP on January 21, 2010, during a conference call between refuge staff, Regional Office staff, and planning contractors. One of the major outcomes of the meeting was a timetable for accomplishing the major steps in the planning process. Initially, we focused on collecting information on the refuge's natural and cultural resources and public use program. The CCP core team of refuge and Regional Office staff and a representative from the

PGC started meeting to discuss existing information, draft a vision statement, and prepare for the public scoping meeting and a technical meeting of State and Federal partners.

**Step B: Public Scoping**

The process seeking public involvement officially began in early April 2010, when the planning team distributed a newsletter to approximately 377 individuals, organizations, and agencies announcing the planning process and public scoping period. A press release announcing the public scoping meeting and requesting public input was distributed to major media outlets on April 22, 2010. Next, the Notice of Intent to prepare a CCP was published in the *Federal Register* on Friday, May 7, 2010 (75 FR 25285).

Scoping activities in May 2010 included two public scoping meetings which were held at the visitor center on May 11, 2010. The meetings included a total of 24 attendees, including 17 attendees from the public and 7 members of refuge and planning staff. The meetings were held in an open house format with brief presentations on the refuge and CCP process status, followed by a question and answer session and informal discussion to identify issues and concerns. The planning team provided displays of the refuge context, habitat management units, visitor services and facilities, the past and planned marsh restoration projects, and handouts on the draft vision and goals.

The public scoping comment period ended on June 11, 2010. On June 21, 2010, the planning team discussed the major issues identified in the agency and public scoping meetings. A second newsletter was developed by the planning team to inform interested individuals, organizations, and agencies about the range of issues identified throughout the scoping process. The newsletter was sent to approximately 432 individuals, organizations, and agencies.

**Steps C and D: Vision, Goals, and Alternatives Development**

On February 19, 2010, invitations for the interagency scoping meeting were sent to 55 Federal and State contacts, elected officials, and 13 contacts from federally recognized Tribes associated with Pennsylvania, Delaware, and New Jersey. On March 29, 2010, the planning team met at the visitor center to finalize the draft vision and goals and coordinate agency scoping meeting logistics.

The agency scoping meeting was held on Wednesday, March 31, 2010, at the refuge's visitor center and included 26 attendees, including 13 contacts from partner agencies, 3 Service staff from Ecological Services, and 10 refuge and planning staff members. The meeting was held in a workshop-style format with brief presentations on the refuge and CCP process status; displays of the refuge context, habitat management units, visitor services, and facilities; and handouts on the draft vision and goals. We continued to consult with experts throughout 2010 and 2011, and to meet regularly as a core team, as we developed and refined our alternatives.

**Step E: Draft CCP and NEPA Document**

On March 22, 2012, we published a Notice of Availability in the *Federal Register* announcing our release of the draft CCP/EA for a 30-day period of public review and comment from March 22 to April 23. We distributed the draft CCP/EA to all interested parties, contacted the media, and posted it on our Web site during the comment period. We also hosted two public meetings in April 2012 at the refuge. We reviewed and summarized all comments received, wrote responses, and revised the CCP during May to August. Our response to public comments is in appendix K.

## 2.3 Issues, Concerns, and Opportunities

### Step F: Adopt Final Plan

We submitted the final CCP to our Regional Director for approval in August 2012. The Regional Director determined that a Finding of No Significant Impact was warranted (see appendix L), and that our analysis was sufficient to simultaneously issue a decision adopting this CCP for the refuge. We announced the final decision by publishing a Notice of Availability in the *Federal Register*, where we also notified people of the availability of the final CCP. These actions complete planning step F to prepare and adopt a final plan.

### Step G and H: Implement, Evaluate, and Revise the Plan

With the planning phase of the CCP process complete, “Step G: Implement Plan, Monitor and Evaluate” will begin. Periodic review of the CCP will be required to ensure that objectives are being met and management actions are being implemented. Ongoing monitoring and evaluation will be an important part of this process. Monitoring results or new information may indicate the need to change our strategies.

As part of “Step H: Review and Revise Plan,” the Service will modify or revise the final CCP, as warranted, following the procedures in Service policies 602 FW 1, 3, and 4 and the NEPA requirements. Minor revisions that meet the criteria for categorical exclusions (550 FW 3.3C) will require only an environmental action memorandum. As the Refuge Improvement Act and Service policy stipulate, the Service will review and revise the CCP at least every 15 years.

The Service defines an issue as “any unsettled matter requiring a management decision” (USFWS 2010). Issues can include an “initiative, opportunity, resource management problem, threat to a resource, conflict in use, or a public concern.” Issues arise from many sources, including refuge staff; other Service programs; other Federal, state, local, and Tribal agencies; Congress; or our partners, neighbors, and user groups. One of the distinctions among the proposed management alternatives is how each addresses those issues.

From agency and public meetings and planning team discussions, we developed a list of issues, concerns, opportunities, and other items requiring a management decision. We placed them in two categories: key issues and issues outside the scope of this analysis and the EA.

*Key issues*—Key issues are those the Service has the jurisdiction and authority to resolve. The key issues, together with refuge goals, formed the basis for developing the management direction we describe in chapter 4.

*Issues and concerns outside the scope of this analysis*—These topics fall outside the jurisdiction and authority of the Service or were deemed impractical. We discuss them after “Key Issues” below, but this plan does not address them further.

The following summary provides a context for the issues that arose during the scoping process.

### Key Issues

We derived the following key issues from public and partner meetings and planning team discussions.

#### *Biological Management*

For national wildlife refuges, the conservation of wildlife and habitats is the highest priority, and serves as the foundation for all that the Service does. Many refuges were established for a very specific purpose, such as protecting a

particular species or habitat. John Heinz NWR has specific purposes mandating the preservation and restoration of Tinicum Marsh, as well as development of the refuge as an environmental education center.

Protection and restoration of coastal plain wetlands and their associated species on the refuge is an important issue addressed in the CCP. The planning team received many opinions on specific actions or techniques to accomplish that endeavor. Some suggestions and actions fall outside Service jurisdiction. Some are best accomplished in partnership with other Federal or State agencies, or non-governmental organizations.

Specific questions asked regarding the topic of biological management, include:

***(1) How will the refuge accommodate potential impacts of climate change on existing refuge habitats?***

Climate change and its corresponding effects on sea level rise, species migrations, extreme shifts in temperature and precipitation, historic species range distributions, and invasive species introductions may pose dramatic threats and alterations to the habitats encompassed within the refuge and the world. The ability to adapt to or address these ever-changing concerns requires a comprehensive understanding of the refuge's landscape context, individual habitats, species utilization, and their resilience.

John Heinz NWR is located at or near sea level and is subject to tidal hydrology across much of its lands. We are evaluating potential changes caused by rising sea levels. We have analyzed the effect of sea level rise on refuge habitats through the use of a Sea Level Affecting Marshes Model (SLAMM) analysis originally completed in 2009, and recently refined in December 2010. We include the SLAMM analysis as appendix I to this CCP. We also discuss the results of the analysis in chapter 3.

***(2) How will the refuge work to improve its biological connectivity with other habitats throughout the region?***

Fragmentation of both terrestrial and aquatic habitats can have adverse effects on many plant, fish, and wildlife species by reducing biodiversity, limiting genetic diversity, and increasing susceptibility to species invasion and other stressors.

The refuge is a biological oasis in an intensely urbanized landscape. As a result, except for a few rivers, streams, and riparian lands, few opportunities remain for improving biological connections to adjacent habitats. Most lands providing optimal connection to adjacent habitats are located outside refuge lands and require extensive landowner or partner coordination.

We envision working with a variety of partnerships with Federal, State, and non-governmental organizations to address biological connectivity to the refuge. We discuss how the refuge will respond to connectivity needs in chapter 4 under goals 1 and 2.

***(3) How will the refuge continue to fulfill its original mandated purpose to protect Tinicum Marsh and conserve freshwater tidal marsh it encompasses?***

Several questions and comments from State and Federal agencies focused on the refuge's protection of the original remnant of Tinicum Marsh, as well as expanding the freshwater tidal marsh through restoration of additional lands that were historically marsh.

Restoration of freshwater tidal marshes on other parts of the refuge through the removal of former fill material is a complex undertaking. Considerations of soil composition (including potential contaminants), surface elevations, hydrologic conditions, species establishment, and long-term maintenance are all necessary for successful restoration. Climate change impacts, such as sea level rise, increase the complexity for future tidal marsh restoration projects. These projects are also costly due to the equipment, duration, regulatory requirements, and complexities required in construction. Many areas of former tidal marsh have been altered and now encompass open water areas or forested habitats.

Identifying the ideal location and conditions for tidal marsh restoration, and evaluating their existing versus future potential in light of existing habitats and threats from climate change, will be necessary to ensure cost-effective and successful results. We discuss how the refuge will respond to concerns related to freshwater tidal marsh conservation and restoration needs in chapter 4 under goal 1.

***(4) How will the refuge manage invasive, nonnative, and overabundant species?***

Invasive plant species threaten refuge habitats by displacing native plant and animal species, degrading wetlands and other natural communities, and reducing natural diversity and wildlife habitat values.

Climate change may also result in a shift of species distributions or conditions across the region that may allow introduction of additional species in the future. Prioritization and management of invasive species should be put in context with other regional efforts to be most effective, but is compounded by limits on staff and resources available to implement treatments against invasive species.

Native species can also adversely affect natural biological diversity when they become overabundant. Numerous Federal and State agency partners noted the importance of managing and controlling both invasive, nonnative species and overabundant native species. Our response to these concerns is discussed in chapter 4 under goals 1 and 2.

***(5) How will the refuge manage its 145-acre impoundment?***

Impoundments are confined bodies of water. The refuge has one large impoundment with a water control structure totaling approximately 145 acres and two small impoundments without water control structures totaling approximately 20 acres. Natural changes in water levels can occur from rainfall and natural springs. Water levels in the impoundment with a water control structure can be altered by inserting or removing boards that either release water or allow tidal water to flow into the impoundment. Changes in water levels during specific times of the year provide habitat and food for an array of wildlife including shorebirds, wading birds, and waterfowl.

The 145-acre open water impoundment is the most accessible area for public observation of wildlife and a focal point for many refuge visitors. It provides a combination of habitats for migratory birds, and supplementary habitat for rare species of reptiles and amphibians. Water level management is difficult due to groundwater elevations, stormwater inputs, the staff resources required, and the capacity, design, and location of the control structures. Some recommendations have been made to restore part or all of the impoundment to freshwater tidal marsh as well as maintain it as open water, but with fluctuating (possibly tidal) hydrology. Our response to these concerns is discussed in chapter 4 under goals 1 and 2.

***(6) How will the refuge address contaminants and other environmental hazards that may adversely affect wildlife and other resources on the refuge?***

Polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and other toxic hazards are known to occur within refuge lands and waters, posing a health risk to fish and wildlife species using the refuge. These compounds affect fish and wildlife by causing reproductive abnormalities, increasing embryonic mortality, increasing physical abnormalities, and decreasing immune system response.

The Lower Darby Creek Remedial Area is a designated Superfund site that consists of two closed landfills that pose these environmental health hazards to the refuge. The U.S. Environmental Protection Agency (USEPA), as a result of the Superfund designation, is leading the remediation efforts. One of these sites, Folcroft Landfill, is located on refuge property. This site is undergoing implementation of a long-term remediation strategy. Some concerns were voiced regarding the immediate and long-term effect of these compounds on fish and wildlife at the refuge. Our response to these concerns is discussed in chapter 4 under goals 1 and 2.

***(7) What role will the refuge play in conservation throughout the Delaware Valley region?***

The refuge, located within the City of Philadelphia and within an hour of four states (Pennsylvania, New Jersey, Delaware, and Maryland), has the potential to act as a regional portal for conservation. Its location and facilities can provide suitable accommodations for meetings, events, and other forums. Refuge staff has the potential to act as a clearinghouse of information related to issues facing the refuge and regional conservation community, such as tidal marsh restoration, deer management, public use effects and compatibility, and invasive species control. At the same time, the region is surrounded by many other organizations and agencies involved with fish and wildlife conservation. Defining our role in regional conservation is important to ensure the refuge protects those resources it can have the greatest impact on, minimizes duplication of efforts, and works with other organizations to achieve management goals. Several questions and comments were made asking us to consider various ways the refuge might embody a partnership or leadership role within regional conservation and associated issues. Our response to these concerns is discussed in chapter 4 under goals 1 through 5.

*Visitor Services*

John Heinz NWR was created with the specific purpose of promoting environmental education, as well as wildlife observation. With limited land available to promote species and habitat conservation, providing appropriate and compatible public use is an important issue addressed within this CCP. As with biological management, the issue of visitor services management encompasses a series of topics identified during the scoping process.

***(1) How will the refuge continue to fulfill its original mandated purpose to create an environmental education center, and what types of programming and target audience will the refuge provide?***

The refuge's location provides a great opportunity to introduce the public to the Service and Refuge System, and our role in conservation. With limited staff resources and several other environmental education providers within the region, identifying potential partnerships, the most receptive target audiences,

and unique educational components is critical for providing the most effective environmental education opportunities at the refuge.

Several comments were received from agency staff and the public regarding environmental education at the refuge. Several commenters noted that the refuge needs to improve and focus educational programming to engage urban youth in and around the City of Philadelphia. Other recommendations included the need to improve and update refuge displays and expand offsite education, including new digital and interactive media technologies. Our response to these concerns is discussed in chapter 4 under goal 3.

***(2) What will the refuge do to improve its environmental interpretation, wildlife-dependent recreation, and compatible public uses?***

The refuge offers numerous opportunities for environmental interpretation by maintaining 10 miles of hiking trails, interpretive signs, displays, and kiosks, as well as sponsoring several public events focused on fish, wildlife, habitat, and their conservation. The majority of refuge visitors participate in self-guided interpretive or wildlife-oriented recreation, outside of planned programs and events.

Most refuge visitors access the refuge on foot for purposes of wildlife viewing, photography, fishing, environmental education programs, or exercise. Additional, but restricted, access is allowed for bicyclists and vehicles used by people with disabilities, where compatible with refuge management. Due to the location and surrounding urban context, there have been several requests to incorporate at least a portion of the refuge's trail system into local and regional bicycle trails. Recommendations have been made to improve access to the tidal marsh through new trails, viewing platforms, or shuttle buses as well as development of eco-tourism with nearby businesses. Determining what access is desired and compatible with the Refuge System mission, as well as feasible on the refuge, will be required to make the appropriate improvements to public accessibility.

We have also received requests to improve access and interpretive facilities at the refuge's west entrance near the SR420 entrance located in Delaware County (see map 3.3). With limited space and staff resources, identifying the most receptive target audiences and effective interpretive components are important for effectively accomplishing our goals for interpretation. Our response to these concerns and recommendations is discussed in chapter 4 under goals 4 and 5.

***(3) What will the refuge do to educate the public about local cultural resources on or around the refuge?***

The refuge location and surrounding lands are significant not only from a natural resource standpoint, but also for cultural history. To date, the refuge has not incorporated many components of the regional cultural history into its education and interpretation. Opportunities to tie into the rich Philadelphia-area settlement history, Lenni-Lenape culture, as well as showcasing natural history topics, such as the changing history of conservation and attitudes towards wetlands, have been recommended for the refuge to consider incorporating into its public use programs. Historic and cultural programs can also attract a wider audience and can introduce new individuals to conservation and stewardship. Considering how, when, and what aspects of cultural history to incorporate into the refuge education and interpretation need to be defined in light of existing and proposed programs, their goals, and available resources. Our response to these concerns and recommendations is discussed in chapter 4 under goals 3 and 4.

***(4) How will the refuge utilize partnerships with area agencies, businesses, and organizations to benefit resource conservation and visitation?***

Despite the focus of management on the refuge, there are many partners within the surrounding region that can complement or support refuge programs related to education, interpretation, biological management, and public use. The partnerships we develop can have lasting benefits to refuge resources and promoting the Refuge System mission. We continue to partner closely with the Friends of the Heinz Refuge to accomplish a variety of refuge goals related to biological management and environmental education and interpretation.

Several possibilities for partnerships and ways they may benefit the refuge were identified in comments from both agency partners and the public. Fostering transportation and tourism-based partnerships with Philadelphia International Airport, Southeastern Philadelphia Transportation Authority (SEPTA), and the city of Philadelphia has potential to yield increases in visitors. The refuge was encouraged through public comment to cooperate and “cross-market” to audiences with other local and regional historic sites and conservation organizations to increase visitation. Participation and coordination with other local organizations and agencies can reduce duplicate efforts and enhance participation in events and programs. Identifying and developing partnerships throughout the region takes time and careful consideration to ensure results and compatibility with refuge goals and objectives. Our response to these concerns and recommendations is discussed in chapter 4 under goals 1 through 6.

**Issues and Concerns Outside the Scope of this Analysis**

We derived the following concerns and issues from public and partner meetings and further team discussions. These topics listed below fall outside the jurisdiction and authority of the Service or were deemed impractical. As a result, they are not discussed further within this plan.

***(1) How will the refuge address degraded water quality entering the refuge and its associated impacts on fish and wildlife?***

The water quality at the refuge is determined by the combination of waters from Darby Creek, Cobbs Creek, and the Delaware River. Philadelphia Water Department and other local, regional, and State agencies have conducted a series of watershed assessments and water quality characterizations that have detailed the water quality impacts related to urbanization and other watershed impacts. Other smaller streams (such as Muckinipattis and Hermesprota Creeks) directly connected to the refuge may also pose important considerations for water quality. Organic loading and pathogens are a growing water quality concern from State agencies in the Darby Creek watershed. Many water quality issues are watershed-scale concerns. The refuge, located at the base of the watershed, requires an understanding of these impacts and water rights and regulations to most effectively manage for environmental health.

Addressing the sources of degraded water quality requires a proactive, watershedwide, and multijurisdictional approach. We do not have the regulatory authority to adequately address the variety of nonpoint source pollution inputs that are impacting the refuge. We acknowledge that water quality plays an important role in the environmental health of the refuge. As a result, we will explore options for improving our monitoring of water quality as it relates to management on the refuge. As opportunities arise, we will support partner organizations to address water quality concerns that would directly benefit the refuge. These approaches are discussed in chapter 4 under goals 1 and 2.