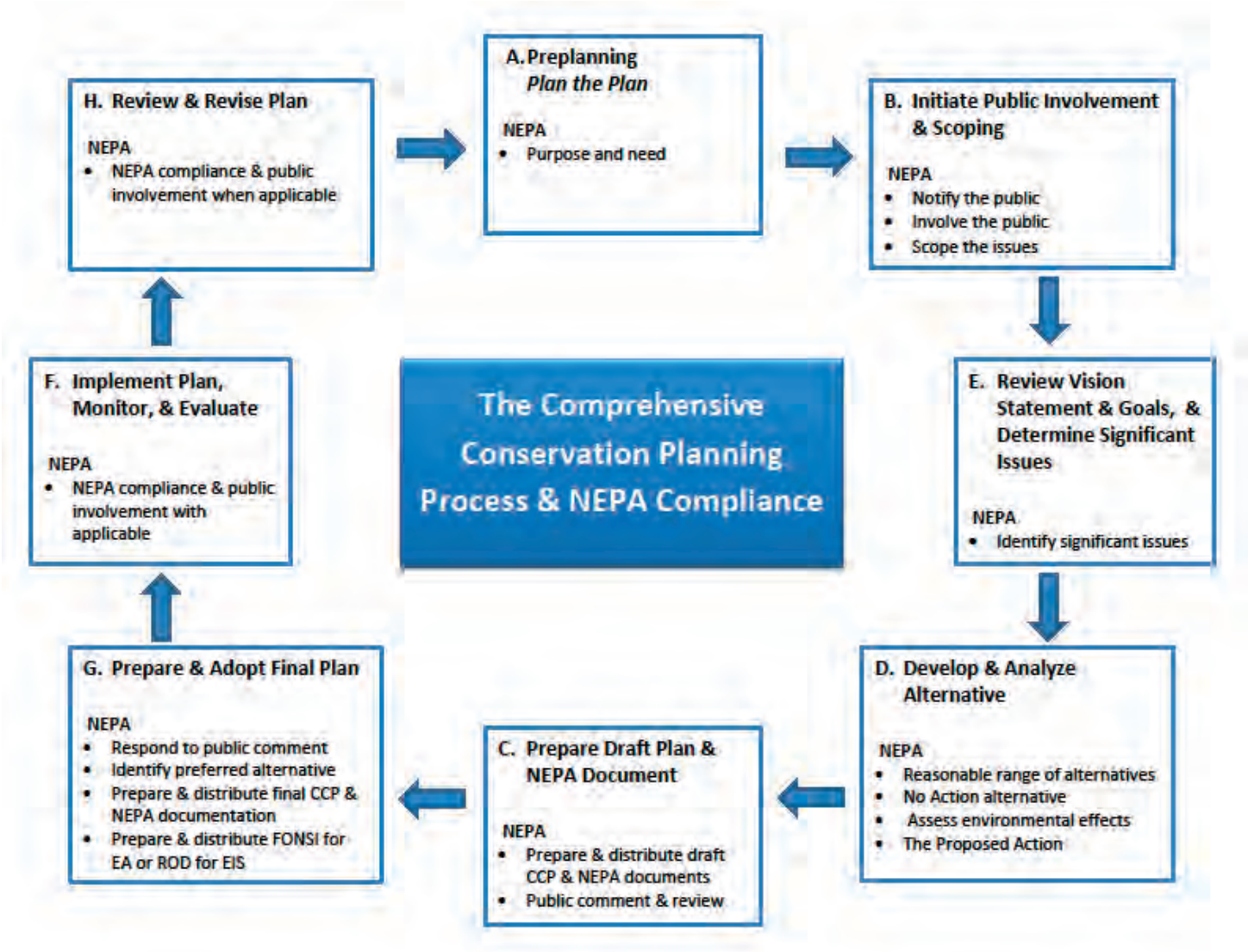
Dragonfly in web. CREDIT: USFWS

2.0 THE PLANNING PROCESS

This CCP complies with the requirements of the Improvement Act and NEPA. Refuge planning policy also guided the process and development of the CCP, as outlined in Part 602, Chapters 1, 3, and 4 of the Service Manual. Service policy, the Improvement Act, and NEPA provide specific guidance for the planning process, such as seeking public involvement in the preparation of the EA. The development and analysis of "reasonable" management alternatives within the EA include a "no action" alternative that reflects current conditions and management strategies on the Refuge.

Figure 2-1 shows the steps in the CCP planning process in a linear cycle. The following sections (2.1.1–2.1.8) provide additional detail on individual steps in the planning process.

Figure 2-1. The Planning Process



2.1 Preplanning

Prior to formally initiating the development of this CCP, the following tasks were completed to support planning activities:

- Established an interdisciplinary planning team
- Identified the Refuge purpose, history, and establishing authority
- Identified all relevant laws, regulations, and policies that would have to be considered during the development of the CCP
- Identified purpose and need for the CCP to make sure all issues are adequately addressed
- Identified planning area and resource data needs

2.2 Initiate Public Involvement and Scoping

The formal planning process begins with the scoping period, which involves a thorough assessment of issues, concerns, opinions, thoughts, ideas, concepts, and visions for the Refuge.

Formal scoping began with publication of a Notice of Intent to prepare a Comprehensive Conservation Plan and Environmental Assessment in the *Federal Register* on November 5, 2008 (Volume 73, Number 215, pp. 65871-65872). In December 2008, a letter was sent to individuals at TPWD formally inviting them to participate in the development of the CCP. We received input from TPWD in January 2009. Information sheets were sent to the public, and news releases were sent to four area newspapers and published in two of the local newspapers (Colorado County Citizen and Eagle Lake Headlight). The news release also aired on KULM Radio in Columbus, Texas. Three public open house meetings were held, one each in Sealy, Texas, and Eagle Lake, Texas, and one at the APCNWR Headquarters in February 2009. The meetings were held on three separate days between 10 a.m. and 6 p.m. Despite advertising for these open houses, turnout was poor. One individual attended the meeting in Sealy, and there was no attendance at the other locations.

Table 2-1. Concerns Grouped by Category and Listed by Stakeholder

Issues/Opportunities	General Public	State of Texas	Federal Agencies	USFWS
Habitat Management				
Climate Change				X
Prairie Restoration	X	X		X
Property Acquisition	X			X
Prescribed Burning	X			
Grazing Management	X			
Invasive Species and Brush Control	X			X
Ecoregion Biodiversity		X		
Rare and Protected Species (Flora)		X		
Wildlife Management				
Ability to keep APC in APCNWR name	X			
Wildlife Management				
Prairie-Chicken Recovery Efforts	X	X		X
Rare and Protected Species Other than APC (fauna)		X		X
Invasive Species (fauna)				X
Partnerships		X		X
Wildlife Food Plots				X
Visitor Services				
Environmental Education	X			X
Interpretation	X			X
Wildlife Observation and Photography	X			X
Facilities				

Issues/Opportunities	General Public	State of Texas	Federal Agencies	USFWS
Quality and Safety of Refuge Roadways	X			X
Development of Administrative Complex				X
Oil and Gas Operations				X
Cultural Resources				X

Additional written comments were received prior to these open house meetings. The feedback received from the open house meetings and written comments that identified issues and/or opportunities from a variety of stakeholders were used in development of the CCP. Table 2-1 lists the concerns expressed by a variety of stakeholders.

2.3 Determine Issues

To determine the planning issues being addressed in the CCP, the planning team reviewed the concerns identified by the public, along with management concerns identified by Refuge staff and those submitted by the State of Texas.

Refuge planning policy defines an issue as any unsettled matter that requires a management decision: an initiative, opportunity, resource management problem, threat to Refuge resources, conflict in uses, public concern, or presence of an undesirable resource condition (602 FW 1.6I.). Public responses obtained through a newsletter and three public open house meetings—in addition to management concerns identified by the Refuge staff and State and Federal natural resource agencies—were used to identify issues addressed in the CCP and EA.

Planning issues were identified for consideration during the development of this CCP. Scoping identified a number of issues reflecting problems, opportunities, or points of discussion that the CCP addresses in a variety of ways. The complete set of written comments received is available from the U.S. Fish and Wildlife Service Southwest Regional Office in Albuquerque, New Mexico.

The issues, concerns, and opportunities expressed during the first phase of planning have been organized under the following headings:

Habitat Management

Prairie Restoration – A portion of the Refuge (approximately 35 percent) is former cropland in need of restoration to native coastal prairie. Continued efforts to enhance the quality of habitat for APC are needed. Much of the Refuge was a working livestock ranch and farm prior to its establishment, and there remains a significant amount of infrastructure that interferes with the prairie's hydrology, including dirt and gravel roads, fences, oil and gas infrastructure, levees, ditches, and water control structures.

The Refuge currently manages two man-made impoundments near the west side of the auto tour route. Constructed in the early 1980s by Refuge staff, these impoundments were designed to attract waterfowl to meet Service waterfowl management objectives. While popular with wildlife-viewing enthusiasts, these impoundments (artificial wetlands) were created at a time when APC numbers were significantly higher than they are today, and they are located in areas that once provided prairie habitat for the endangered APC. The presence of these impoundments also introduces the potential for the spread of disease from migrating waterfowl. APCs and northern bobwhite quail sampled during the late 1990s revealed that 14.8 percent and 5.7 percent, respectively, were serologically positive for *Pateurella multocida* (causative agent for avian cholera) antibodies (Peterson et al. 1998, Purvis et al. 1998). Removal of this infrastructure would compliment other APC

recovery efforts to achieve restoration of native prairie and natural hydrology on the Refuge and would also decrease the potential for the spread of disease such as avian cholera resulting from waterfowl concentrations on the Refuge in these artificial impoundments.

The Refuge has had problems with obtaining a consistent supply of locally adapted native prairie seed. Production and access to native seed harvested from the Refuge is highly dependent on weather conditions. Because of this, prairie restoration is a slow, long-term commitment for the Refuge. The Refuge needs to explore other options for consistently obtaining native prairie seed in order to meet restoration goals.

Prescribed fire and grazing are management tools used to restore and maintain native prairie. Properly managed grazing and prescribed fire serve to maintain and encourage native grasses and forbs and to cycle nutrients through the ecosystem. There are aspects of fire and grazing that need to be further analyzed, such as the effects of fire on prairie insect populations. In addition, fencing needs should be evaluated to determine the optimal amounts of fencing needed to most effectively manage the grazing program.

Land Acquisition – Habitat abundance and quality for obligate grassland species have been severely reduced throughout the ecosystem. With native prairies and grassland habitat being amongst the most threatened in the State of Texas and North America, there is a need to increase acreage to provide habitat for APC. The effects of urban encroachment (ranchettes) and fragmentation of the coastal prairie habitat have become much more noticeable adjacent to the Refuge during the last eight years, making it critical to initiate funding once again for the land acquisition program. Efforts to connect the two separate Refuge blocks through continued acquisition need to be made.

Invasive Species (Flora) – Several invasive species are common on the Refuge and are reducing the quality and potential of native prairie. It is recognized that invasive plant species out-compete native plant species. The public identified the need for more brush control through fire and other methods. Historically, encroachment of woody species onto grasslands was minimized by periodic fires characteristic of tallgrass prairie ecosystems. However, fire suppression, overgrazing, and introduction of exotic woody species have resulted in dramatic increases in the woody species distribution within the Gulf Prairies. The presence of two man-made impoundments on the Refuge is problematic because the structures harbor invasive species, such as deep-rooted sedge and Macartney rose, that flourish in wet environments.

Climate Change – Climate change is expected to impact ecosystems in a variety of ways. These impacts may include: species range shifts, species extinctions, phenological changes, and increases in primary productivity. As habitats change, the wildlife species that utilize those habitats will also change. Although the Refuge can do little to resolve this issue, it can realize that such change is occurring, document these changes through data collection, and adapt management to reflect and/or address changes in hydrology and plant communities. Water, or lack of water, is expected to become a major environmental crisis throughout the State in the near future if conservation measures are not taken seriously. Combined with climate change, this issue has the potential to affect many Refuge management activities such as grazing, food plot management, and fire management. Although climate change and other factors have the potential to alter the distribution of habitat types in this area, the effects of this change on Refuge resources, including wildlife species, are still unknown.

<u>Wildlife Management</u>

Prairie-chicken Recovery – As stated in the APC Recovery Plan, threats affecting the recovery of APC throughout its historic range include extremely small populations of birds, habitat and

population fragmentation resulting in genetic isolation, and diseases and parasites in both the wild and captive settings. The inability of captive breeding facilities to produce large numbers of captive-reared birds to supplement existing populations and re-establish extirpated populations and poor brood survival in wild populations are also problematic. Historically throughout the region, challenges facing wild APC populations include predation, red imported fire ants (RIFA), accidents (e.g., flying into fences and wires), flooding, incompatible grazing, and altered fire regimes (USFWS 2010). Research is needed to gain a greater understanding of the threats and solutions to address causes of APC decline (USFWS 2010). The best management practices need to be continued and enhanced to assist in the recovery of APC, and management of predatory wildlife to minimize impacts to APC is also desired. Refuge personnel are concerned with the potential of disease spread (e.g., avian cholera) from high concentrations of waterfowl on the Refuge to APC populations (USFWS 2010).

Rare and Protected Species – In order to recover APC, some management activities may have a negative impact on other rare and protected species. Both the public and State have concerns with this issue. The public has expressed concern about sustainable populations of APC and, if recovery efforts are not successful, the Refuge should shift emphasis to other grassland species. The State expressed concerns about predator control methods and management activities that may affect other migratory birds.

Invasive Species Control (Fauna) – Invasive species such as feral hog, nutria, and red imported fire ants have negative effects on habitat and species. Feral hogs currently move primarily along brush corridors not used by APC but could pose a threat to nesting APC if hogs expand into prairie habitat as they have in other portions of the APC's range. In addition, areas disturbed by feral hogs become prone to the establishment of invasive plant species. Nutria are mostly found in the Refuge's artificial water impoundments; they burrow through dikes, creating serious safety issues. Red imported fire ants throughout the southeastern U.S. have affected numerous bird species such as APC, northern bobwhite quail, and loggerhead shrike (USFWS 2010, Allen et. al 2004).

Coordination with Partners – Coordination with more than two dozen partners is critical in carrying out objectives for APC recovery. Often partners are vying or competing for the same grants and funding opportunities without realizing it. Effective coordination and communication is essential to achieving recovery goals.

Visitor Services

Public Use Opportunities – The Refuge provides public use opportunities that are appropriate and consistent with other national wildlife refuges of the same size and staffing levels. Because of the highly endangered status of the APC, most of the focus on the Refuge is directed toward habitat improvement and recovery actions. Participants in the public scoping process had an interest in increasing public use opportunities to include weekend hours at the visitor contact station, increased educational programs for local schools, and expanding the auto tour route to include the Horseshoe Lake area. Relocating the Refuge's auto tour route is necessary to address the removal of two man-made impoundments and to provide visitors with more opportunities for appreciating and understanding the coastal prairie ecosystem that makes up the majority of Refuge habitat.

Facilities

Quality and Safety of Refuge Roadways – The condition of roads used by Refuge staff and visitors vary, but generally they are in fair to poor condition. The first mile of the Refuge entrance road is a poorly maintained asphalt county road that leads to the Refuge auto tour route. There is an existing power line along the first half mile of the entrance road that has recently fallen into the roadway, blocking visitor and staff access to the Refuge. All roads are in

need of improvement. During inclement weather, the condition of the gravel auto tour route is poor, and vehicles sometimes lose traction around curves and create ruts in the road. For this reason, the auto tour route is often closed during inclement weather. One portion of the auto tour route can create a potential safety concern if vehicles are trying to pass outside designated pullouts, due to the narrow nature of the levee.

Development of Administrative Complex – The current administrative complex consists of three separate portable buildings connected by a temporary walkway. A permanent and professional headquarters, visitor contact station, and biology lab are needed. The area being utilized for lab facilities is a small facility that does not have adequate working space to accomplish Refuge activities. The parking lot is inadequate and not level.

Oil and Gas Operations –- Although these issues are rare, occasional spills and worn or abandoned equipment must be cleaned up and removed. Some wildlife disturbance does occur during maintenance operations and regular site visits, but it is infrequent and limited in scope.

2.4 Develop and Analyze Alternatives

The practice of developing management alternatives as a part of the planning process is derived from NEPA. This act requires Federal agencies to consider the impacts of proposed actions and to develop a reasonable range of alternatives to those actions. Alternatives are "different sets of objectives and strategies or means of achieving Refuge purposes and goals, helping to fulfill the Refuge System mission, and resolving issues" (602 FW 1 of the Service Manual). The planning team developed a range of alternatives that responded to the planning issues and eliminated alternatives that did not meet Refuge purposes or that were outside the Service's ability to implement. The environmental effects of the alternatives were analyzed, and the results are presented in Section 4.0 of the environmental assessment found in Appendix B.

2.5 Prepare Draft Plan and EA

The Draft CCP and EA were concurrently prepared. The Draft CCP and EA was reviewed and revised by Refuge and Regional Office Staff, then submitted to TPWD for review. The Notice of Availability for the Draft CCP and EA was published on was published in the *Federal Register* on December 12, 2011 (Volume 76, Number 238, pp. 77245-77247) and the comment period closed on January 23, 2012.

2.6 Prepare and Adopt Final Plan

During the full public review period, only four comments were received by the Service. A summary of comments and the Service's response can be found in Appendix J.

The Final CCP will replace current management direction after the decision document is signed (see section 1.6, Decision to be Made, of Appendix B, Environmental Assessment).

2.7 Implement Plan, Monitor, and Evaluate

This CCP will guide management of the Refuge over the next 15-year period. It will guide the development of more detailed step-down management plans for specific resource areas and will be the basis for the annual budgeting process for refuge operations and maintenance (Chapter 5). Most importantly, it lays out the general approach to managing habitat, wildlife, and people at the Refuge that will direct day-to-day decision-making and actions.

A critical component of adaptive management is monitoring and measuring resources and social conditions to make sure that progress is being made toward meeting goals. Monitoring also detects new problems, issues, or opportunities that should be addressed. The Refuge is using an adaptive management approach, which means

that information gained from monitoring is used to evaluate and, as needed, to modify Refuge objectives.

2.8 Review and Revise Plan

Agency policy directs that the CCP be reviewed annually to assess the need for changes. The CCP will be revised when significant new information becomes available, ecological conditions change, or the need to do so is identified during the annual review. If major changes are proposed, public meetings may be held, or new environmental assessments or environmental impact statements may be necessary. Consultation with appropriate State agencies would occur at least every 15 years, but in practice, occurs more frequently.