

Environmental Assessment

Southwestern Native Aquatic Resources and Recovery Center Facility Improvements

December 2023

Prepared by

Southwestern Native Aquatic Resources and Recovery Center
Dexter, NM

And

U.S. Fish and Wildlife Service Southwestern Regional Office
Albuquerque, NM

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Environmental Assessment for SNARCC Facility Improvements

Date: December, 2023

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 (550 FW 3) regulations and policies. The National Environmental Policy Act (NEPA) 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 construct a new experimental facilities (raceways, ponds, and building) that support the Southwestern Native Aquatic Resources and Recovery Center (SNARRC) in Dexter, New Mexico. The ponds will be used to raise and condition Razorback Sucker (*Xyrauchen texanus*) and Colorado Pikeminnow (*Ptychocheilus lucius*) for release into the San Juan river as part of the San Juan River Basin Recovery Implementation Program. Specific project elements include:

- Construction of four concrete flow conditioning raceways (50-80 ft) configured to allow flow adjustments, resting and feeding areas, and access to fish for data collection and harvest. These flow conditioning raceways would be able to condition up to 12,000 age-1 Colorado Pikeminnow.
- Construction of four ¼ acre ponds, including water and drain lines, catch basins, and polypropylene liners. These ponds would be used to produce live prey for Colorado Pikeminnow reared at the hatchery. Alternatively, these ponds could be used to grow up to 1,000 subadult Razorback Sucker. The ponds could also be used to conduct predator avoidance or flow and habitat complexity training for either species.
- Construction of a roughly 3,280 square foot addition on the existing fish culture building to support operation of the new ponds and house flow chambers, conduct other hatchery enrichment experiments, and provide additional space to rear and house young fish. The building will be a slab on grade, one story, engineered steel building super structure, with metal roof, and metal siding. All exterior materials and details will match the existing building e.g. man doors, overhead doors, windows, eave and rake details etc. The addition will tie into the existing building dry and wet utilities and will alleviate/reduce/minimize site disturbance. The addition will be constructed on existing asphalt areas.

Figures showing the proposed locations of the ponds, raceways, and building addition are included in Appendix B.

A proposed action may evolve during the 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 EA.

Throughout construction, a range of best management practices and environmental protection measures will be implemented. These include:

- Barricades and warning devices as necessary to safeguard the public, workers, and government personnel.
- Compliance with all applicable federal, state, and local environmental laws and regulations governing noise levels, air and water quality standards, erosion control, surface runoff, and cultural resources.
- Erosion control methods (such as watering dry soils) and appurtenances (such as silt fence) as necessary to prevent wind-borne dust and water-borne silt from leaving the immediate work area.

Background

National Fish Hatcheries are guided by the goals and objectives of the Strategic Plan for the U.S. Fish and Wildlife Service, Fish and Aquatic Conservation Program (FAC): 2016-2020 (USFWS 2016), the National Fish Hatchery System (NFHS), the authorized purposes of an individual hatchery, and U.S. Fish and Wildlife Service (Service) policy. National Fish Hatchery areas are maintained for the fundamental purpose of the propagation and distribution of fish and aquatic animal life and managed for the protection of all species of wildlife (50 CFR Ch. 1 70.1).

The facility was originally authorized as a National Fish Hatchery under the White Act of 1930 to meet the demands for warmwater sport fish in the American Southwest. This purpose was amended after the Endangered Species Act of 1973. The primary purpose of the hatchery now is to conduct an aquatic species conservation program that assists in the restoration and recovery of federally listed Threatened and Endangered species. Notwithstanding, other uses of the hatchery are also authorized.

The mission and work of the NFHS:

" ... improves recreational and public use of aquatic resources, recovery of federally listed Threatened or Endangered species, restoration of imperiled species ... and fulfillment of tribal partnerships and trust responsibilities. "

National Fish Hatchery System propagation addresses top priorities such as:

- Enhancement of recreational fishing
- Enhancement of public use of aquatic resources
- Recovery of federally protected species
- Restoration of imperiled species
- Fulfillment of tribal partnerships and trust responsibilities

Therefore, it is a priority of the Service to construct and maintain modern research and propagation facilities that meet the needs of the FAC program and species recovery programs throughout the Southwest.

Purpose and Need for the Action

The purpose of the proposed action is to expand the Service's capacity to propagate threatened and endangered aquatic species at SNARRC. The proposed action is needed to meet the stated goals of the Fish and Aquatic Conservation Program especially the recovery of federally protected species, restoration of imperiled species, and fulfillment of tribal partnerships and trust responsibilities.

Alternatives

Alternative A – No-Action Alternative

Under the no-action alternative, the Service would not improve the facilities at SNARRC by adding a research and rearing building, constructing additional raceways, and adding rearing ponds. Operations would continue in their current fashion. The no-action alternative does not meet the Service's purpose and need because it does not meaningfully address the need for producing conditioned aquatic species that may have higher survival rates, increasing the likelihood of recovery. Without the additional facilities, SNAARC will not be able to meet the demand for captive bred threatened and endangered species and the individuals that are raised at the facility may be less fit (reduced survival rates) for release into the wild to augment natural populations.

Alternative B – Facility Improvements

Alternative B is the proposed action, including all relevant best management practices and conservation measures designed to minimize environmental effects while meeting the Service's purpose and need.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource (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 are discussed. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship with 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.

SNARRC consists of approximately 640 acres in Chavez County, New Mexico. The primary habitat type at the facility is grassland with some wetland areas and tamarisk thickets.

SNARRC is located on the Pecos River Valley of southeastern New Mexico. The facility is approximately 200 miles southeast of Albuquerque, 20 miles south of Roswell, and one mile east of Dexter. Elevation is approximately 3,500 feet and average annual rainfall is 12 inches. This area of Chavez County is on the northern fringe of the Chihuahuan desert and adjacent to the Llano Estacado to the east. The proposed action would occur in the northwest area of the facility.

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:

- Geologic Hazards
- Soils
- Climate
- Minerals and Energy Resources
- Wilderness and Wild and Scenic Rivers
- Recreation
- Hazardous, Toxic, and Radioactive Waste
- Vegetation
- Public Safety

Natural Resources

Terrestrial Wildlife and Aquatic Species

Affected Environment

Description of Affected Environment for the Affected Resource

This EA considers the terrestrial and aquatic species that may be present at SNARRC naturally and not propagated or residing at the facility as part of the mission and operations of the FAC Program.

SNARRC supports an assortment of resident and migratory waterfowl, native and introduced game birds, songbirds, raptors, and wading birds. Mammals observed at the facility include mice/rats (*Reithrodontomys sp.*, *Peromyscus sp.*, *Onychomys sp.*, *Sigmodon sp.*, *Neotoma sp.*), shrews (*Cryptotis sp.*, *Notiosorex sp.*), bats (*Myotis sp.*, *Lasionycteris sp.*, *Pipistrellus sp.*, *Lasiurus sp.*, *Euderma sp.*, *Plecotus sp.*, *Antrozous sp.*), skunks (*Mephitis sp.*), raccoons, and white-tailed deer. Reptiles and amphibians include snakes (*Crotalus sp.*, *Sistrurus sp.*, *Coluber sp.*, *Diadophis sp.*, *Heterodon sp.*, *Lampropeltis sp.*), skinks (*Eumeces sp.*), turtles (*Kinosternon sp.*, *Chelydra sp.*, *Chrysemys picta bellii*, *Trachemys sp.*, *Pseudemys sp.*, *Terrapene sp.*, *Trionyx sp.*), lizards (*Phrynosoma sp.*, *Uta sp.*, *Holbrookia sp.*, *Crotaphytus sp.*, *Gambelia sp.*), frogs (*Rana sp.*), and toads (*Bufo sp.*, *Scaphiophus sp.*, *Spea sp.*).

The wide range of wildlife that may be found at the hatchery or adjacent to it is due to the nearby Pecos River, which marks the western edge of the Llano Estacado and eastern edge of the Roswell Basin, a rare source of water for migrating birds and other wildlife in the high plains.

SNARRC staff take measures to deter waterfowl and wildlife away from the rearing ponds to reduce depredation and disease transmission, typically using propane cannons or other noise emitters. Wildlife in the direct vicinity of the facility are already accustomed to a high level of disturbance, and it is unlikely that additional noise and traffic during construction will alter wildlife use of the site, especially in the southern and eastern parts of the property, which are managed for waterfowl and upland game.

Description of Environmental Trends and Planned Actions

Impacts on Affected Resource

Alternative A

Under the no-action alternative, SNARRC operations would continue, using existing facilities and building footprints. There would be no additional temporary or long-term disturbances to wildlife in the area.

Alternative B

Under the proposed action alternative there would be a long-term reduction in some grassland and shrub type habitat where the new ponds and facility are proposed. Parts of this area are

previously disturbed and mowed on a regular basis. Temporarily displaced wildlife would have ample similar or higher quality habitat to disperse to on the remainder of the SNARRC property.

Threatened and Endangered Species, and Other Special Status Species

Affected Environment

Description of Affected Environment for the Affected Resource

Federally listed Threatened and Endangered species that may occur at SNARRC are Listed below with a brief description of life history.

- Tricolored Bat (*Perimyotis subflavus*) – Proposed Endangered
- Lesser Prairie-chicken (*Tympanuchus pallidicinctus*) – Endangered
- Northern Aplomado Falcon (*Falco femoralis septentrionalis*) – Exp. pop
- Piping Plover (*Charadrius melodus*) – Threatened
- Pecos Bluntnose Shiner (*Notropis simus pecosensis*) – Threatened
- Pecos Gambusia (*Gambusia nobilis*) – Endangered
- Monarch Butterfly (*Danaus plexippus*) – Candidate
- Pecos Sunflower (*Helianthus paradoxus*) – Threatened
- Wright’s Marsh Thistle (*Cirsium wrightii*) – Threatened

Description of Environmental Trends and Planned Actions

Nine species listed under the Endangered Species Act have ranges that fall within the Action Area. The primary threat to these species is a loss of suitable habitat, with the exception of the Tricolored bat, which has a high mortality rate from white nose syndrome. Agriculture, increased development, climate change, and increased water use reduce suitable habitat for the eight other species. Habitat connectivity is also reduced when development occurs, resulting in a greater loss in acreage of suitable habitat than the acres of land which are disturbed. The habitat types these species rely on are: grasslands, rivers, shorelines, spring-fed waters, and wetlands.

The proposed project would alter existing facilities and construct a new facility for the purpose of recovering two fish species: the Razorback Sucker (*Xyrauchen texanus*) and the Colorado Pikeminnow (*Ptychocheilus lucius*). Critical and/or otherwise suitable habitat does not exist within or nearby the project area, so the project is unlikely to affect these species.

Impacts on Affected Resource

Alternative A

Under the no-action alternative there would be no affects to any federally listed Threatened or Endangered species.

Alternative B

As identified in the attached Intra-Service Section 7 consultation document, the proposed action would not affect any federally listed Threatened or Endangered species. The No-Effect determination is included in Appendix C.

Geology and Soils

Affected Environment

Description of Affected Environment for the Affected Resource

The soil profile for the project area is Reakor Loam on a 1-3% slope ([SoilWeb: An Online Soil Survey Browser | California Soil Resource Lab \(ucdavis.edu\)](#)). Reakor soils are well-drained, deep soil types that are common in alluvial plains of the region.

Description of Environmental Trends and Planned Actions

Impacts on Affected Resource

Alternative A

Under the no-action alternative, no ground disturbing activity would be planned that could alter soils in the project area.

Alternative B

Under the proposed action alternative, construction of the new ponds and facilities would require ground disturbance, leading to breakup of soil horizons and removal of some material and temporarily increasing the risk of erosion. During construction, best management practices for controlling erosion would be implemented. Disturbed areas are expected to revegetate within a growing season, stabilizing soils over the long term. Given the relatively gentle slope of the project area and the best management practices during construction, there is a low risk of erosion impacting any other natural resources on-site at SNARRC or offsite.

Air Quality

Affected Environment

Description of Affected Environment for the Affected Resource

There are 7 facilities within 10 miles of SNARRC with active air quality permits ([NMED Air Quality Air Permit Map \(APMAP\)](#)). These facilities serve functions in the local economy including biogas, rock crushing, asphalt production, and feed milling. A range of heavy machinery and transportation related emissions are associated with these facilities in addition to emissions from the local agricultural economy. The project area may also be influenced by emissions from the Permian Basin oil fields, leading to elevated levels of ozone and PM10 during a portion of the year.

Description of Environmental Trends and Planned Actions

Impacts on Affected Resource

Alternative A

Under the proposed action, SNARRC would not take any action likely to change air quality conditions in the area.

Alternative B

Under the proposed action, SNARRC would require additional delivery trucks and machinery during the duration of construction. Emissions associated with construction would be negligible within the area, given a relatively high level of emissions from neighboring agricultural, industrial, and energy sectors.

Cumulative Effects

SNARRC may implement a habitat management program that calls for prescribed fire in select units of the on-site marshes. Fires on these marshes would be timed based on up-to-date air quality reports as to minimize impacts to the area. Additionally, it is unlikely that any prescribed fires will be scheduled concurrently with construction.

Visitor Use and Experience

Affected Environment

Description of Affected Environment for the Affected Resource

Portions of the facility, beyond the interior boundary, are open to public access and bird hunting during certain periods of the year. The station currently follows New Mexico's shooting hours which are a ½ hour before sunrise to sunset. Requirements are a valid New Mexico Hunting License and staying within the designated hunting areas.

SNAARC also receives visitors interested in learning about the facility. Such visits are infrequent.

Description of Environmental Trends and Planned Actions

SNAARC receives 2-10 visits per month during appropriate hunting seasons in addition to the handful of visitors interested in hatchery operations. The current level of visitation does not represent a major impact on SNAARC resources.

Impacts on Affected Resource

Alternative A

Under the no-action alternative there would be no change to visitor use and experience. Existing opportunities will continue.

Alternative B

Under the proposed action alternative, there may be temporary disturbances to visitors as work crews and machinery operate at SNAARC. The impact of this disturbance would not

extend past the completion of construction. Due to the limited number of visitors to SNAARC, the overall impact on the public would be negligible.

Cultural Resources

Affected Environment

Description of Affected Environment for the Affected Resource

Known cultural resources at the project area date from within New Mexico's statehood. Some of the original structures at SNARRC were constructed in 1931 before New Deal-era programs. Interestingly, in 1946, various repairs were made to some of the buildings using labor from German prisoners of war (POW) at Orchard Park, the Roswell POW internment camp. The only Historic period building that remains is the Superintendent's residence, located 600 feet north of the project area.

Description of Environmental Trends and Planned Actions

Impacts on Affected Resource

Alternative A

Under the no-action alternative there would be no planned activity within the project area with potential to affect cultural resources.

Alternative B

For the proposed action, the Service obtained a "no historic properties affected" concurrence from the New Mexico State Historic Preservation Officer. This concurrence is recorded in a consultation letter dated February 7th, 2022, included in Appendix C.

If cultural resources are discovered during construction, work will stop until the regional archaeologist can document them and consult with the New Mexico State Historic Preservation Officer and affected tribes.

Socioeconomics and Environmental Justice

Environmental Justice

Affected Environment

Description of Affected Environment for the Affected Resource

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.

The socioeconomic profile for this analysis is based on the adjacent area including the cities of Dexter, Midway, Hagerman, and Roswell. The median age across this area in 2021 is 38.4 years

old out of a population of 50,802. Midway, Hagerman, and Dexter all have roughly 100-1000 residents, with most of the services, shopping, and economic activity focused in Roswell. The proportion of residents who graduated high school is 79.1%, slightly lower than the U.S average of 88.9%. The population is 65.8% minority, primarily Hispanic or Latino. Across the project area, 17.3% of families live in poverty.

Impacts on Affected Resource

Alternative A

Under the no-action alternative, the SNAARC would maintain the same socioeconomic footprint as it currently has. It is unlikely that SNAARC will have disproportionate effect on any minority or low-income populations in the future.

Alternative B

The proposed action would be unlikely to have an outsized effect on any minority or low-income populations. It would not change the long-term economic role of the SNAARC within the region and may provide a minor benefit to the local economy as work crews visit local businesses during construction.

Monitoring

During each phase of construction, a licensed contractor procured by the Service will obtain the required state and county permits to ensure compliance with all applicable environmental laws. Subsequent inspections by compliance monitors will ensure that required best management practices are in place such as traffic control, fugitive dust abatement, and silt fences. Additionally, the Service's Contracting Officer's Representative (COR) will observe construction and note any deficiency in conservation measures that would lead to environmental harm during construction. Any deficiency will be corrected.

Summary of Analysis

Alternative A – No Action Alternative

As described above, the no-action alternative does not meet the Service's purpose and need and would limit SNARRC's contribution to federally listed species recovery.

Alternative B – Facility Improvements

As described above, the proposed action would increase the capacity at SNARRC for supporting recovery of federally listed species recovery. Given the temporary duration of construction and site selection alongside existing structures there would be limited impacts from the facility improvements. Best management practices during construction would reduce on-site impacts to a negligible level and there would be only limited, temporary displacement of wildlife as a result of construction.

List of Sources, Agencies and Persons Consulted

The proposed action was developed with support from the U.S. Bureau of Reclamation and consulted on with the New Mexico State Historic Preservation Officer and the U.S. Fish and Wildlife Service – Ecological Services. Tribes consulted included Apache Tribe of Oklahoma, Comanche Nation, Kiowa Indian Tribe of Oklahoma, Mescalero Apache Tribe, Pueblo of Tesuque, and Pueblo of Ysleta del Sur.

List of Preparers

Joel Miner – Conservation Planner, FWS Southwest Region

Natalie Sanford – Cultural Resources Specialist, FWS Southwest Region

Nathan Franssen – Deputy Center Director, SNARRC

Wade Wilson – Center Director, SNARRC

Tribal Consultation

The service sent consultation letters to federally recognized tribes listed above that have indicated interest in projects within Chavez county, NM. No comments or input on this project was received prior to the public comment period.

Public Outreach

This EA will be posted for public comment for 30 days prior to issuing a Finding of No Significant Impact. At the conclusion of the comment period any comments will be addressed or incorporated prior to finalizing this EA.

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.

Appendix A

This Appendix lists all applicable statutes, regulations, and executive orders addressed in this EA.

Cultural Resources

Archaeological Resources Protection Act of 1979

National Historic Preservation Act of 1966, as amended

Fish and Wildlife

Endangered Species Act of 1973, as amended

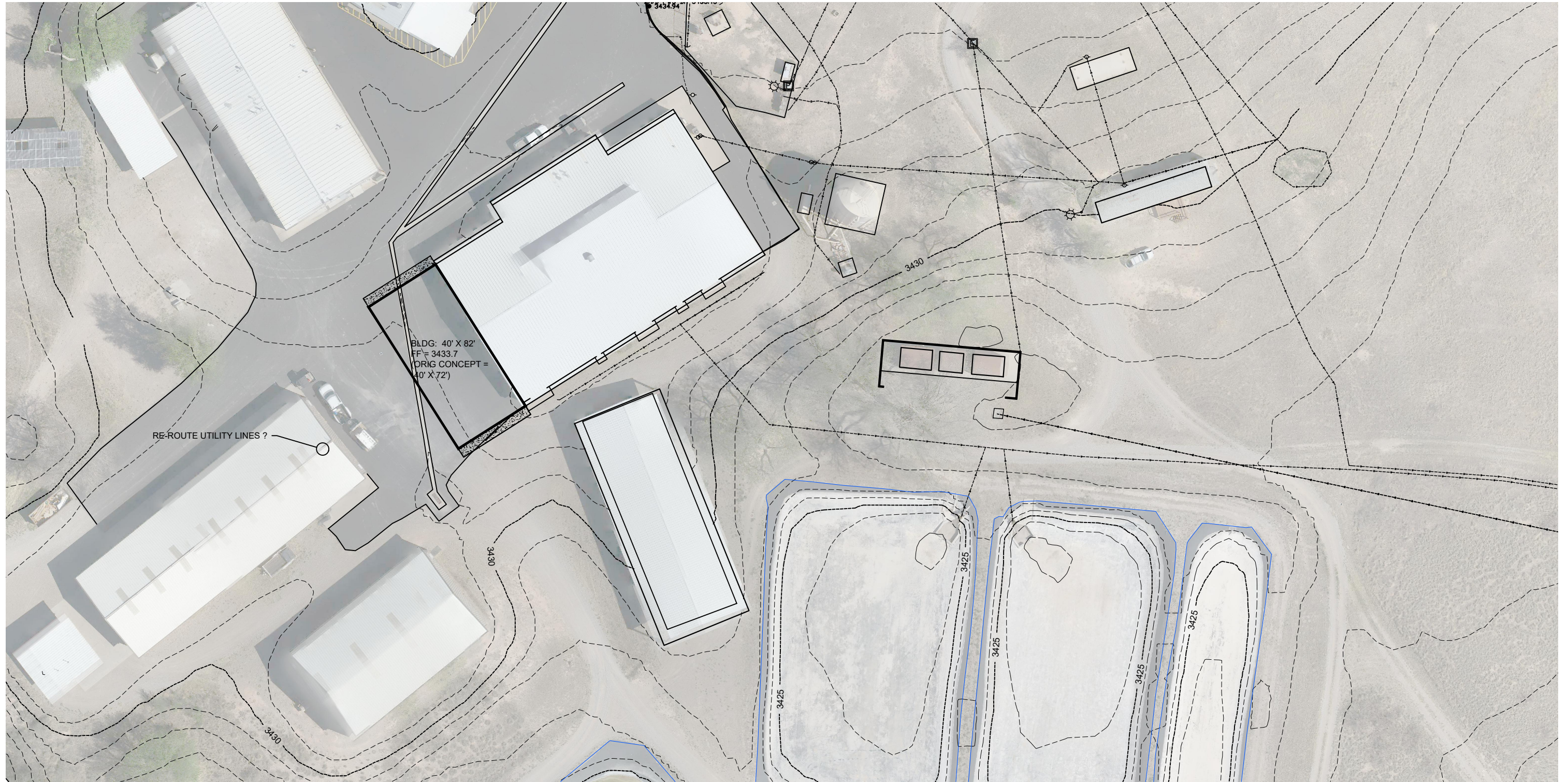
Fish and Wildlife Act of 1956, 16 U.S.C. 742a-m

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

Natural Resources

Clean Air Act, as amended

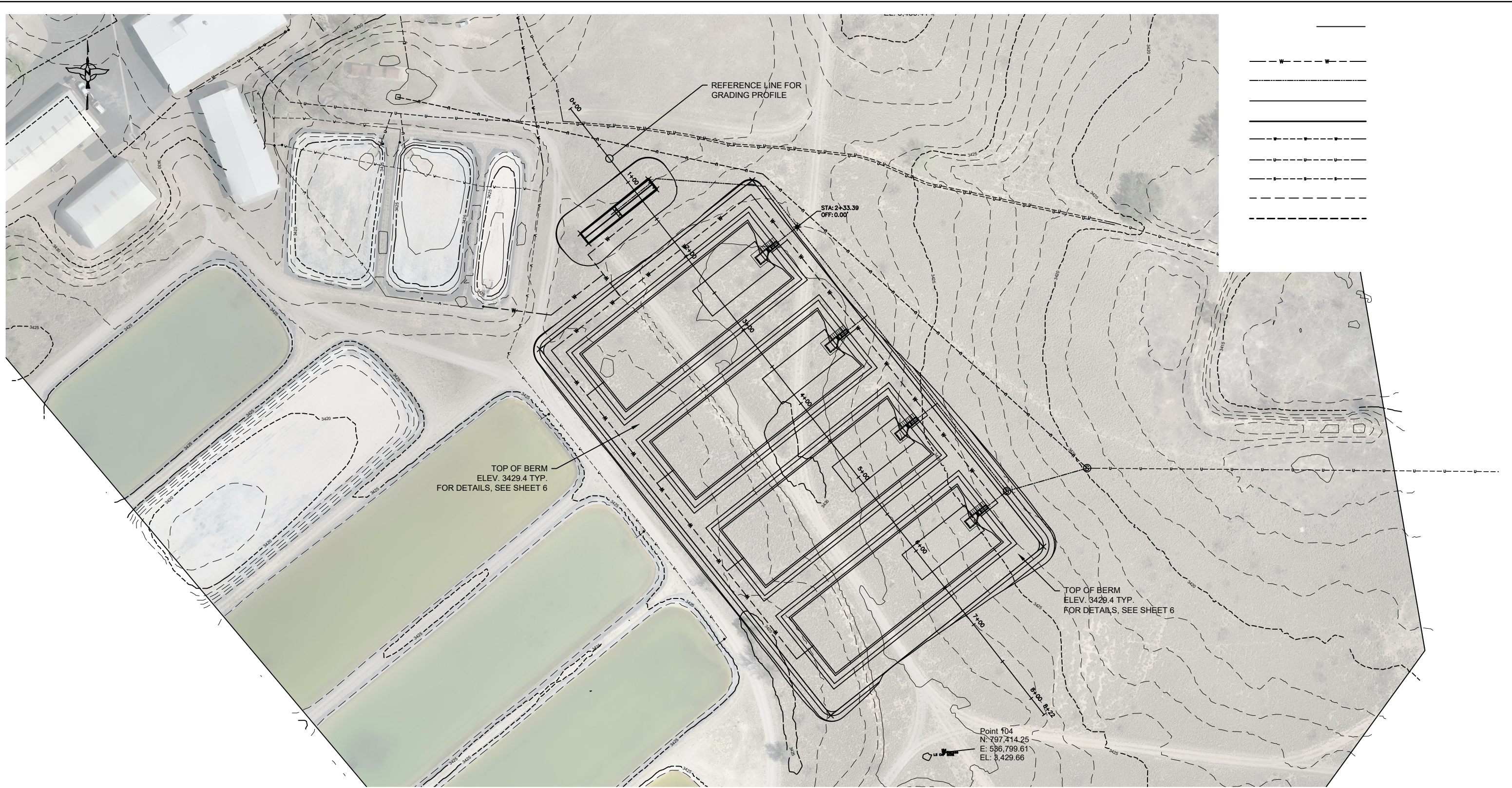
Appendix B



SITE LAYOUT



UNITED STATES DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE DIVISION OF ENGINEERING DEXTER NFH		
CHAVEZ		NEW MEXICO
SNARRC RACEWAYS, PONDS AND LAB CONCEPT SITE PLAN		
DESIGN: designer	DRAWN: J.Gigstead	CHECK: checker
DRAWING FILENAME AND NUMBER		DATE: 12-7-2024
... Concept Site Fir Elev_current.dwg		SHT. NO. SEQ. NO.
		16 1 OF 5



DRAFT

POND EARTHWORK VOLUMES

APPROXIMATE CUT: 9,200 C.Y. (RAW)
 APPROXIMATE FILL: 6,840 C.Y. (FACTORED)
 6,224 C.Y. (RAW)

*NOTE:
 CUT VOLUME IS A RAW VOLUME AND INCLUDES TOP SOIL LAYER THAT WILL NOT BE SUITABLE FOR EMBANKMENT CONSTRUCTION.

A SHRINKAGE FACTOR OF 1.1 WAS APPLIED TO REQUIRED FILL VOLUME. (1.0 CY CUT REQUIRED TO PRODUCE 0.91 CY FILL VOLUME)

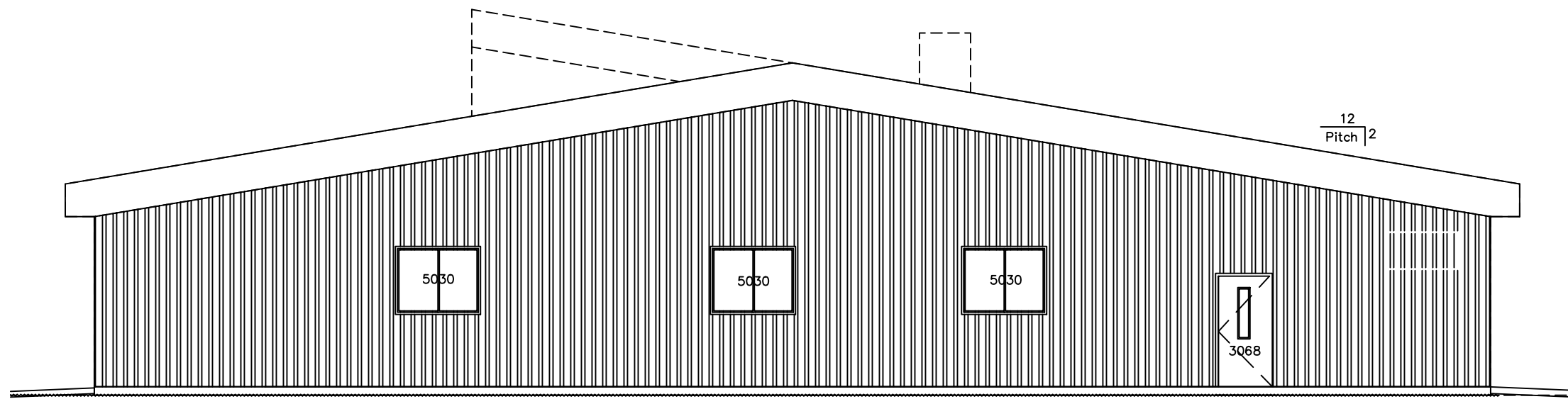
PLAN



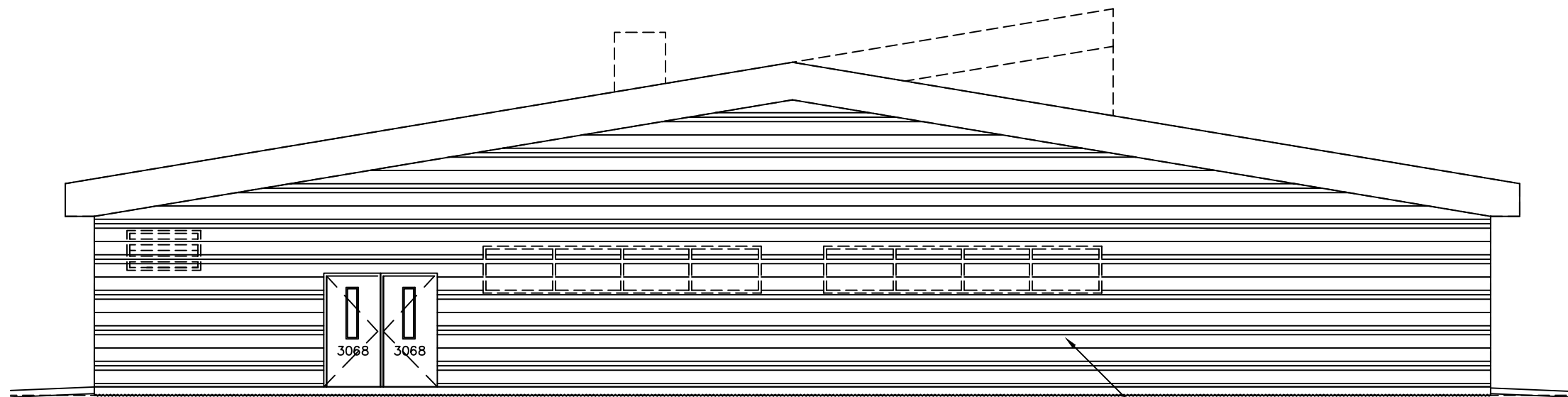
U.S. FISH AND WILDLIFE SERVICE

CHAVES COUNTY

DESIGN:	
DRAWING FILENAME AND NUMBER	
2023 PONDS AND KETTLES	
2F-NM-133-61.0	17



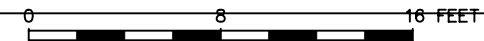
RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION

NOTE: PROVIDE BUILDING
 MANUFACTURES STANDARD GUTTERS
 AND DOWNSPOUTS AT ROOF DRIP
 EDGES WITH SPLASH BLOCKS.
 GUTTERS AND DOWNSPOUTS ARE NOT
 SHOWN ON ELEVATIONS.

AJJOINING WALL OF
 EXISTING BUILDING



CHAVEZ

DESIGN:
 DRAWING FILENAME AND NUMBER
 dwgname

Appendix C



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Southwest Regional Office (Region 2)
Post Office Box 1306
Albuquerque, New Mexico 87103

Dr. Jeff Pappas
State Historic Preservation Officer
Historic Preservation Division
Bataan Memorial Building
407 Galisteo Street, Suite 236
Santa Fe, NM 87501

February 7, 2022

RE: A Class III Cultural Resource Inventory for a New Aquatic Research Building, Exterior Raceways, and Ponds at the Southwestern Native Aquatic Resources and Recovery Center, Chaves County, New Mexico (2023-NM-BOI-001; NMCRIS Activity 152300)

Dear Dr. Pappas:

Pursuant to Section 106 of the National Historic Preservation Act (54 USC §306108) and its implementing regulations (36 CFR §800), the U.S. Fish and Wildlife Service (FWS) seeks your concurrence regarding our finding of *no historic properties affected* for a New Aquatic Research Building, Exterior Raceways, and Ponds at the Southwestern Native Aquatic Resources and Recovery Center, Chaves County, New Mexico. Required documentation as defined by 36 CFR §800.11 is outlined below and included as Enclosure A.

Project Area

The project area is at the Southwestern Native Aquatic Resources and Recovery Center (SNARRC), historically known as the Dexter New Mexico Station or Dexter Federal Fish Hatchery, one mile east of Dexter, New Mexico in the northwest quarter of Section 16, Township 13 South, Range 26 East. The project area is two miles west of the Pecos River on generally flat area (less than three percent slopes) that was formerly a marsh and series of small playa lakes. Elevation ranges from 3,420 to 3,430 feet above mean sea level. Currently, the project area is roughly 50 percent developed hatchery facilities (ponds, outbuildings, roads) and landscaped areas, while the other half is undeveloped with a variety of bunchgrasses, grama grass, and shrubs.

Description of the Undertaking and the Area of Potential Effects

The SNARRC facility is proposing to construct one new research building, new exterior raceways, and demolish three existing ponds (Ponds A, B, C) to construct new ponds in the northwest corner of the facility (Section 16). To allow for maximum flexibility during implementation, the area of potential effects (APE) encompasses the areas of proposed ground disturbance plus a 30-meter

(~100-foot) construction buffer (where existing facilities do not limit the project footprint). The total APE is 13.94 acres.

Identification and Evaluation of Historic Properties

On December 21, 2022, FWS archaeologist Natalie Sanford completed a Class III cultural resource inventory of the entire APE. The inventory resulted in the documentation of three Statehood – Recent Historic period isolate occurrences (IOs) (Enclosure A). An in-depth review of SNARRC archives was also completed on site to determine potential association with New Deal-era programs, such as the Works Progress Administration (WPA) and Civilian Conservation Corps (CCC).

The Dexter New Mexico Station was established under the White Act of 1931. The entire 640-acre land parcel (all of Section 16) was originally owned by New Mexico State Game and Fish Commission and was acquired by the Federal government on August 31, 1931. Construction of residences, office buildings, and hatchery ponds began immediately after acquisition and operations began in 1932. Between 1937 and 1941, funding and labor was provided by both the WPA and CCC programs; however, none of those features are extant today. Ponds A, B, C, and D are mentioned as being constructed in the 1938 annual report using WPA labor, but the dimensions are not the same as existing Ponds A, B, and C. There is no modern pond D. A review of historical aerial imagery shows that the historical footprint of Ponds A-D was completely redesigned sometime between 1984 and 1992 and the area is now designated Ponds A, B, and C. In 1992, the ponds were again rehabilitated and Hypalon lining was added.



Figure 1. Aerial view of the Dexter Federal Fish Hatchery before 1950 showing the original configuration of Ponds A-D. 1960 Annual Report caption “Station before 1950.”

In sum, there are no extant buildings or features in the APE or within the SWARCC property that can be clearly associated with the WPA or CCC. Labor and funding from both programs were used; however, the property underwent several major reconstruction phases, the most recent of which occurred between 1998 and 2001. Today, the only Historic period building that remains is the Superintendent's residence (Quarters 1), constructed in 1931 before the New Deal-era programs, and this is located 600 feet north of the APE. Interestingly, in 1946, various repairs were made to buildings, including Quarters 1, using laborers from the German prisoner of war at Orchard Park, the Roswell POW internment camp.

Finding of Effect

Based on the results of this inventory and archival research, the FWS is recommending a finding of ***no historic properties affected*** for the proposed undertaking. We seek your concurrence on our finding of effect. If you have any questions regarding this project, please contact FWS Regional Archaeologist, Natalie Sanford, by email at natalie_sanford@fws.gov or by phone at (505) 238-4496.

Sincerely,

**WADE
WILSON**

Digitally signed
by WADE WILSON
Date: 2023.02.09
06:37:06 -07'00'

Concur with Recommendations as Proposed



for the NM SHPO, 2/13/2023

Wade Wilson
Center Director
Southwestern Native Resources and Recovery Center

Enclosure A: A Class III Cultural Resource Inventory for a New Aquatic Research Building, Exterior Raceways, and Ponds at the Southwestern Native Aquatic Resources and Recovery Center, Chaves County, New Mexico (2023-NM-BOI-001; NMCRIS Activity 152300)

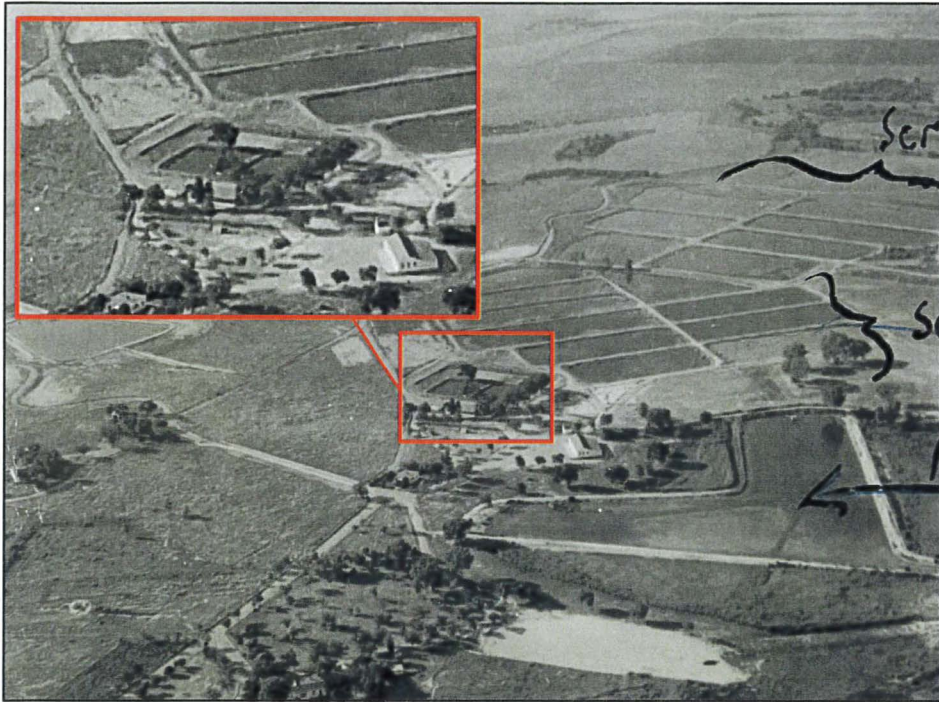


Figure 2. Aerial view of the Dexter Federal Fish Hatchery in 1960 showing the original configuration of Ponds A-D. 1960 Annual Report caption “Station 1960.”

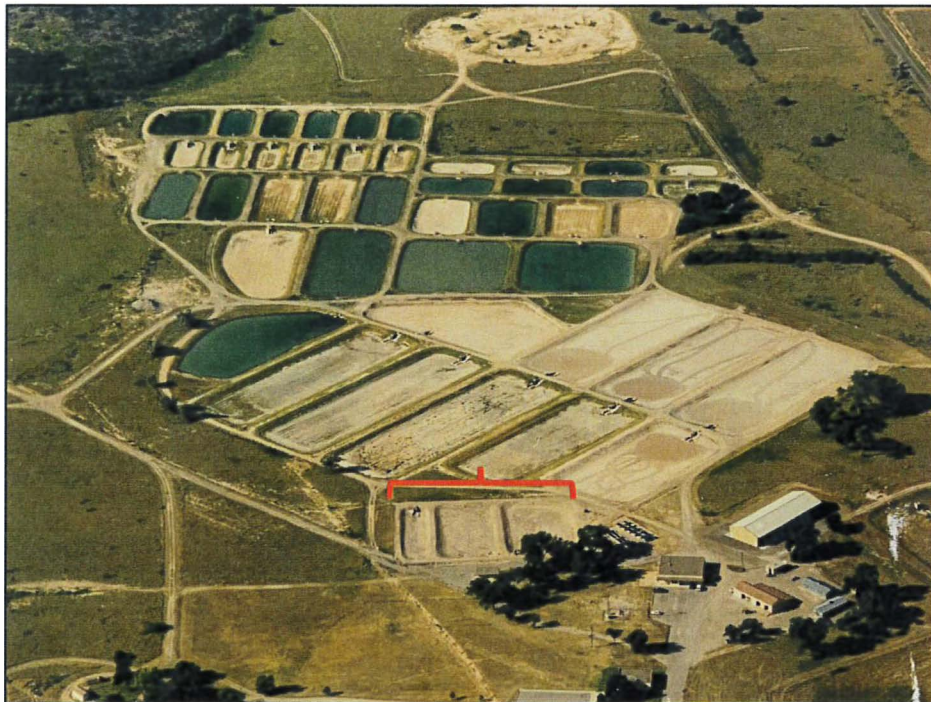


Figure 3. Aerial view of Dexter National Fish Hatchery after Ponds A-C were constructed (red bracket), before Hypalon lining added. Note the change in configuration from four ponds to three. 1992 Annual Report caption: “Aerial view of Dexter NFH & TC operation area looking from NNE to SSW.”

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

CONTACT INFORMATION

Originating Person: Wade Wilson, Center Director, Southwestern Native Aquatic Resources and Recovery Center

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GENERAL PROJECT INFORMATION

Date Submitted: 7-Dec-2023

IPaC Project Code: 2024-0008455

Consultation Number: N/A

Region: Region 2 - Southwest

Service Program: Fisheries and Aquatic Conservation

Station Name: Southwestern Native Aquatic Resources and Recovery Center

PROJECT LOCATION INFORMATION

Project Name: Southwestern Native Aquatic Resources and Recovery Center Capital Improvements

Location:

Section Township, and Range:

T13S, R26E, Sect. 16

Coordinates for Project Centroid (include coordinate system and projection if appropriate):

Lat: 33.19400, Long: -104.35013

County: Chaves County, New Mexico

Distance to Nearest Town: 1.0 mile

Location description: The project will be located at the US Fish and Wildlife Service's Southwestern Native Aquatic Resources and Recovery Center (SNARRC) approximately 1 mile east of Dexter, NM (Figure 1). Construction will occur adjacent to existing infrastructure on the east side of the main campus. The building will be constructed next to a preexisting building on an asphalt pad (Figure 2). The 4 new ponds will be constructed adjacent to preexisting ponds in an area with existing gravel paths and regrowth of native vegetation.

Ecoregion Number and Name: Chihuahuan Desert (24b)

PROJECT DESCRIPTION AND IMPLEMENTATION

Project Description:

The U.S. Fish and Wildlife Service (Service) is proposing to construct a new experimental facility and reconfigure existing ponds at SNARRC that will support razorback sucker (*Xyrauchen texanus*) and Colorado pikeminnow (*Ptychocheilus lucius*) recovery. Specific project elements include:

- Construct four concrete flow conditioning chambers (50-80 ft) configured to allow flow adjustments, resting and feeding areas, and access to fish for data collection and harvest. These flow conditioning chambers would be able to condition up to 12,000 age-1 Colorado pikeminnow.
- Construct four ¼ acre ponds, including water and drain lines, catch basins, and polypropylene liners. These ponds would be used to produce live prey for Colorado Pikeminnow reared at the hatchery. Alternatively, these ponds could be used to grow up to 1,000 subadult Razorback Sucker. The ponds could also be used to conduct predator avoidance or flow and habitat complexity training for either species.
- Construct a 3,000 square foot building to support operation of the new ponds and house flow chambers, conduct other hatchery enrichment experiments, and provide additional space to rear and house young fish.

The purpose of the proposed action is to expand the Service's capacity to propagate threatened and endangered aquatic species at the SNARRC. The proposed action is needed to meet the stated goals of the Fish and Aquatic Conservation Program especially the recovery of federally protected species, restoration of imperiled species, and fulfillment of tribal partnerships and trust responsibilities.

The four flow-conditioning chambers will be constructed on an area near existing ponds. The total area of disturbance for the raceways will be approximately 0.2 acres (Figure 2). Water, drain, and power lines will be tied into existing systems.

An area of approximately 3.64 acres will be cleared with heavy equipment and excavated to create the new pond depressions. Fill material will be used to sculpt berms around the ponds and create needed slopes. The pond kettles (fish catch basins) will be built at the low end of the ponds using concrete that will be trucked in and poured on site. Water inflow lines and drain outflow lines will be tied into existing systems.

The area proposed for the new building is 0.25 acres and will occur next to a current building on an asphalt parking lot. Building rooms will include a large area for rearing and experimental tanks for fish, lab space, a climate controlled interior room housing Z-habitat aquaria, a mechanical room, and bathroom. All necessary plumbing, electrical, water, and drain lines will be incorporated.

All construction sites will be accessed from preexisting roads and work will be conducted during normal work hours.

The overall outcomes from the construction will include a turn-key building, outdoor rearing ponds, and outdoor raceways that will be used to rear, house, and hold endangered Colorado Pikeminnow and Razorback Sucker for conservation purposes.

Project Timeline: Construction will occur in the spring/summer of 2024 on the ponds and winter 2024/2025 on the raceways and building.

Project Staff: Construction of the ponds and raceways will be conducted by qualified personnel at the US Bureau of Reclamation. The building will be constructed by a certified contractor yet to be determined.

Project Area and Action Area:

Project Area:

The Southwestern Native Aquatic Resources and Recovery Center (SNARRC), formerly known as Dexter National Fish Hatchery & Technology Center, is a U.S. Fish and Wildlife Service facility dedicated to fish culture techniques for threatened and endangered fishes of the American Southwest. Located in Dexter, New Mexico, it is the only federal facility in the nation dedicated to studying and holding only threatened and endangered fish. Dexter National Fish Hatchery was established in 1931, to satisfy demands for game fish throughout the Southwest. The Endangered Species Act brought changes to the hatchery in the 1970s shifting all focus to endangered aquatic species.

SNARRC sits on 640 acres of historically Chihuahuan desert but has been transformed into a large fish culture facility through the construction of multiple buildings, lined and unlined ponds, and outflow wetlands. The Center is surrounded by residences and agriculture (row crops and grazing) on all sides. The proposed project area encompasses disturbed lands adjacent to existing infrastructure. The new ponds will require clearing of some native vegetation (i.e., short grasses, mesquite shrubs) that has regrown following previous disturbances.

Action Area:

Because the Project Area will occur near existing infrastructure, the Action Area will likely not extend to any areas that have not been or are not currently disturbed due to ongoing activities at the Center. All areas of disturbance will have at least a 200 ft buffer that will only extend into previously disturbed land that is mowed. Large heavy equipment (e.g., excavators, tractors, trucks, frontend loaders) are frequently used during daily operation and maintenance of the facility. The Center was designed to retain all water generated from fish culture activities to avoid biocontamination of adjacent aquatic systems by isolating its drainage via settling wetlands southeast of the main facility. Such factors likely limit any potential ‘downstream’ effects of construction.

List of Figures Related to Project Area and Description:

Figure 1. Overview of the proposed action area (blue polygon) at the Southwestern Native Aquatic Resources Recovery Center 1 mile west of Dexter, NM.

Figure 2. Detailed overlay (in red) of proposed construction sites of raceways, ponds, and research building at the Southwestern Native Aquatic Resources Recovery Center, Dexter, NM (A). The red arrows denote photopoint of the picture in panel B.

Figure 3. Detailed location of proposed raceways and ponds including water and drain lines.

Figure 4. Detailed location of proposed research building.

SPECIES AND CRITICAL HABITAT INFORMATION

Number of Species and Critical Habitats in Project Area:

A total of 9 federally listed and candidate species as well as 0 critical habitats potentially occur in the Action Area.

List of Potentially Affected Species and Critical Habitats:

List of Species:

- Tricolored Bat (*Perimyotis subflavus*) – Proposed Endangered
- Lesser Prairie-chicken (*Tympanuchus pallidicinctus*) – Endangered
- Northern Aplomado Falcon (*Falco femoralis septentrionalis*) – Exp. pop
- Piping Plover (*Charadrius melodus*) – Threatened
- Pecos Bluntnose Shiner (*Notropis simus pecosensis*) – Threatened
- Pecos Gambusia (*Gambusia nobilis*) – Endangered
- Monarch Butterfly (*Danaus plexippus*) – Candidate
- Pecos Sunflower (*Helianthus paradoxus*) – Threatened
- Wright’s Marsh Thistle (*Cirsium wrightii*) – Threatened

List of Critical Habitats:

- None present.

List of Figures Related to Species and Critical Habitat:

Figure 5. Range map of Tricolored Bat (*Perimyotis subflavus*).

Figure 6. Range map of Northern Aplomado Falcon (*Falco femoralis septentrionalis*).

Figure 7. Range map of Lesser Prairie-chicken (*Tympanuchus pallidicinctus*).

Figure 8. Range map of Piping Plover (*Charadrius melodus*).

Figure 9. Range map of Pecos Bluntnose Shiner (*Notropis simus pecosensis*).

Figure 10. Range map of Pecos Gambusia (*Gambusia nobilis*).

Figure 11. Range map of Monarch Butterfly (*Danaus plexippus*).

Figure 12. Range map of Pecos Sunflower (*Helianthus paradoxus*).

Figure 13. Range map of Wright’s Marsh Thistle (*Cirsium wrightii*).

SPECIES AND CRITICAL HABITAT STATUS AND EFFECTS DETERMINATIONS

None

NO EFFECTS DETERMINATIONS

Species 1: Tricolored Bat (*Perimyotis subflavus*)

Species Status:

The tricolored bat (*Perimyotis subflavus*) is one of the smallest bats native to North America. The

once common species is wide ranging across the eastern and central United States and portions of southern Canada, Mexico and Central America (Figure 5; US Fish and Wildlife Service, 2021). During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. White nose syndrome is the leading cause of mortality of the species followed by wind energy development and habitat loss. No known caves exist on or near the Action Area, therefore, tricolored bat will likely not be affected.

Species 2: Northern Aplomado Falcon (*Falco femoralis septentrionalis*)

Species Status:

A nonessential experimental population (NEP) of the Northern Aplomado Falcon was established in New Mexico and Arizona on July 26, 2006 (Figure 6). The Northern Aplomado Falcon is dependent on expansive, open grasslands and associated avian communities for prey. The continued conversion of grasslands to agricultural uses and potential impacts from climate change may further reduce bird populations that aplomado falcons rely on for prey and for nests (U.S. Fish and Wildlife Service 1990). Because highly suitable potential habitat and availability of grassland birds for prey are limiting factors, an ecosystem management approach that protects and improves existing grasslands is recommended to benefit Northern Aplomado Falcons and other grassland species. Maintaining the areal extent and suitability of existing Aplomado Falcon habitat is of primary importance. Additionally, encouraging the development of healthy native grassland communities by limiting disturbance and shrub encroachment, as well as through proper management of fire, invasive species, and grazing, can improve habitat suitability for Aplomado Falcons and other birds. A healthy grassland ecosystem will likely develop a sufficient avian prey base, yuccas and other shrubs that form nest substrates, and will support ravens and other raptors that build nests that Northern Aplomado Falcons can use.

The action area generally occurs in potential habitats of Northern Aplomado Falcon (i.e., Chihuahuan desert). However, the action area has been disturbed for many years and the local vegetation is consistently mowed, making the habitat likely unsuitable for the species. Moreover, the natural habitat that may occur adjacent to the action area is surrounded by agricultural and residential developments that would likely preclude its presence.

Species 3: Lesser Prairie-chicken (*Tympanuchus pallidicinctus*)

Species Status:

The Lesser Prairie-chicken (LEPC) is a species of prairie grouse that once ranged across the Southern Great Plains (U.S. Fish and Wildlife Service 2022). Its range has been much reduced, and the LEPC now occurs within four ecoregions (Figure 7). Each ecoregion is associated with unique environmental conditions based on habitat and climatic variables and some genetic differentiation. These four ecoregions are the Short-Grass Prairie/Conservation Reserve Program Mosaic Ecoregion in Kansas and Colorado; Sand Sagebrush Prairie Ecoregion in Colorado, Kansas, and Oklahoma; Mixed-Grass Prairie Ecoregion in Kansas, Texas, and Oklahoma; and Sand Shinnery Oak Prairie Ecoregion in New Mexico and Texas (U.S. Fish and Wildlife Service 2022). The Sand Shinnery Oak Prairie Ecoregion harbors the nearest population relative to the proposed action area.

The closest known leks of lesser prairie-chicken are in the Sand Shinnery Oak Prairie Ecoregion and

~20 miles east of the proposed construction site (www.sgpchat.org, accessed Oct. 24, 2023). Therefore, the project will likely pose no effect on the species due to its proximity to the nearest population.

Species 4: Piping Plover (*Charadrius melodus*)

Species Status:

The species occupies mostly riparian and coastal habitats (U.S. Fish and Wildlife Service 2015; Figure 8). The closest breeding record near the action area occurred in Eddy County, NM (Bailey and Niedrach 1965). Due to the rarity of the species in New Mexico and the lack of shoreline habitat of the action area, the species will likely not be impacted by the project. The nearest location of the species ever recorded is over 20 miles from the action area (Bailey and Niedrach 1965), therefore, the project should pose no effect to the species.

Species 5: Pecos Bluntnose Shiner (*Notropis simus pecosensis*)

Species Status:

The historical range of the Pecos bluntnose shiner (a subspecies of *Notropis simus*) included a 329-mile reach of the Pecos River from the Gallinas River confluence, approximately 24 miles north of Santa Rosa, New Mexico to slightly north of Carlsbad, New Mexico (Figure 9; Sublette et al. 1990). Based on recent monitoring data, the current range is limited to a 190-mile section of the Pecos River from the Taiban Creek confluence to the Brantley Reservoir delta, a 42 percent reduction from its historical range (Davenport 2019). The current range is ultimately bounded by reservoirs (Sumner and Santa Rosa upstream and Brantley downstream), thus limiting potential for expanding the current distribution. Additionally, in reaches upstream of the Taiban Creek confluence and between Sumner and Santa Rosa Reservoirs, as well as downstream of Brantley Reservoir, habitat conditions are not well suited for the shiner and further limit possibilities for increasing its current range.

The action area occurs in an isolated watershed 2 miles from the nearest potential Bluntnose Shiner populations in the Pecos River to the east. The distance from the species and the isolated nature of the watershed of the proposed action will likely preclude any effects on the species.

Species 6: Pecos gambusia (*Gambusia nobilis*)

Species Status:

Gambusia is primarily a subtropical genus with the closest relatives of the Pecos gambusia occurring in Mexico and south Texas (U.S. Fish and Wildlife Service 1983). The Pecos gambusia is known principally from lower elevations, with the population at Ink Pot north of Roswell, New Mexico on Bitter Lake National Wildlife Refuge (BLNWR) representing the highest elevation (1087 meters (m)[3566 feet (ft)]) and northernmost area presently known to be occupied by the species (Figure 10). All populations, including those at historic and current locations, occur between 822 m (2697 ft) and 1187 m (3894 ft) in elevation, a range of only 365 m (1198 ft).

The action area occurs in an isolated watershed 30 miles from the nearest potential Pecos gambusia population at the Bitter Lake National Wildlife Refuge northwest of Roswell, NM. The distance of the action area from the species will likely preclude any effects of the project.

Species 7: Monarch Butterfly (*Danaus plexippus*)

Species Status:

The monarch, *Danaus plexippus*, is a species of butterfly globally distributed throughout 90 countries, islands, and island groups (Figure 11; U.S. Fish and Wildlife Service 2020). These butterflies are well known for their phenomenal long-distance migration in the North American populations. Descendants of these migratory monarch populations expanded from North America to other areas of the world where milkweed (their larval host plant) was already present or introduced. With the year-round presence of milkweed and suitable temperatures, many of these global monarch populations no longer migrate.

Two North American populations, the migratory populations located east and west of the Rocky Mountains, have been monitored at their respective overwintering sites in Mexico and California since the mid-1990s. While these populations fluctuate year-to-year with environmental conditions, these census data indicate long-term declines in the population abundance at the overwintering sites in both populations. These declining trends led to the petition of the U.S. Fish and Wildlife Service to list the monarch butterfly for protection under the Endangered Species Act of 1973, as amended.

The Monarch Butterfly may only be present near the action area during the spring breeding season. However, the area of disturbance is consistently mowed, precluding available habitat and will likely have no effect on the species.

Species 8: Pecos Sunflower (*Danaus plexippus*)

Species Status:

Pecos sunflower is a wetland plant that grows in areas with permanently saturated soils in the root zone (U.S. Fish and Wildlife Service 2005). These are most commonly desert springs and seeps that form wet meadows called cienegas. The word ‘cienega’ or ‘cienega’ is derived from the Spanish ‘cien aguas’ meaning hundred waters, which indicates a large area where water is seeping from the ground in numerous places. These are rare wetland habitats in the arid southwest region. This sunflower also can occur around the margins of lakes, impoundments and creeks. When Pecos sunflowers grow around lakes or ponds, these are usually impoundments or subsidence areas within natural cienega habitats. The soils of these desert wetlands are typically saline or alkaline because the waters are high in dissolved solids and high rates of evaporation leave deposits of salts, including carbonates, at the soils surface. Soils in these habitats are predominantly silty clays or fine sands with high organic matter content. Like all sunflowers, this species requires open areas that are not shaded by taller vegetation.

In New Mexico, Pecos sunflower occurs at 11 spring seeps and cienegas in the Roswell/ Dexter region of the Pecos River valley in Chaves County (Figure 12). Three of these wetlands support many thousands of Pecos sunflowers, but the remainder are smaller, isolated occurrences.

The action area occurs in an isolated watershed that historically harbored a population of Pecos Sunflower (Radke 1997); however, no individuals have been sited since 2006 (W. Knight pers. comm) and the closest wetland habitat is >0.3 miles from the action area and >0.6 miles from the historical population.

Species 9: Wright's marsh thistle (*Cirsium wrightii*)

Species Status:

Cirsium wrightii was historically known to occur in Arizona and New Mexico in the United States, and Chihuahua and Sonora in Mexico (Figure 13; US Fish and Wildlife Service 2017). The single location in Arizona was a historical 1851 collection from San Bernardino Cienega, which straddles the international border with Mexico, and no longer has suitable wetland habitat on the Arizona side of the line. There were ten historical occurrences in New Mexico; however, in a recent search effort at one of the sites (Lake County), the species was not found and another of the ten records (Rattlesnake Springs, Eddy County) is now thought to be a hybrid between *C. wrightii* and *C. texanum*. The status of the species in Mexico is presumed extirpated. There have been few verified historical collections, and the most recent site visit to Fronteras, MX and Cerro Angostura, MX indicated that the habitat had been mostly dried out and is considered no longer suitable. Therefore, *C. wrightii* has been extirpated from all previously known locations in Arizona, two historical locations in New Mexico, all known locations in Mexico, and was misidentified and likely not ever present in Texas. In New Mexico, there are eight general confirmed locations of *Cirsium wrightii* covering an area of approximately 43 hectares (ha) (106 acres (ac)): Santa Rosa, in Guadalupe County; Bitter Lake NWR, in Chaves County; Blue Spring, in Eddy County; La Luz Canyon, Karr/Haynes Canyons, Silver Springs, and Tularosa Creek, in Otero County; and Alamosa Creek, in Socorro County.

The action area occurs >30 miles from the nearest population of Wright’s march thistle (Bitter Lake National Wildlife Refuge) and will likely have no effect on the species.

DETERMINATIONS:

Summary Table:

Anticipated Effects	Determination	Species/CH
<i>No Effect</i>	This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species.	<ul style="list-style-type: none"> • Tricolored Bat (<i>Perimyotis subflavus</i>) • Lesser Prairie-chicken (<i>Tympanuchus pallidicinctus</i>) • Northern Aplomado Falcon (<i>Falco femoralis septentrionalis</i>) • Piping Plover (<i>Charadrius melodus</i>) • Pecos Bluntnose Shiner (<i>Notropis simus pecosensis</i>) • Pecos Gambusia (<i>Gambusia nobilis</i>) • Monarch Butterfly (<i>Danaus plexippus</i>) • Pecos Sunflower (<i>Helianthus paradoxus</i>) • Wright’s Marsh Thistle (<i>Cirsium wrightii</i>)
<i>May Affect, but Not Likely to Adversely Affect</i>	This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals of listed species and/or designated critical habitat.	
<i>May Affect and Likely to Adversely Affect</i>	This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species and/or designated critical habitat.	

<p><i>May affect but Not Likely to Jeopardize candidate or proposed species/critical habitat</i></p>	<p>This determination is appropriate when the proposed project may affect, but is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat.</p>
<p><i>Likely to Jeopardize candidate or proposed species/critical habitat</i></p>	<p>This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat.</p>

Supervisor at originating station

Signature and date: **WADE WILSON**  Digitally signed by WADE WILSON
Date: 2023.12.07 14:49:55 -07'00'

FIGURES

Figure 1. Overview of the proposed action area (blue polygon) at the Southwestern Native Aquatic Resources Recovery Center 1 mile west of Dexter, NM.



Figure 2. Detailed overlay (in red) of proposed construction sites of raceways, ponds, and research building at the Southwestern Native Aquatic Resources Recovery Center, Dexter, NM (A). The red arrows denote photopoint of the picture in panel B.



Figure 3. Detailed location of proposed raceways and ponds including water and drain lines.

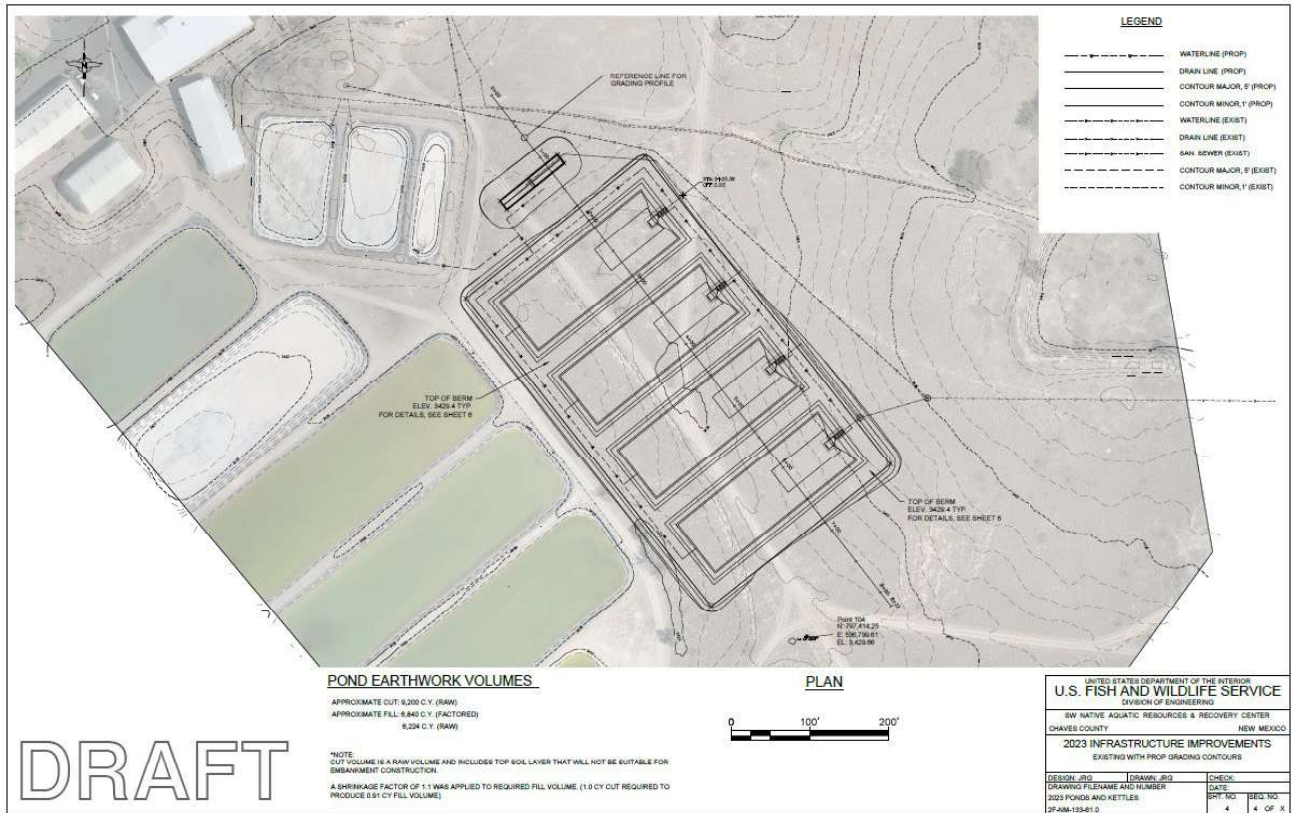


Figure 4. Detailed location of proposed research building add on.



Figure 5. Current range map of Tricolored Bat (*Perimyotis subflavus*). The Project location is denoted with a red star.



Figure 6. Current range map of Northern Aplomado Falcon (*Falco femoralis septentrionalis*) by US county. The Project location is denoted with a red star.

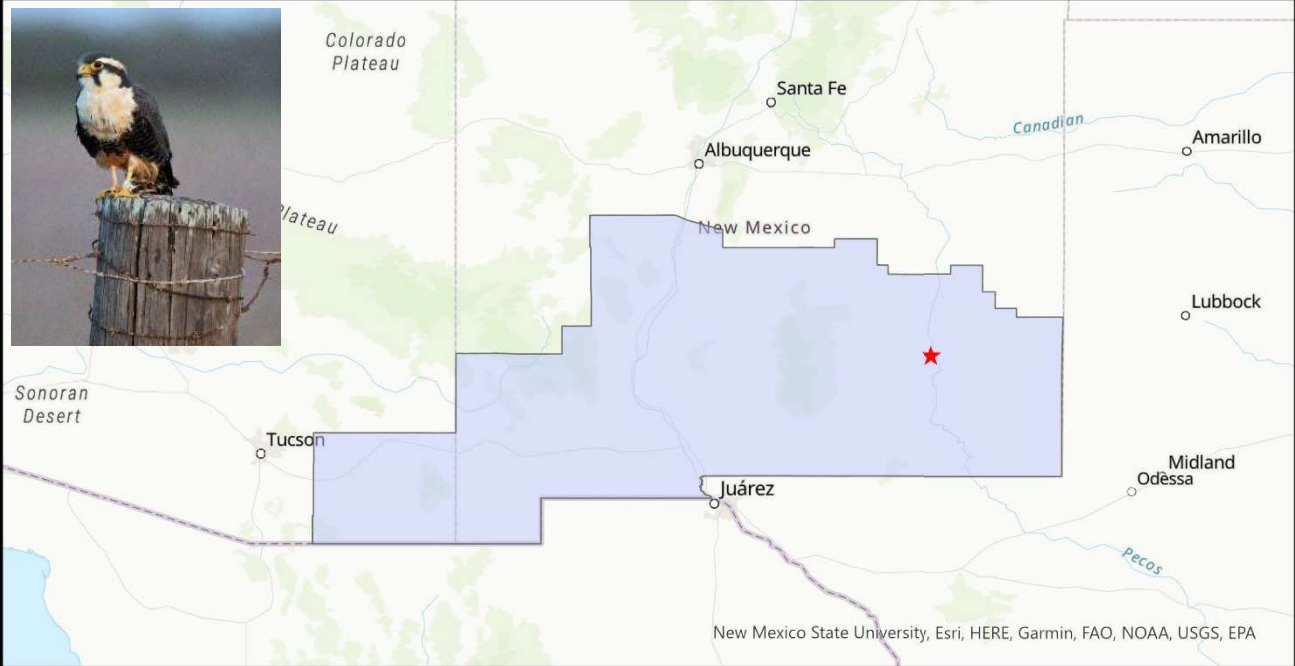


Figure 7. Current range map of Lesser Prairie-chicken (*Tympanuchus pallidicinctus*) by US county. The Project location is denoted with a red star.



Figure 8. Current range map of Piping Plover (*Charadrius melodus*) by US county. The Project location is denoted with a red star.

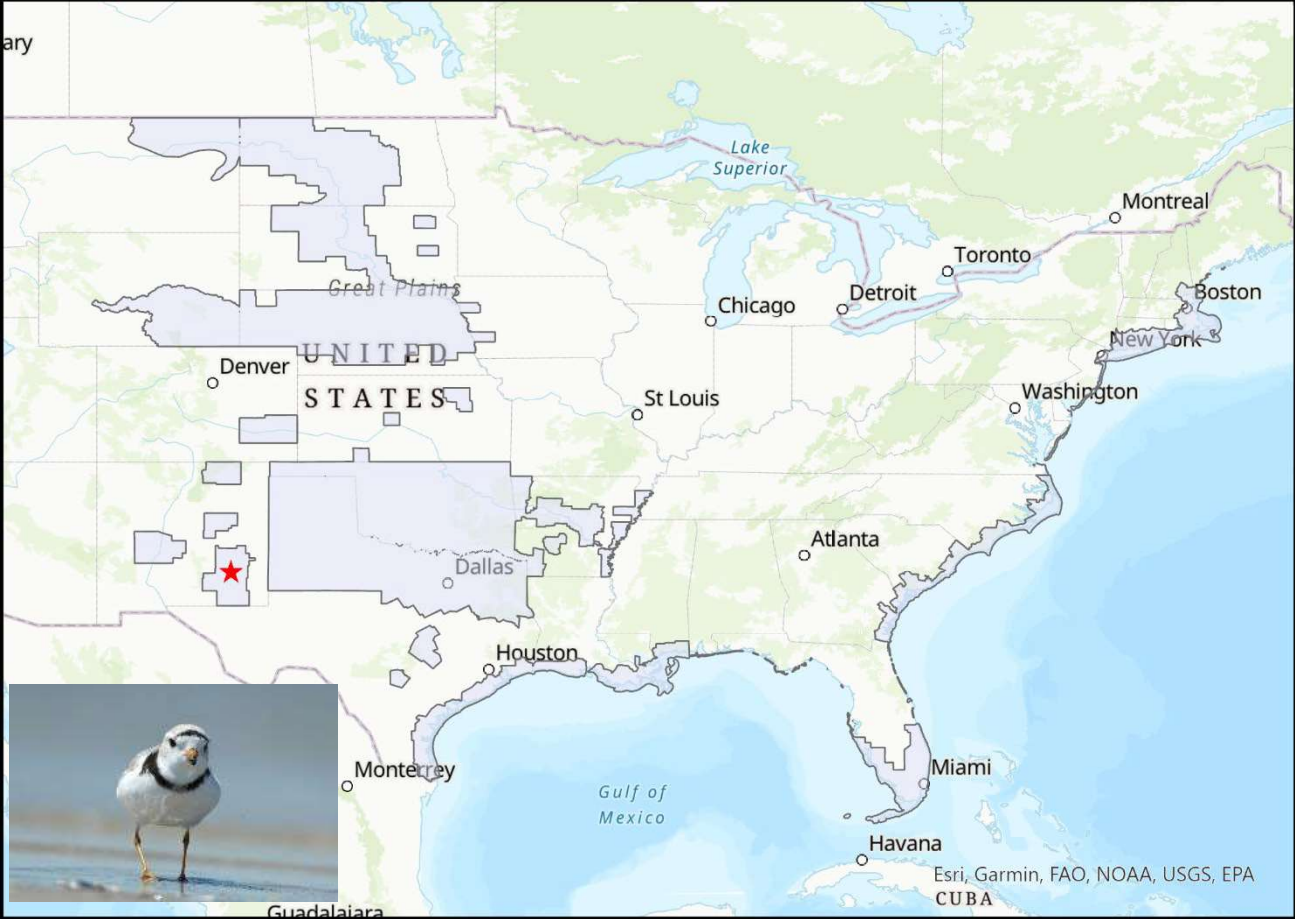


Figure 9. Current range map of Pecos Bluntnose Shiner (*Notropis simus pecosensis*) by US county. The Project location is denoted with a red star.

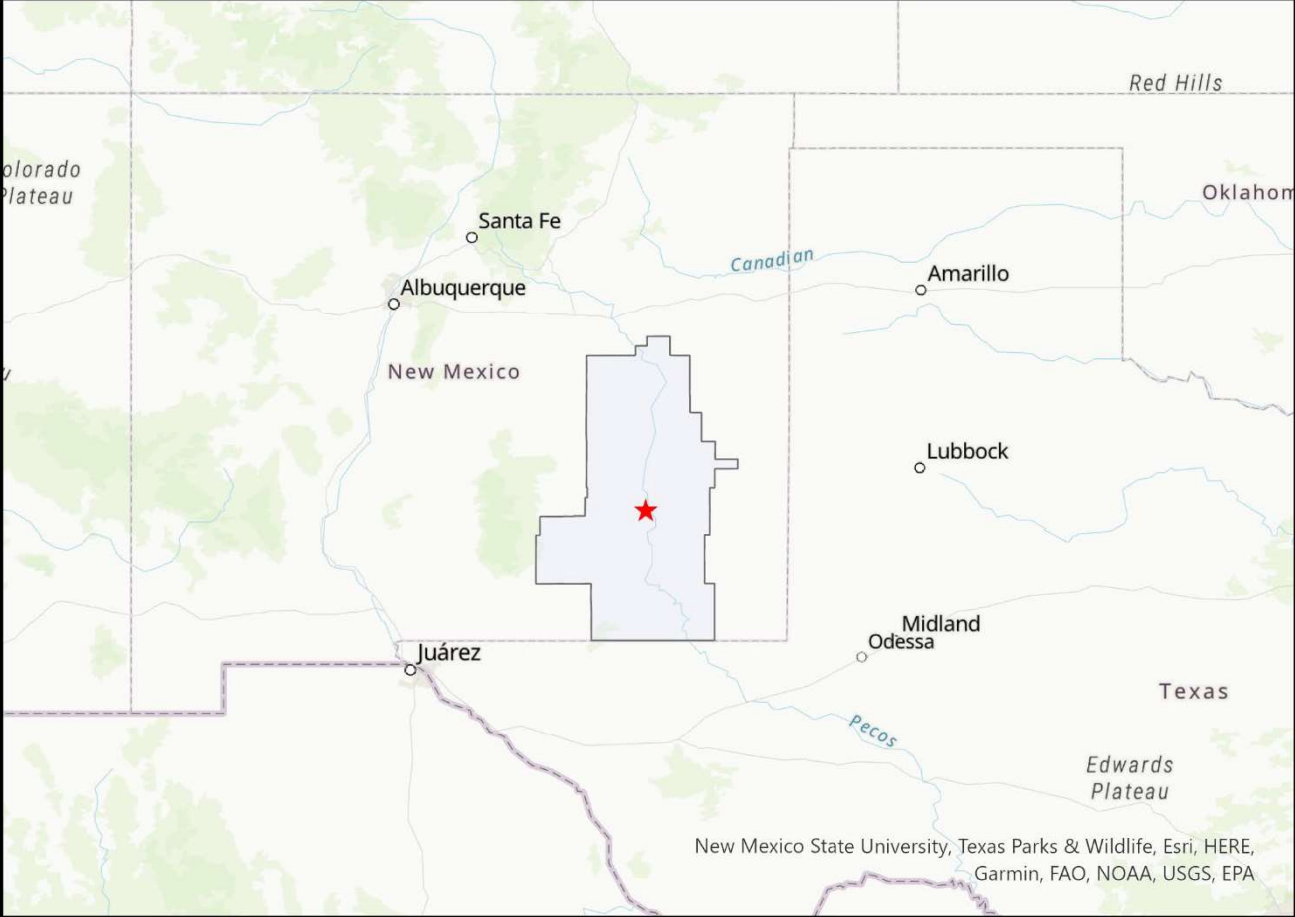


Figure 10. Current range map of Pecos Gambusia (*Gambusia nobilis*) by US county. The Project location is denoted with a red star.



Figure 11. Current range map of Monarch Butterfly (*Danaus plexippus*) by US county. The Project location is denoted with a red star.



Figure 12. Current range map of Pecos Sunflower (*Helianthus paradoxus*) by US county. The Project location is denoted with a red star.

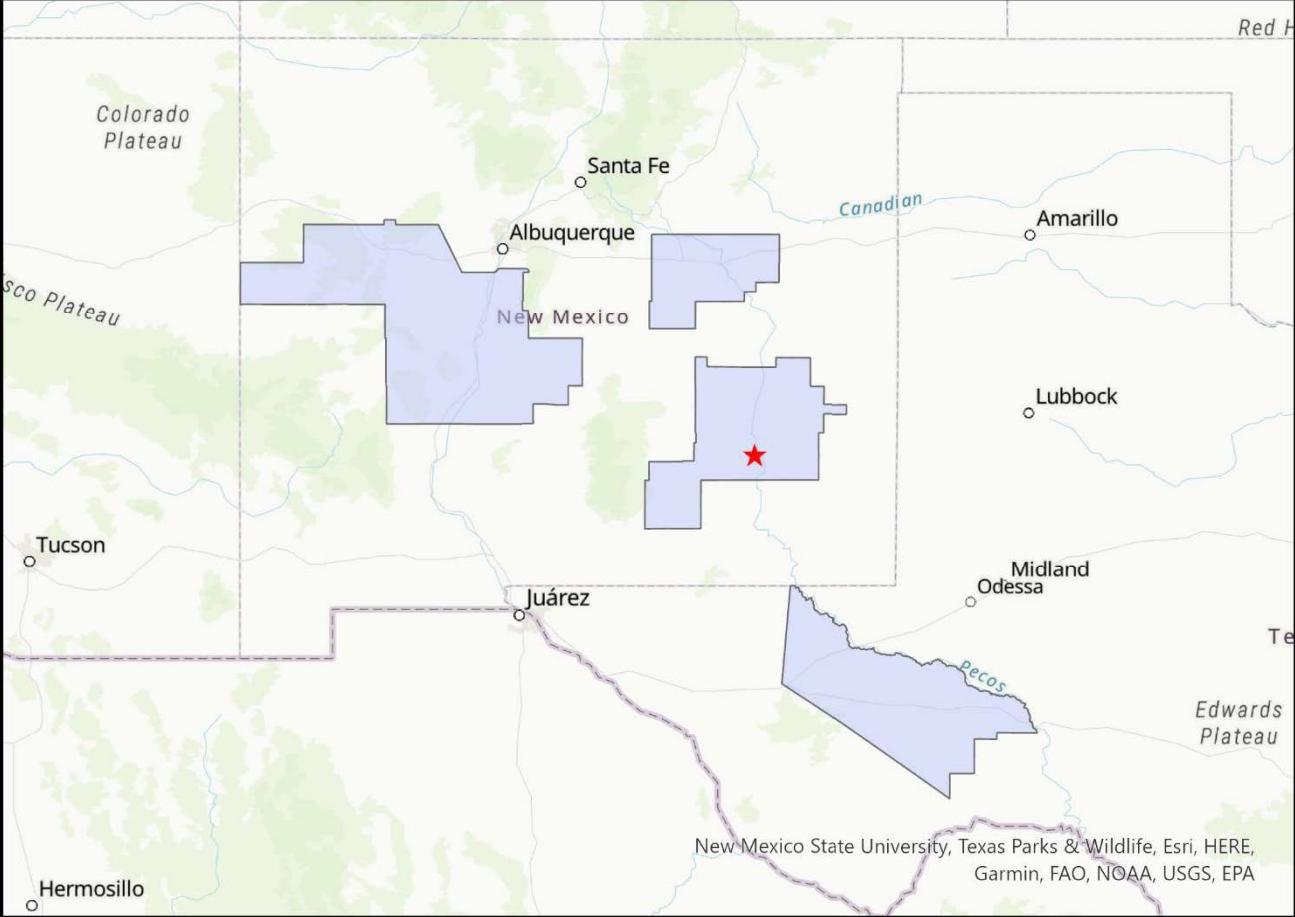
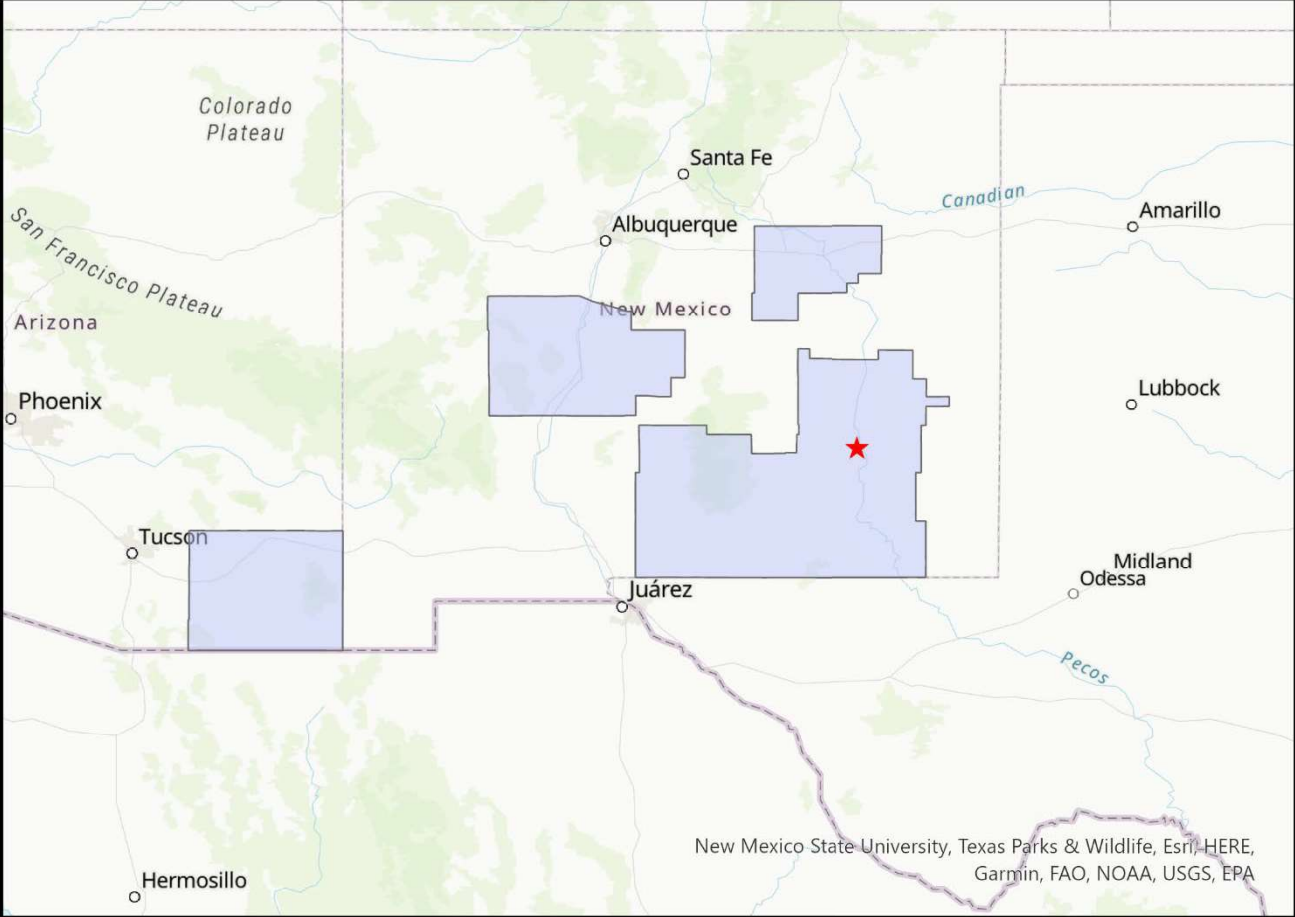


Figure 13. Current range map of Wright’s Marsh Thistle (*Cirsium wrightii*) by US county. The Project location is denoted with a red star.



REFERENCES CITED

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- U.S. Fish and Wildlife Service. 2017. Species status assessment report for *Cirsium wrightii*(Wright's Marsh Thistle), Version 1.0. October 2017. Albuquerque, NM.
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- U.S. Fish and Wildlife Service. 2021. Species Status Assessment Report for the Tricolored Bat (*Perimyotis subflavus*), Version 1.1. December 2021. Hadley, MA.
- U.S. Fish and Wildlife Service. 2022. Species status assessment report for the lesser prairie-chicken (*Tympanuchus pallidicinctus*), Version 2.3. 109 pp. + Appendices.