

Draft Environmental Assessment
Infrastructure Improvements
at
Attwater Prairie Chicken National Wildlife Refuge

April 2022

Prepared by
Attwater Prairie Chicken National Wildlife Refuge
Eagle Lake, Texas

Table of Contents

BACKGROUND	1
PURPOSE AND NEED FOR THE ACTION	2
ALTERNATIVES	3
ALTERNATIVE A – CURRENT MANAGEMENT – NO ACTION ALTERNATIVE	3
HEADQUARTERS AND VISITOR CONTACT STATION	3
MAINTENANCE COMPOUND	3
REMOTE STORAGE BARN (RENTZ TRACT)	4
ALTERNATIVE B – CONSOLIDATE AND MODERNIZE FACILITIES – PROPOSED ACTION ALTERNATIVE	4
MITIGATION MEASURES AND BEST PRACTICES	5
AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	6
NATURAL RESOURCES	7
WILDLIFE AND AQUATIC SPECIES	7
HABITAT AND VEGETATION (INCLUDING VEGETATION OF SPECIAL MANAGEMENT CONCERN)	9
ENVIRONMENTAL TRENDS AND PLANNED ACTIONS	9
IMPACTS ON AFFECTED RESOURCE	10
VISITOR USE AND EXPERIENCE	11
AFFECTED ENVIRONMENT	11
CULTURAL RESOURCES	12
AFFECTED ENVIRONMENT	12
REASONABLY FORESEEABLE CONNECTED ACTIONS	13
SUMMARY OF ANALYSIS	13
ALTERNATIVE A – CURRENT MANAGEMENT – NO ACTION ALTERNATIVE	13
ALTERNATIVE B – CONSOLIDATE AND MODERNIZE FACILITIES – PROPOSED ACTION ALTERNATIVE	14
LIST OF PREPARERS	14
CONSULTATIONS	14
PUBLIC OUTREACH	14
DETERMINATION	15
SIGNATURES	15
SUBMITTED BY:	15
CONCURRENCE:	15
APPROVED:	15
REFERENCES	16
APPENDIX A - OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS	17
APPENDIX B - MAPS	19
APPENDIX C. RESOURCES CONSIDERED BUT NOT ADVANCED FOR ANALYSIS	25

Environmental Assessment for Infrastructure Improvements at Attwater Prairie Chicken National Wildlife Refuge

This Draft Environmental Assessment is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (50 FW 3) regulations and policies. The National Environmental Policy Act requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action

The U.S. Fish and Wildlife Service (Service) is proposing to replace, repair and consolidate administrative, maintenance and storage facilities to improve efficiency, modernize transportation infrastructure, and demolish unnecessary infrastructure at the Attwater Prairie Chicken National Wildlife Refuge (refuge). The Service proposes to repair existing maintenance facilities, consolidate, and replace the current headquarters and visitor center, and relocate a storage barn from a remote location to the headquarters maintenance area. The areas where existing facilities are removed will be restored to natural conditions. New trailheads, parking, and access points will be developed for the joint administrative/visitor center facility.

A proposed action may evolve during the National Environmental Policy Act (NEPA) process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the Environmental Assessment (EA).

Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is:

"... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans."

The purposes specific to Attwater Prairie Chicken NWR are:

- *"... to conserve (A) fish or wildlife which are listed as endangered species or threatened species....or (B) plants ..."* 16 U.S.C. §1534 (Endangered Species Act of 1973) and;
- *"...for the development, advancement, management, conservation and protection of fish and wildlife resources..." Fish and Wildlife Act of 1956 (16 U.S.C. 742f(a)(4), as amended, and "...for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude..." Fish and Wildlife Act of 1956 (16 U.S.C. 742f(b)(1), as amended.*

The 10,541-acre Attwater Prairie Chicken National Wildlife Refuge was established on July 1, 1972 to provide a secure refuge for the critically endangered Attwater's prairie-chicken (APC) (*Tympanuchus cupido attwateri*). Management goals established by the Attwater Prairie Chicken National Wildlife Refuge Comprehensive Conservation Plan (USFWS 2012) relevant to this action include:

- Provide quality grassland habitat to support Attwater's prairie-chickens and other grassland dependent species native to the Gulf coastal prairie ecosystem;
- Maintain and enhance healthy populations of wildlife with the recovery of Attwater's prairie-chicken being the priority;
- Provide opportunities for visitors to enjoy and appreciate the Refuge, its fish and wildlife, and its management activities through compatible wildlife-dependent recreation programs, and
- Provide high-quality, safe, environmentally responsible facilities to support Refuge operations and enhance visitor experiences.

The refuge visitor, administrative, biological, and maintenance programs currently use a combination of space at various buildings located within the refuge. The three modular office buildings were installed in 2005-2006 and are no longer adequate in terms of office space, efficiency, storage, and parking, and are a health and safety concern with antiquated HVAC systems, roof, floor, and electrical deficiencies. Due to dramatic increases in visitation over the past 2-3 years, the existing visitor contact station no longer meets the needs of the visiting public. The maintenance facilities are over 20 years old, and are in need of many repairs and upgrades. Storage for biological field materials is currently spread throughout three buildings that are over two miles apart.

Purpose and Need for the Action

The purpose of the proposed action is to provide safe, secure, energy efficient facilities that reduce annual operating costs, and increase logistical capabilities for administering natural resource protection and public use programs at the refuge. Proposed facilities include a centrally located visitor center, administrative office, and maintenance and storage facility for up to 15 permanent and seasonal staff, interns and volunteers, including secure and sufficient parking for employees and visitors

The proposed action is needed to eliminate or substantially reduce the deferred maintenance backlog by an estimated \$7.3 million and reduce the annual operating costs and logistical barriers at the refuge to better meet the needs of the visiting public and support refuge goals and objectives. The proposed action meets the Service's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWRs" and "ensure that

opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses” 16 U.S.C. 668dd(a)(4).

The NWRSAA mandates the Secretary of the Interior in administering the System to (16 U.S.C. 668dd (a)(4):

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses.

This project would protect biodiversity, improve access to recreation, and restore balance on America’s public lands and waters to benefit current and future generations. Furthermore, it would support local communities and partners by supporting a robust local tourism industry that attracts visitors from around the world to the refuge for outdoor recreation and wildlife observation.

Alternatives

Alternative A – Current Management – No Action Alternative

The refuge continues to maintain an array of facilities to support biological, maintenance and administrative operations, encourage public use and to protect natural resource values. The Attwater Prairie Chicken National Wildlife Refuge administrative facilities are primarily located in the Southeast portion of the refuge near the confluence of Coughatta Creek and the San Bernard River. The administrative buildings include the administration building, the biological building and the visitor contact station. Other current facilities include the maintenance shop; equipment storage building, equipment shed, the remote Renz storage barn and five residential quarters (tiny homes).

Headquarters and visitor contact station

There are three modular buildings that make up the administrative and biological offices and visitor contact station. They were set in place in the mid-2000’s and are connected by an outdoor deck and breezeway. This arrangement requires the staff to exit one building, go outside and enter another building to access each of the three separate administrative and visitor facilities. The buildings are wood frame and stucco with wall-mounted HVAC units and metal roofs.

Maintenance compound

The maintenance compound includes a large maintenance shop building, an equipment storage building, a biological supply storage building (also known as the “Butler” building), an equipment shed, a small cinderblock building used for recycling storage, a pair of above-ground fuel storage tanks, two well houses and a small cinderblock building used to store the radio communications equipment at the base of a 100’ radio tower. The Butler building was constructed in the 1970’s. It is a surplus military barracks that was converted to an early maintenance shop and office. The rest of the maintenance buildings were built in the 1990’s to early 2000’s and are metal skinned buildings with roll-up shop doors.

Residences

There are five government quarters (tiny homes) on the refuge. Each are 399 square feet and are identical in floor plan. They were purchased new and installed in 2020. There are two volunteer RV trailer pads located near the tiny homes. These trailer pads are gravel, with utilities and are utilized for a few months each year by resident volunteers who park their RVs on site.

- There are improvements in the residential areas to include underground power and data lines, water lines and propane lines.
- Five separate septic systems serve the headquarters, maintenance shop, trailer pads, residences and visitor contact station.

Remote storage barn (Renz tract)

The remote storage barn on the Renz tract of the refuge, is located approximately two miles from the refuge headquarters compound. It is used to store supplies for the refuge biological program. It was acquired with the Renz tract when it was purchased in 1979 and is in an extremely dilapidated condition.

Alternative B – Consolidate and Modernize Facilities – Proposed Action Alternative

Under the Proposed Action Alternative, the Service will construct a new combined administrative headquarters and visitor center building and a biological supply storage building to replace inefficient and geographically dispersed facilities. The existing maintenance shop, equipment storage building, and storage shed will be repaired and updated. This proposed action will co-locate and consolidate multiple facilities to improve health, safety, and efficiency and demolish unnecessary infrastructure where appropriate. The proposed location for the new headquarters and visitor center is near the current maintenance shop building, adjacent to the existing entrance road.

The Service will design and construct an approximately 7000 square foot administrative headquarters and visitor center building and a 2000 square foot multi-purpose storage building. The refuge will construct a new visitor parking area, kiosk and trailhead for the Sycamore trail. The Service will conduct geotechnical surveys to determine exact building location prior to construction. The overall footprint of construction and buildings may be approximately 1-3 acres but is expected to be less than two acres (see Figure 4).

This project will include demolition and cleanup of the existing three-building administrative and visitor contact station complex, as well as the remote storage barn on the Renz tract (see Appendix B, Figures 2 and 3). Facilities that will be demolished include the administrative building, visitor contact station and biological building and associated septic system and drain field. All roads and parking areas no longer needed after the modifications, and all building sites total approximately three acres. These areas will be restored to native prairie following construction of the new headquarters and visitor center. On balance, the amount of acreage disturbed by new construction will be less than the acreage restored once the existing buildings are removed.

Historical consultation will occur prior to any demolition activities of infrastructure built in or prior to 1972. Depending on historical review and consultation results, demolition plans may be altered and/or

interpretive panels, documents or other actions may be developed to acknowledge the historical contributions to the area.

In addition, this project will slightly modify the alignment of the entrance road where it meets the auto tour route. The project will require a new trailhead location for the Sycamore trail, and that trail will be extended by approximately 200 yards. Current access will remain until new access points are completed and open for use. See Appendix B for figures.

Mitigation Measures and Best Practices

Mitigation measures include:

- Avoidance of an impact by not taking an action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of an action; or
- Rectifying impacts by repairing, rehabilitating, or restoring the affected environment.

Best management practices can include an array of alternatives that produce desirable results with minimal impact on other resources.

Migratory Bird Mitigation Measures and Best Management Practices

As part of Leadership in Energy and Environmental Design (LEED) Certification requirements for the new facilities, this project would include compliance with Pilot 55: Bird Collision Deterrence to minimize impacts to migratory birds. This measure is intended to reduce the chances of bird injury and mortality from in-flight collisions with buildings. This rule requires designers and builders to comply with building façade and site structures that include a lighting and a monitoring plan designed to minimize bird collisions.

Soil Mitigation Measures and Best Management Practices

Contractors would provide erosion control methods (such as watering dry soils) and structures (such as silt fences) as necessary to prevent wind-borne dust and water-borne silt from leaving the immediate work areas.

Native topsoil would be stockpiled and reused for landscaping purposes around the exterior of the facilities. Access points would be designated and flagged to minimize soil compaction. Mats or boards would be used to access equipment during wet conditions to prevent rutting and soil loss.

Invasive Species Best Management Practices

Construction materials and equipment will be thoroughly washed before entering site and inspected daily to prevent the introduction of invasive species, particularly the Tawny crazy ant which are known to disperse through the translocation of soil and landscaping materials. Periodic monitoring for the presence of invasive species will be performed by refuge staff.

Archeology Mitigation Measures and Best Management Practices

If paleontological, archaeological, or historical remains (including burials or skeletal material) were encountered, all work would be immediately halted and a construction representative, contracting officer representative, contracting officer or a Service representative would be notified. The

contracting officer would notify the regional archaeologist so the provisions of 36 CFR 800.7 and other relevant laws were followed. Work would cease in the immediate vicinity until permitted to resume by written order from the contracting officer. Work in other areas may proceed as approved by the contracting officer.

All mitigation measures agreed to in consultation with the Texas State Historic Preservation Office in relation to this project would be administered. Historical consultation will occur prior to any demolition activities. Depending on historical review and consultation results, demolition plans may be altered and/or interpretive panels, documents or other actions may be developed to acknowledge the historical contributions to the area.

Demolition and Construction Best Management Practices

Local construction permits will be secured and compliance with local building codes will be enforced to ensure health and safety of workers, refuge staff and visitors.

Buildings would be demolished in phases as current facilities are still being used to some extent. Administrative facilities would not be demolished until replacement facilities are constructed.

The presence or absence of asbestos in any buildings will be determined by a qualified inspector and if asbestos is present, appropriate steps will be taken to mitigate for or to safely remove the asbestos in accordance with state and local statutes.

Contractor-provided fuel storage will be limited to only the necessary amounts and to appropriate storage facilities and containers. Spill containment will be available on site.

All construction debris will be removed by the contractor, who will maintain a clean work site to prevent litter and spread of waste and debris.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here and changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

The refuge contains some of the last remaining undisturbed native coastal prairie in Southeast Texas and is one of the largest intact tracts of coastal prairie to remain. Nearly all surrounding properties have been developed for commercial or residential purposes, farmed, or are heavily grazed. Most surrounding lands, if not farmed, have been converted to non-native grasses for the purpose of intensive livestock grazing. The refuge consists of a diverse ecosystem of Gulf Coast tallgrass prairie within which many ephemeral “prairie-pothole” wetlands exist. These native habitats support a diversity of wildlife species, including the critically endangered Attwater’s prairie-chicken.

The refuge sits at the confluence of the San Bernard River and Coushatta Creek and contributes to the health of both riparian systems by serving as a buffer to agricultural runoff, and by moderating flood waters during extreme rainfall events.

The section below provides additional, brief descriptions of each resource affected by the proposed action. For more detailed information regarding the affected environment, please see the refuge's Comprehensive Conservation Plan, which can be found here: https://www.fws.gov/refuge/AttwaterPrairieChicken/what_we_do/planning.html

The following resources either (1) do not exist within the project area or (2) would either not be affected or only negligibly affected by the proposed action: floodplains and water quality. No work in a floodplain occurs within the project area. As such, these resources are not further analyzed in this EA.

Natural Resources

Wildlife and Aquatic Species

Affected Environment

As one of the last and largest remnant tracts of coastal prairie habitat remaining in southeast Texas, Attwater Prairie Chicken NWR harbors numerous wildlife species, including grassland bird species, migratory waterfowl, water birds, mammalian, amphibian, and reptilian species, and—most noteworthy—the Attwater's prairie-chicken. An intra-service Section 7 consultation was initiated to evaluate potential impacts to listed species. That consultation resulted in a "may affect, not likely to adversely affect" determination signed by the Ecological Services Field Supervisor in late March of 2022 for Attwater's prairie-chicken and Monarch butterfly.

About 428 species have been documented on or potentially could occur on the refuge: 266 birds, 55 mammals, 57 reptiles, 31 amphibians, and 19 species of fish.

Environmental Trends and Planned Actions

The Service currently works to restore previously disturbed lands within the refuge and maintains and preserves naturally-occurring habitats through the use of native seed harvesting and planting, prescribed fire, controlled grazing, and invasive species control (both mechanical and chemical). Where necessary, the refuge uses heavy machinery to restore original topography and drainage where former agricultural infrastructure (levees and canals) still exist. That disturbance is followed with proven grassland restoration methods.

Impacts on Affected Resource

Alternative A

No direct impacts to wildlife and aquatic species are expected from continuation of current management. Under current management, refuge visitors have a dated, 400 square foot contact center and staff have limited office and storage space. Staff are located in separate buildings and storage is scattered in multiple locations which affects their ability to communicate and to meet the refuge purpose to manage wildlife and associated habitat and provide for a quality visitor experience.

Alternative B

Approximately 70% of the designated footprint (less than 2 ac.) of the new construction site is classified as previously disturbed pasture. Approximately 30% of the footprint (less than 1 ac.) is undisturbed native prairie. This project will consolidate buildings and reduce the overall footprint of facilities on the refuge. The expected footprint will be as small as reasonably possible, between 2-3 acres, with size dependent on final building design and topography. Vegetation will not be completely removed from the footprint, some native landscape will remain. Impacts to wildlife include disturbance and displacement as well as direct mortality of less mobile wildlife from demolition and construction activities. Visual and noise disturbances could disrupt normal wildlife behavior for the duration of demolition and construction activities. Sufficient habitat exists in all directions immediately adjacent to the project area footprint for wildlife to disperse into if affected by the proposed action. Demolition activities would occur in phases as priorities for reconstruction efforts are identified by the refuge, but all new administrative facilities construction activities should be completed in 2024.

Construction of the new administrative facilities in previously undisturbed habitat may impact some ground-nesting birds by removing potential nesting sites. These direct impacts would be minimal because sufficient habitat is available in the immediate vicinity of this disturbed area to provide abundant nesting opportunities for birds.

Demolition and construction activities would include use of heavy equipment, machinery, and labor to demolish and reconstruct facilities. Vehicular traffic to the work site, as well as foot traffic and heavy equipment operations, have the potential to flush birds and wildlife. These short-term direct effects would be temporary since sufficient habitat is available to provide security to displaced wildlife in the immediate vicinity of the project site and roads used to access the site.

The introduction of non-native, invasive species of plants and animals, particularly invasive noxious weeds and non-native Tawny crazy ants could impact native wildlife and plant populations. Measures will be taken (see Alternative B above) to prevent the introduction of non-native species to the project area.

Once construction of the new administrative site is complete, long-term indirect effects on wildlife are anticipated due to continued administrative use of each of the respective facilities. These effects would be similar to current disturbance levels at existing facilities and include everyday activities that occur in each respective facility. Vehicular as well as foot traffic at the new visitor center and administrative building may increase slightly due to its more modern design and expanded size compared to the existing contact station. It is anticipated that wildlife movement and activity would return once construction is complete.

Removal of approximately two-thirds of the existing headquarters parking area would result in short term impacts to small mammals, birds, and other wildlife due to avoidance during demolition activities. Approximately 2-3 acres of native grasslands would be temporarily disturbed. Once the existing buildings are removed, the site will be graded to its natural contour and seeded with native grasses. Impacts to nesting birds and other wildlife could occur by construction related noise and vehicles accessing the work site. However, work would occur largely within previously disturbed areas and areas with already high levels of disturbance by vehicles and public use. If demolition within these areas occurs between April-July, peak nesting period of most migratory birds, areas will be surveyed for

nesting birds and activities will be modified, curtailed, or postponed until nesting activities are complete (e.g., young have fledged).

Construction of a new trail connecting to the existing Sycamore trail would originate at the previously disturbed area within the current administrative complex would have a long-term negligible impact on wildlife. The trail extension is expected to be approximately 0.2 miles in length. Disturbance from trail construction would temporarily displace wildlife such as lizards, snakes, birds, and mammals. Most wildlife would avoid any harm by escaping to surrounding undisturbed habitat. The wildlife habitat present in the project area is common and the permanent loss caused by this small project footprint would not adversely affect any of the wildlife species on the refuge.

Beneficial impacts on wildlife are also anticipated under the proposed action based on the refuge's improved ability to efficiently support the management of wildlife and associated habitat through efficient utilization of new facilities and resources. In addition, outside of the new trailhead parking lots, the former administrative facility site and remote Renz barn storage site will be restored to a natural state that will provide habitat for ground nesting birds, native wildflowers for numerous pollinators, quality forage for grazing wildlife, and replace several non-native species with a diversity of native species.

Habitat and Vegetation (including vegetation of special management concern)

Affected Environment

Coastal prairie once occupied over six million acres, but today substantially less than one percent remains. Estimates are that less than 200,000 fragmented acres remain in Texas (USFWS 1998), but, according to Smeins et al. (1991), as little as 65,000 acres remain, and very little prairie can be found in Louisiana—most along narrow strips of land near railroad rights-of-way (USFWS and USGS 1999). Nonetheless, these prairie remnants are critical sources of biodiversity and genetic material for the ecoregion and must be protected and managed properly.

Environmental Trends and Planned Actions

Prairie habitat surrounded by a “sea of crop fields” and exotic brush requires constant, intensive management to control a barrage of invasive plant species and maintain its unique grassland characteristics. Continued use of habitat management tools such as prescribed burning, brush control to include chemical treatments, and moderate grazing is necessary to achieve recovery goals for the Attwater's prairie-chicken. Any changes in the use of these habitat management tools need to be accomplished very carefully to avoid irreparable damage to the habitat. Elimination of these habitat tools would dramatically alter the prairie landscape within a few years. When applied properly, however, these tools have the potential to provide and maintain quality prairie habitat for many years to come.

In recent years, the “sea of crop fields” that surround the refuge has slowly seen an increase in conversion to residential subdivisions, rural subdivisions, industrial areas and large warehouse storage and distribution centers. These developments get closer to the refuge every year. The refuge is actively

seeking to acquire high quality native prairie and open lands through fee title or easement acquisition to provide a buffer to the core prairie-chicken habitat.

Impacts on Affected Resource

Alternative A

Very limited direct impacts to habitat and vegetation are expected from the continuation of current management. Under current management, refuge visitors have access to two foot trails totaling approximately 2.5 miles in length and a four-mile driving loop. It is rare for visitors to stray off of the mowed foot trails or driving loop. With an expected increase in visitation over time, some social trails may occur when individuals walk off trail, generally, taking a shortcut by walking through vegetation to reach the parking lot or designated trails. Degradation and disturbance to habitat from use of social trails is not expected to be significant however.

Alternative B

Under Alternative B, impacts to vegetation and habitat will occur on approximately 2-3 acres. All construction activities would occur within a designated footprint. The expected footprint will be as small as reasonably possible, not exceed 3 acres and is expected to be under 2 acres.

In areas with existing facilities, native vegetation was already removed during the construction of those facilities. Minimal land disturbance is anticipated for the restoration process, to include recontouring the land to native contours where needed and through rutting and removal of surface vegetation through tire damage and skidding from equipment. Impacts from equipment operation will occur, though primarily limited to non-native grass, including Bermuda grass. Invasive species will be treated and controlled prior to seeding to native plants and throughout the restoration process.

Some new construction will extend into previously undisturbed habitat. Removal of vegetation will result in a direct loss of habitat. Native vegetation would be removed to facilitate infrastructure such as roads, power lines, parking lots, and driveways. The total square footage of new construction would be less than the total square footage of the facilities proposed for removal.

Non-native species are prevalent within the project site and encroaching land beyond the facility boundary. These non-native species out-compete native species and diminish biological diversity within the area. Non-native species would be removed before construction and again prior to native species restoration. Native seed would be collected from other refuge locations and planted on sites where existing facilities have been removed during the demolition phase of the project (following new construction). Treatments of non-native species would be required post-restoration to control and limit the spread of any remaining non-native species. Restoration of areas where existing facilities have been removed will provide benefits to a variety of native wildlife species, including the Attwater's prairie-chicken.

Implementing the Proposed Action would involve a net gain of approximately three acres in native vegetation following construction (two acres at the current administration/visitor center site and one acre at the remote Renz barn storage site). Additionally, some of the proposed action project locations are currently infested with non-native vegetation. Therefore, implementation of the Proposed Action would result in the reduction of non-native vegetation on the refuge.

Construction of a hiking trail extension would cause permanent disturbance to vegetation. The effects of the disturbance would not adversely affect the population of any plant species in the area due to the small size of the trail footprint relative to the amount of the same type of vegetation throughout the refuge.

Beneficial impacts on vegetation and habitat are anticipated, as the refuge will have improved capabilities with new facilities and consolidating infrastructure reduces the overall footprint on the refuge. This will improve the Service's ability to manage habitat and restore previously disturbed areas. Demolition areas will be fully restored with native vegetation.

Visitor Use and Experience

Affected Environment

Description of Affected Environment for the Affected Resource

The refuge has historically received between 4000 and 5000 visitors per year. However since 2020, annual visitation has increased to exceed 20,000 visitors each year. These visitors primarily engage in wildlife observation and photography while using the auto tour route, designated trails, observation blind and viewing decks. These activities primarily occur in the portion of the refuge open for public use, comprising approximately 1100 acres near the headquarters, visitor center and maintenance facility.

Description of Environmental Trends and Planned Actions

Local opportunities for outdoor recreation are very limited in the area of the refuge. Southeast Texas includes very little public land. The Stephen F. Austin State park is located approximately 12 miles Northeast of the refuge, and the 55-acre Eagle Lake Nature and Birding area within the Eagle Lake municipal park is located approximately seven miles to the Southwest. The refuge is surrounded by private property. A significant increase in residential development in the suburbs and surrounding cities around Houston has led to an increase in visitation to the refuge in recent years. We expect that increase in visitation to only continue.

Impacts on Affected Resource

Alternative A

Under this alternative, there is potential for negative impacts to the visitor experience. Deteriorated facilities require staff and resources for constant repairs. This can take away from the refuge's ability to support other programs like maintaining visitor use infrastructure or wildlife habitat. The limited space available at the existing visitor contact station, as well as the position of the building relative to the maintenance work area, detracts from the overall visitor experience to the refuge. Visitors are often subject to vehicle and heavy equipment traffic nearby and through the visitor parking area. Visitors who are eating lunch at the headquarters picnic area are often subjected to loud noises and distracting conversation coming from the maintenance shop area which is less than 100 yards from the picnic tables.

Alternative B

There would be temporary adverse impacts while new buildings are being constructed and old buildings are being demolished, from noise and traffic. The timeline for construction is 18 months once initiated and demolition is approximately 36 months. Long-term beneficial impacts are anticipated, as the consolidated facilities will create efficiencies in management and new facilities will reduce the extensive maintenance needs that currently exist.

The current visitor center and headquarters building is located in an area that requires visitors to first drive by the maintenance shop facility. The proposed visitor center and administrative building would be positioned ahead of the existing maintenance facility as visitors arrive, making it the first building they come to and hiding the maintenance facility behind it. In addition, the design of the building would separate the visitor parking and picnic areas both visually and audibly from the often loud and disruptive maintenance facility.

Visitors may be temporarily impacted by noise associated with equipment operations and visual aesthetics of disturbed land immediately upon demolition. Areas where buildings were demolished will be replanted or allowed to regenerate naturally into native vegetation types.

After relocation of the trailhead, the Sycamore Trail will extend an additional 200 feet to the south across the former parking area to the new parking area. Other refuge trails and the auto tour route will not be affected.

The existing picnic area will be relocated to a covered outdoor interpretive area with seating where visitors can enjoy their lunch or wait for other members of their group who remain inside the visitor center. This will place visitors within an outdoor exhibit that provides for interpretation and education while they wait or eat lunch, further enhancing their experience.

Cultural Resources

Affected Environment

Description of Affected Environment for the Affected Resource

The Texas Gulf Coast prairie was historically home to several Native American nations and early European settlers. This region is also significant for its history in the spread and development of early American ranchers, pioneers, and especially oil prospectors, known as wildcatters. When Álvar Núñez Cabeza de Vaca was shipwrecked along the Texas coast in 1528, he and three surviving shipmates became the first Spaniards to explore the territory that would become Texas (Chipman 2011). Cabeza de Vaca and his companions lived among the Native Americans for eight years before returning home to what is now Mexico. They took with them tales of cities of gold that caused great excitement. In 1540, Francisco Vázquez de Coronado set off with an army to find the fabled cities of gold. Coronado searched all the way to present day Kansas without ever finding the wealth described by Cabeza de Vaca.

Numerous historic sites such as homes, buildings, cemeteries, farmsteads, and settlements dot the region. The banks of many local rivers are considered to have good potential for archaeological sites, as indigenous cultures preferred to locate near sources of water. The Tonkawan, Coushatta, and Karankawa tribes were known to inhabit the coastal region before European settlement.

The current refuge headquarters is located on the site of the former Housh ranch headquarters, which was acquired by the Fish and Wildlife Service in 1972. When the property was acquired, there were two houses and a barn on the site, all of which have since been removed and replaced with the existing refuge facilities. None of the current headquarters facilities exceed 50 years in age. The Renz storage barn is located remotely (approximately two miles from the headquarters) and was acquired along with the former Renz property in the 1980's. The age of this barn is unknown. An interpretive display will be created in the new refuge visitor center to recognize the ranching history of the region and those families who contributed to the establishment of the refuge.

Impacts on Affected Resource

Alternative A

No impacts to cultural resources are expected from continuation of current management.

Alternative B

No known sites are located within the Headquarters and Renz barn demolition/restoration areas and the area for new facilities. Once the construction of the new headquarters and visitor center building is completed, refuge staff will remove all structures associated with the old headquarters complex and Renz storage barn. No new development or demolition will occur without completing consultation with the State Historic Preservation Office. If currently unknown archaeological resources are uncovered during construction, the regional archaeologist will be notified, and construction will cease until a determination regarding the significance of the resources can be made.

Description of Environmental Trends and Planned Actions

With nature tourism growing in Texas, one concern that Refuge personnel struggle with is the inability to provide adequate APC viewing opportunities to Refuge visitors on a consistent basis. With APC numbers so close to extinction, it is imperative that disturbance of the birds, especially during their breeding season, be tightly monitored and minimized as much as possible. However, refuge personnel also realize the importance of creating a constituency that is supportive of Service, Refuge, and APC recovery efforts and programs. People tend to be more supportive of a cause when they can see and interact with the subject. Limited APC viewing opportunities limits opportunities to garner support for Refuge and APC recovery efforts.

Reasonably Foreseeable Connected Actions

There are no actions in the foreseeable future that, when connected or combined with the construction or demolition activities, could lead to significant wildlife disturbance.

Summary of Analysis

Alternative A – Current Management – No Action Alternative

As described above, the refuge would continue to maintain an array of facilities. Refuge administrative and maintenance facilities are located in the southern portion of the refuge and the Renz storage barn is located near the center of the refuge. The main office buildings and visitor center are housed in modular buildings and were constructed as a temporary solution due to budget constraints. These buildings are reaching the end of their lifespan and are no longer adequate in terms of office space, storage, and parking. They have become a health and safety concern with antiquated HVAC systems, electrical and structural deficiencies.

The no action alternative would not meet the purpose and need of the Service to eliminate the deferred maintenance backlog by an estimated \$7.3 million and reduce the annual operating costs at the refuge to better meet the needs of visiting public while supporting refuge goals and objectives.

Alternative B – Consolidate and Modernize Facilities – Proposed Action Alternative

The proposed action would meet the purpose and need of the Service to provide infrastructure and facilities sufficient to manage habitat requirements and visitor service activities on the Refuge. This project would consolidate outdated buildings into a more efficient footprint that would improve overall efficiency and procedures of everyday refuge operations.

Construction activities under the proposed action would have minimal impacts on some natural resources including wildlife, air quality, soils, and vegetation. Implementing the Proposed Action would involve a net gain of approximately 1 acre in native vegetation following construction, demolition and restoration efforts. Mitigation and best management practices will minimize impacts on these resources. There will be beneficial impacts on administration, public use, and recreation under the proposed action by enhancing the Visitor Center and consolidating administrative and storage facilities to support wildlife and habitat management while supporting ecotourism in the region.

The proposed action is consistent in meeting the purpose and needs of the Service because this project would significantly reduce the deferred maintenance backlog on the refuge and ensure the refuge has infrastructure and facilities sufficient to support habitat and wildlife management while also meeting the needs of various visitor services activities.

List of Preparers

John Magera, Refuge Manager, Attwater Prairie Chicken NWR

Meredith Stroud, Wildlife Refuge Specialist, Attwater Prairie Chicken NWR

Dr. Mike Morrow, Refuge Biologist, Attwater Prairie Chicken NWR

Consultations

This document was prepared following a Section 7 (endangered species) consultation with the Fish and Wildlife Service's Clear Lake Ecological Services office.

Public Outreach

To solicit public review and comment, the refuge has sent notices to area newspapers that have wide local distributions, including the Colorado County Citizen and the Sealy News, posted notices on social media, and posted on the refuge website at https://www.fws.gov/refuge/attwater_prairie_chicken/.

This Draft Environmental Assessment will be made available for public comment from May 1, 2022 through May 31, 2022. Comments should be mailed to Attwater Prairie Chicken National Wildlife Refuge, P.O. Box 519, Eagle Lake, TX 77434, or sent via email to apc_publiccomment@fws.gov. In order to be considered, all comments must be received by June 7, 2022.

Determination

This section will be filled out upon completion of the public comment period and at the time of finalization of the Environmental Assessment.

- The Service's action will not result in a significant impact on the quality of the human environment. See the attached "**Finding of No Significant Impact**".
- The Service's action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Signatures

Submitted By:

Project Leader Signature:

Date:

Concurrence:

Refuge Supervisor Signature:

Date:

Approved:

Regional Chief, National Wildlife Refuge System Signature:

Date:

References

U.S. Census Bureau. 2019. <https://www.census.gov/quickfacts/coloradocountytexas>

U.S. Fish and Wildlife Service. 2012. Attwater Prairie Chicken National Wildlife Refuge Comprehensive Conservation Plan.

DRAFT

Appendix A - OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

Cultural Resources

American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 - 1996a; 43 CFR Part 7

Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3

Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa-470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810

Paleontological Resources Protection Act, 16 U.S.C. 470aaa-470aaa-11

Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10

Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)

Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)

The proposed action does not impact any documented paleontological or archaeological sites. The Service has coordinated with the Texas State Historic Preservation Office, and consultation will be completed prior to demolishing any buildings that meet criteria under the National Historic Preservation Act. Consultation and implemented required conditions will assure compliance with Cultural resource laws.

Fish and Wildlife

Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, 450

Fish and Wildlife Act of 1956, 16 U.S.C. 742a-m

Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904

Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21

Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)

The proposed action is consistent with Executive Order 13186 because the Environmental Assessment for Infrastructure Improvement at Attwater Prairie Chicken NWR evaluates the effects of agency actions on migratory birds.

Natural Resources

Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23

Wilderness Act, 16 U.S.C. 1131 et seq.

Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.

Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)

The proposed action is consistent with Executive Order 13112 because stipulations in permits would be designed to prevent the introduction of invasive species.

DRAFT

Appendix B - Maps

DRAFT

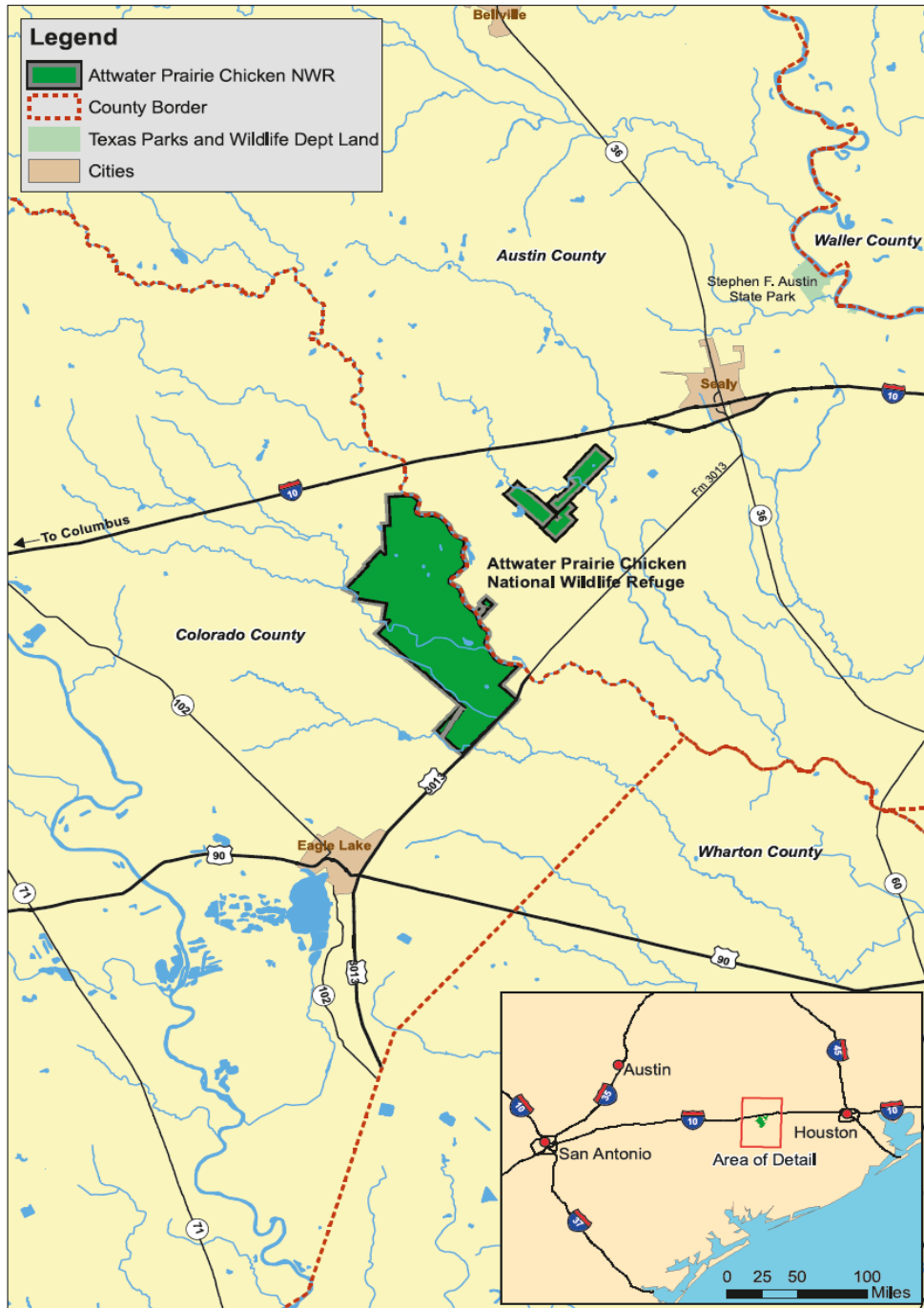


Figure 1. Map of refuge, and surrounding area

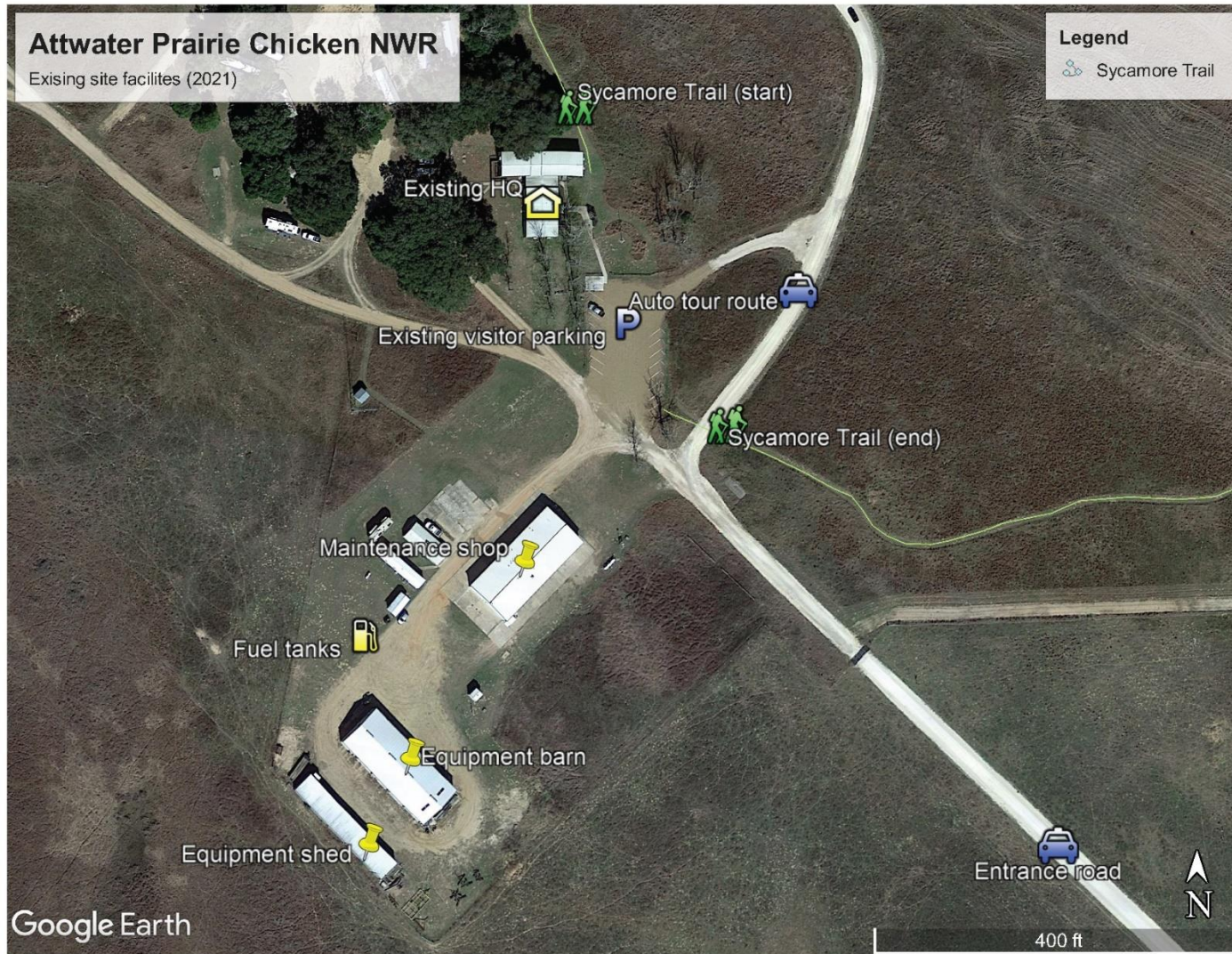


Figure 2: Existing site facilities at APCNWR



Figure 3: Proposed Renz Barn Demolition and Restoration Area

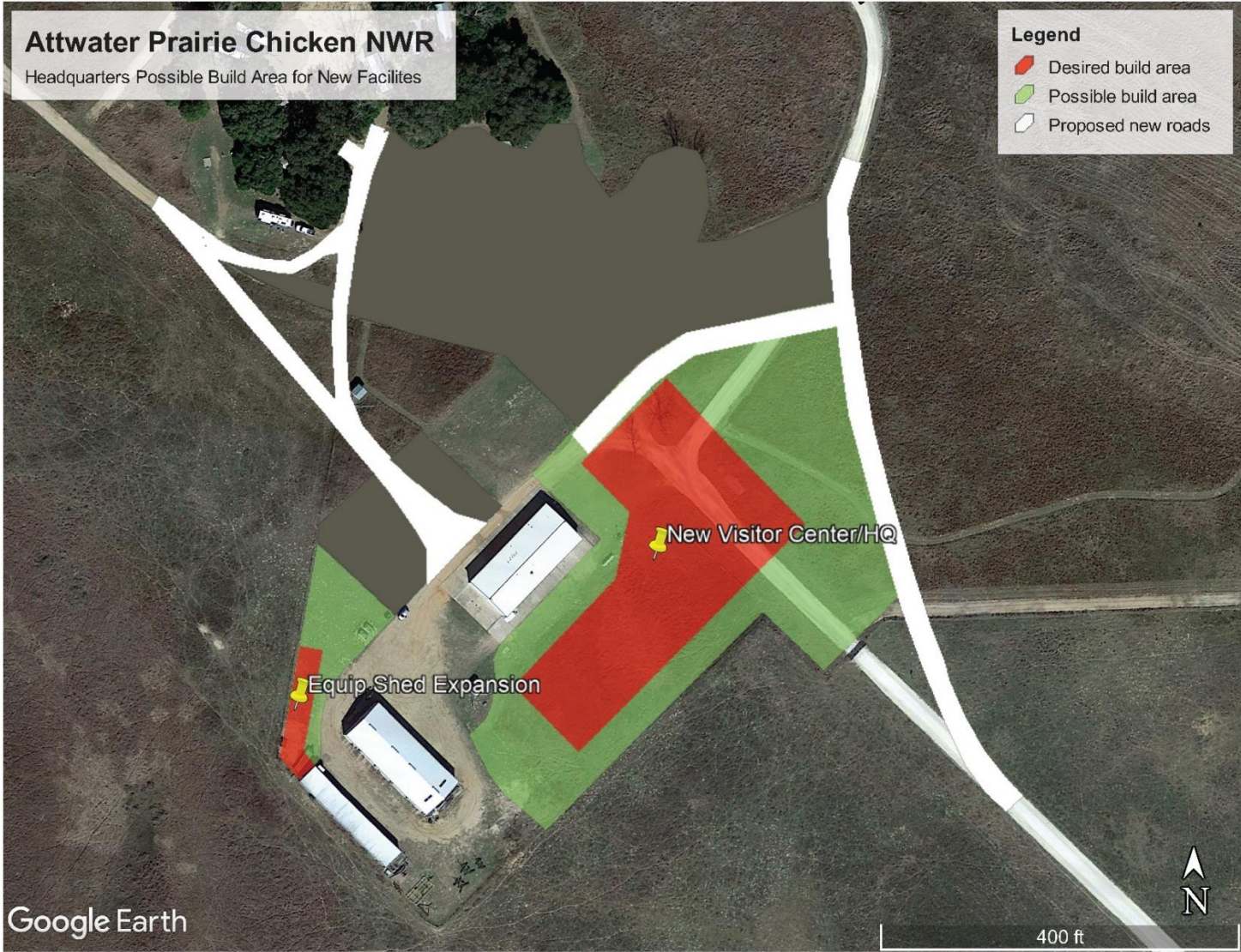


Figure 4: Proposed Site for New Facilities

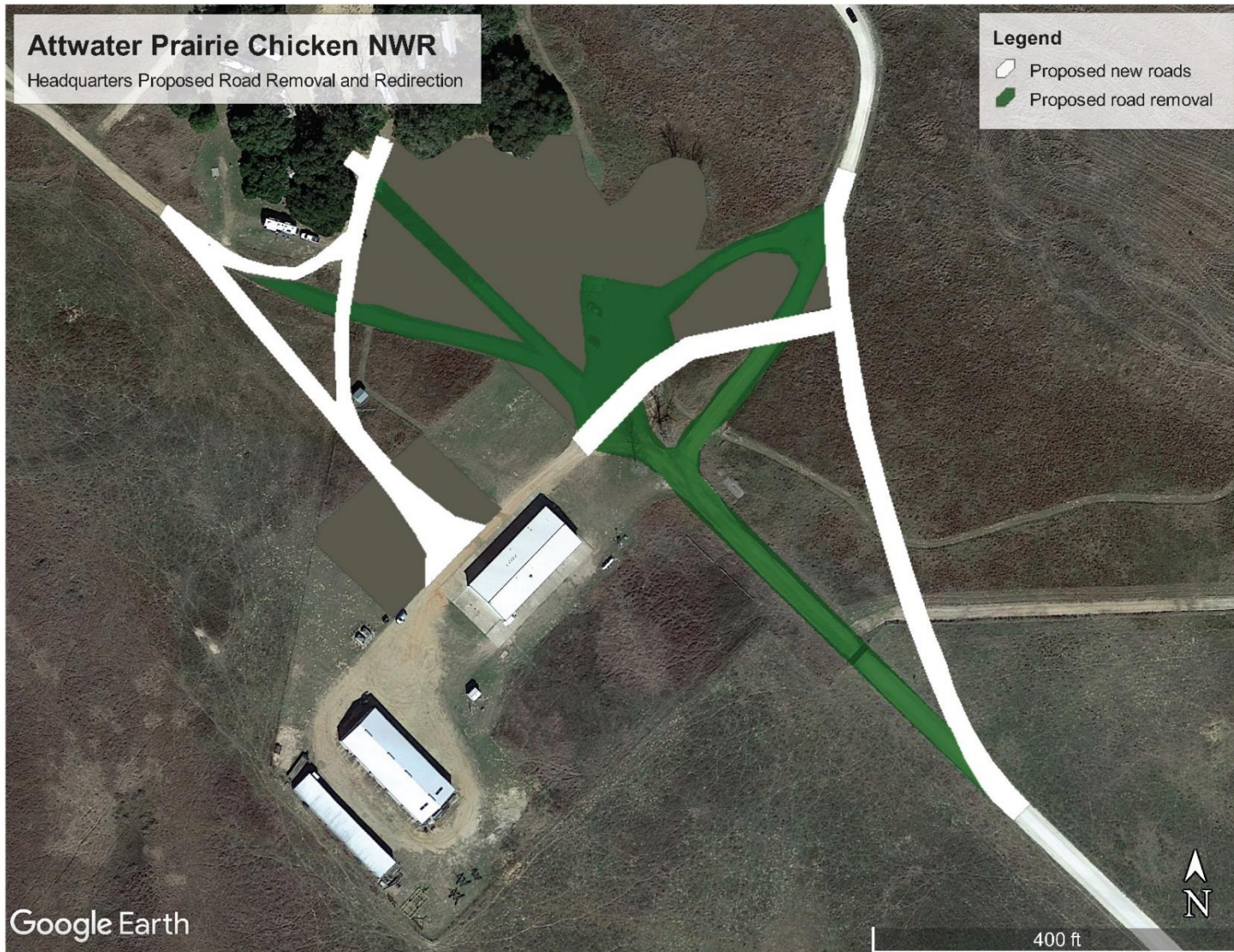


Figure 5: Proposed Road Removal and Rerouting

Appendix C. Resources Considered but not Advanced for Analysis

Geology and Soils

Affected Environment

Description of Affected Environment for the Affected Resource

Soils in the area of potential effects are largely the Katy fine sandy loam and Kuy Sand soils, with extensive distribution in the region. Deep sand soils make up approximately 80% of the region. Soils are moderately well drained with 0-5% slopes and a water table 48-72 inches below the surface.

Description of Environmental Trends and Planned Actions

There is minimal soil disturbance currently in the project areas beyond what has already been altered for the existing administrative, storage and maintenance facilities. The areas are currently covered in native grasses, some non-native grasses (Bermuda grass and others), concrete, asphalt or gravel.

Impacts on Affected Resource

Alternative A

Soil conditions on developed sites have been altered substantially due to many years of facility activities and use. Some impacts to soils would be expected from continuation of current management. It is anticipated there would be occasional ground disturbing activities from continued maintenance needs, including deeper disturbance from future utility line and septic system repairs. Soil compaction and erosion would continue to occur along edges of paved roads and on social trails, increasing soil loss and reducing soil productivity.

Alternative B

Under Alternative B, impacts are expected on soils associated with the removal of existing structures and construction of replacement facilities. Soil conditions on developed sites have been altered substantially due to many years of facility activities and use. Impacts within the designated footprints of construction and demolition efforts include removal of vegetation and topsoil to clear areas for construction. Impacts of vegetation removal include exposing soils to the elements and increasing vulnerability to runoff, sedimentation, and windblown soil loss. Short-term impacts from the construction of associated infrastructure (clearing areas for new facilities, small sections of roads, parking lots, and utility lines) are anticipated. Most soil disturbances would be temporary until construction and landscaping efforts are finalized. Best management practices designed to minimize the impact on soils would be utilized in all construction phases of the project.

A limited amount of soil loss in the construction area is expected since some construction would occur in a previously undisturbed area. Impacts associated with this alternative would result in disturbance to soils from construction activities on approximately 2 acres within the proposed construction site. Approximately the same amount of area with previous development would be graded so contour of the ground would be restored as close as possible to natural conditions. The site would then be restored to native vegetation. Removal of asphalt, concrete, and porous road material would improve soil health by regulating water, sustaining plant and animal life, and cycling nutrients.

Construction of a hiking trail extension would cause permanent disturbance to soils on the new portion of trail. The effects of the disturbance would be negligible due to the small size of the footprint relative to the amount of the same soils the refuge. Additionally, the new trail would allow other social trails to be abandoned and restored.

Consolidation and reducing the overall footprint of facilities, along with restoring areas that had buildings scattered throughout the refuge, would minimize long-term soil damage.

Socioeconomics

Agriculture is a prevalent industry in this region because of its proximity to the coast. In 2008, the Gulf Coast region produced crops, livestock and other agricultural goods worth \$1.69 billion (Texas Comptroller of Public Accounts 2010). Rice crops in this region account for 79 percent of the total rice acreage in Texas. Colorado County is one of the State's top three rice producing counties (Texas Comptroller of Public Accounts 2010).

The socioeconomic impact of Attwater Prairie Chicken NWR consists primarily of the contributions it makes to local retail trade in the form of equipment rental and purchases, as well as in the purchase of services. The Refuge also contributes to the area's socioeconomic wellbeing through the salaries of its staff. Annual salaries totaling more than \$531,000 are currently paid to Refuge employees, many of whom own homes and pay taxes in Austin or Colorado County. The Refuge supports two economic uses. The Refuge administers a cooperative grazing program, which provides opportunities for local ranchers to graze cattle and bison on the Refuge. This program supports coastal prairie habitat management specifically for Attwater's prairie-chicken. Grazing is an important management tool used to maintain optimal habitat for APC. Additionally, the Refuge has a cooperative agreement for prairie seed harvesting on the Refuge. The Refuge keeps 15 percent of harvested seed for restoration on the Refuge, and the cooperator keeps the remaining seed.

Land acquired by the Service in fee title is removed from county tax rolls. To help pay for lost tax revenues, the county receives an annual payment in lieu of taxes, as provided by the Refuge Revenue Sharing Act of 1935 (16 U.S.C. 7145:49 Stat. 383, as amended). In 2010, the refuge's payment to Colorado County was \$11,130; Austin County's payment was \$1,950. In addition, the Refuge hosts the Attwater's Prairie-Chicken Festival every spring to provide an opportunity for visitors to view this critically endangered grouse. Visitors come from all parts of the world to view these birds, thus providing an economic stimulus to local towns through the use of hotels, gas stations, and restaurants.

Impacts on Affected Resource

Alternative A

No impacts to socioeconomics are expected from continuation of current management.

Alternative B

Under Alternative B, improved infrastructure and public use facilities would benefit socioeconomics for the entire region. The refuge would have the ability to meet the needs of everyday management activities and refuge operations with improved and efficient facilities. Construction activities could also have beneficial economic impacts in the local area if supplies were purchased and equipment was rented in neighboring communities.

With limited types of outdoor recreation available to the public in this area, increased capacity and improved facilities would continue to support the economy. Rebuilding administrative and visitor service facilities would ensure local economies continue to benefit from an increase in tourism.

Pacific Islander alone, 1.9% identify as two or more races, 30.7% identify as Hispanic or Latino and 55.7% identify as White alone, not Latino or Hispanic.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.

According to the U.S. Census Bureau, the median household income for Colorado County, TX was \$52,529 in 2019 dollars. An estimated 12.7% of the population lives in poverty, compared to the U.S. Average of 11.4% (U.S. Census Bureau 2019). The racial makeup of the county is as follows: 83.7% identify as White alone, 12.5% identify as Black alone, 1.1% identify as American Indian or Alaskan Native, 0.7% identify as Asian alone, 0.1% identify as Native Hawaiian or other.

The Service has not identified any potential adverse environmental or human health impacts from this proposed action or any of the alternatives. Continuation of refuge management and constructing new administrative facilities is not expected to disproportionately affect minority or low-income communities. Implementation of the proposed action is expected to benefit the people and environment in the surrounding communities.

Air Quality

Affected Environment

The refuge has no air quality monitoring sites or special designations. Air quality on the refuge is primarily influenced by off-site sources, carried by prevailing southeast transport winds. Natural and man-made contributors of particulates that may affect air quality include dust storms, wildfire/prescribed fires, unpaved roads, vehicles, and coal-fired power plants.

Environmental Trends and Planned Actions

Air pollution from nearby off-refuge sources, including industry, power plants, and automobiles, exists within the county. Planned prescribed fire both on refuge and off refuge in nearby rice fields can generate smoke that can temporarily affect the air quality of the refuge. Reduced air quality may negatively affect the health of wildlife or their food sources. There are no current planned actions that may affect air quality.

Impacts on Affected Resource

Alternative A

Continued minimal impacts on air quality are expected from the continuation of current management. The Renz barn storage facility is not located near the headquarters area. An increased need to drive back and forth for maintenance and management staff results in increased vehicle emissions.

Alternative B

The proposed action may result in short-term impacts on air quality during the demolition and construction phases of the project. These impacts are associated with the use of heavy equipment to demolish and remove damaged and destroyed infrastructure as well as during the construction phase of replacement facilities. Impacts to air quality are based on emissions from construction equipment such as tractors, vehicular traffic, and transporting equipment and resources to project sites. Construction of the new administrative facilities are expected to be completed within one year of initiation, demolition is expected to be completed within 3 years of initiation. All work is expected to be completed primarily between 6AM and 6PM CT.

Consolidation and modernization of refuge facilities and the removal of the Renz storage barn would require use of heavy equipment and motor vehicles to deliver construction materials and transport construction personnel to the site. Earthwork, equipment, and hauling material during construction will result in minor, short term localized impacts to air quality by temporarily increasing dust and vehicle emissions with the work areas and downwind. However, refuge air quality is not anticipated to be significantly or adversely affected by the short-term increase in traffic following construction. This part of Colorado County is very rural and the good wind dispersal conditions most times of the year on the refuge facilitate dispersal of any vehicle emissions.

Consolidation of facilities and moving the storage building to the administration and maintenance area with a walking path between buildings will reduce the need to drive a vehicle. This may have minimal long-term beneficial impacts to air quality through decreased emissions.

Wilderness or Other Special Designation

Affected Environment

National Natural Landmarks Program

The National Natural Landmarks Program recognizes and encourages the conservation of outstanding examples of our country's natural history. It is the only natural areas program of national scope that identifies and recognizes the best examples of biological and geological features in both public and private ownership. National Natural Landmarks (NNLs) are designated by the Secretary of the Interior, with the owner's concurrence. To date, fewer than 600 sites have been designated. The National Park Service administers the NNL Program and, if requested, assists NNL owners and managers with the conservation of these important sites. The Attwater Prairie-Chicken Preserve is a NNL located within the Attwater Prairie Chicken NWR totaling 3,464 acres. This area contains a significant segment of gulf coastal prairie.

Globally Important Bird Area

The Refuge is part of a Globally Important Bird Area designated by the American Bird Conservancy during the late 1990s.

Environmental Trends and Planned Actions

The introduction of exotic invasive plants and animals has affected the Refuge's National Natural Landmark acreage. Most notable of these invasive species include Macartney rose, deep-rooted sedge, Chinese tallow, feral hogs, and red imported fire ants. Unfortunately, eradication of most of these may be cost prohibitive and time consuming. Ongoing control and containment is often the mode of operation to combat these exotic species. Increased urbanization surrounding the Refuge has the potential to dramatically reduce or inhibit Refuge habitat management activities that occur on the NNL area such as prescribed burning. As more homes surround the Refuge, prescribed burning, used to attain and maintain high quality prairie habitat, becomes more expensive and more difficult to conduct safely. As a result, the quality and quantity of coastal prairie habitat degrades further, adding to the loss of this unique habitat.

Alternative A

Due to the open nature of native coastal prairie, buildings located at the refuge administrative and maintenance facility are visible from the National Natural Landmark (NNL) area, which is located approximately in the center of the main portion of the refuge. The auto tour route

extends into a portion of the NNL. Sounds from activities at these distant facilities or the tour route might detract from the experience of visiting the NNL, although without the auto tour route access it would be difficult for visitors to either know about or appreciate the National Natural Landmark designation. At the present time, a stone and brass monument marking the NNL sits near the observation deck that overlooks the NNL area within the refuge.

Alternative B

If implemented, the proposed action alternative would have negligible short-term impacts on the National Natural Landmark within the refuge and beneficial long-term impacts. The new administrative building would have no additional impacts on the NNL beyond what already exist due to its location within the existing headquarters compound that is located over a mile from the NNL area. None of the demolition sites are within the area. Noise and visual disturbance from demolition activities may impact visitors viewing the NNL, though impacts would be negligible as they would occur largely on weekdays during off-peak usage days and would be short term in nature.

Removing the remote Renz storage barn, which is visible across the NNL from the observation deck, would have lasting positive visual impact for visitors. Additional interpretive information available at the newly constructed visitor center will enhance the visitor's understanding of the Landmark designation and help them appreciate the uniqueness and ecological quality of the area.