



ENVIRONMENTAL ASSESSMENT CELLULARONE TELECOMMUNICATION TOWER SITE MANY FARMS

CELLULARONE



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Environmental Assessment

October 2023

Many Farms West Telecommunications Tower
Many Farms Chapter, Navajo Nation; Apache County, AZ

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Acronyms:

ADWR	Arizona Department of Water Resources
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management

BMP	Best Management Practice
BRCF	Biological Resource Compliance Form
CE	Categorical Exclusion
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CLUP	Community Land Use Plan
CRI	Cultural Resource Inventory
CWA	Clean Water Act
DNR	Navajo Nation Division of Natural Resources
EA	Environmental Assessment
ESA	Endangered Species Act
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
IPaC	Information Planning and Consultation System
GLDD	Navajo Nation General Land Development Department
GWSI	Ground Water Site Inventory
HEARTH	Helping Expedite and Advance Responsible Tribal Homeownership Act
IWMP	Integrated Weed Management Plan
LGA	Local Governance Act
MBTA	Migratory Bird Treaty Act
MRDS	Mineral Resource Data System
NAAQS	National Ambient Air Quality Standards
NAMLRD	Navajo Nation Abandoned Mine Land Reclamation Department
NEPA	National Environmental Policy Act
NESL	Navajo Endangered Species List
NFD	Navajo Forestry Department
NHPA	National Historic Preservation Act
N.N.C.	Navajo Nation Code
NNDFW	Navajo Nation Department of Fish and Wildlife
NNEPA	Navajo Nation Environmental Protection Agency
NNHP	Navajo Natural Heritage Program
NNHHPD	The Navajo Nation Heritage and Historic Preservation Department
NNSWQS	Navajo Nation Surface Water Quality Standards
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NTUA	Navajo Tribal Utility Authority
RCRA	Resource Conservation and Recovery Act
TCP	Traditional Cultural Properties
TES	Threatened, Endangered, or Sensitive
TSCA	Toxic Substance Control Act
USDA	United States Department of Agriculture
USDOI	United States Department of the Interior
USEPA	United States Environmental Protection Agency
USFWS	US Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
WRCC	Western Regional Climate Center

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1.0 Introduction

1.1 Summary

This Environmental Assessment (EA) was prepared for CellularOne of Northeastern Arizona, a division of Smith Bagley Inc, of Show Low, Arizona. CellularOne is proposing to construct a 180-foot self-supporting telecommunications lattice tower on a 50-foot x 50-foot lease area in the Many Farms Chapter of the Navajo Nation. The site is located on Tribal Trust Land in Arizona, just north of Chinle. CellularOne will apply for a telecommunications site lease from the Navajo Nation General Land Development Department (GLDD). In addition, CellularOne will apply for a license to operate the telecommunications tower from the Federal Communications Commission (FCC). This EA has been prepared to meet both agencies' requirements.

Under the Navajo Nation General Leasing Regulations of 2013 (CO-53-13), The GLDD issues land leases and permits for agriculture, public relations, education, recreation, telecommunications, and residential sites on fee and trust land. The environmental review requirements are set forth in Subchapter 8 of the leasing regulations. The GLDD will approve or deny the Telecommunications Site Lease application.

All facilities constructed by or for the FCC licenses or owned by registrants must comply with the FCC's environmental regulations for implementing the National Environmental Policy Act (NEPA) process. *CellularOne* will submit an Environmental Notification with an 854 Form file number in accordance with *47 CR Part 1 Subpart I-Procedures Implementing NEPA*. The FCC will approve or deny a license to operate the telecommunications tower.

1.2 Purpose and Need

Broadband, or highspeed internet, is limited in many communities of the Navajo Nation such as the Many Farms Chapter. The purpose of the project is to allow CellularOne to expand infrastructure that will provide additional coverage and internet connectivity for this area. This will improve wireless and internet communication services for amenities like distance learning, telehealth, telework, e-commerce, public safety, and emergency response, as well as general connection service for the Chapter and travelers along U.S. Route 191.

1.3 Location

The telecommunication tower site is located in the Many Farms Chapter of the Navajo Nation in northeastern Arizona, about 60 miles from the Four Corners National Monument. The land is in Tribal Trust status and the site can be reached by Indian Route 59 via U.S. Route 191 north from Chinle. The site is accessible from Navajo Route 8082 from the Many Farms Chapter House. An access to the road is proposed from an existing dirt road near the site. **Table 1** provides the size, coordinates, legal location, and United States Geologic Survey (USGS) 7.5-minute map locations of the project area. **Figure 1** presents a general location map of the project area and access road.

Table 1. Project Location Information				
Tower Site/Number	Size	Center Lat/Long Coordinates	Legal Description	USGS 7.5' Quadrangle
Many Farms West/AZAP0385A	50-feet x 50-feet	36° 20'47.85"N 109°41'48.39"W	Section 18, T. 34 N, R. 25 E	Many Farms SW, AZ (1968)

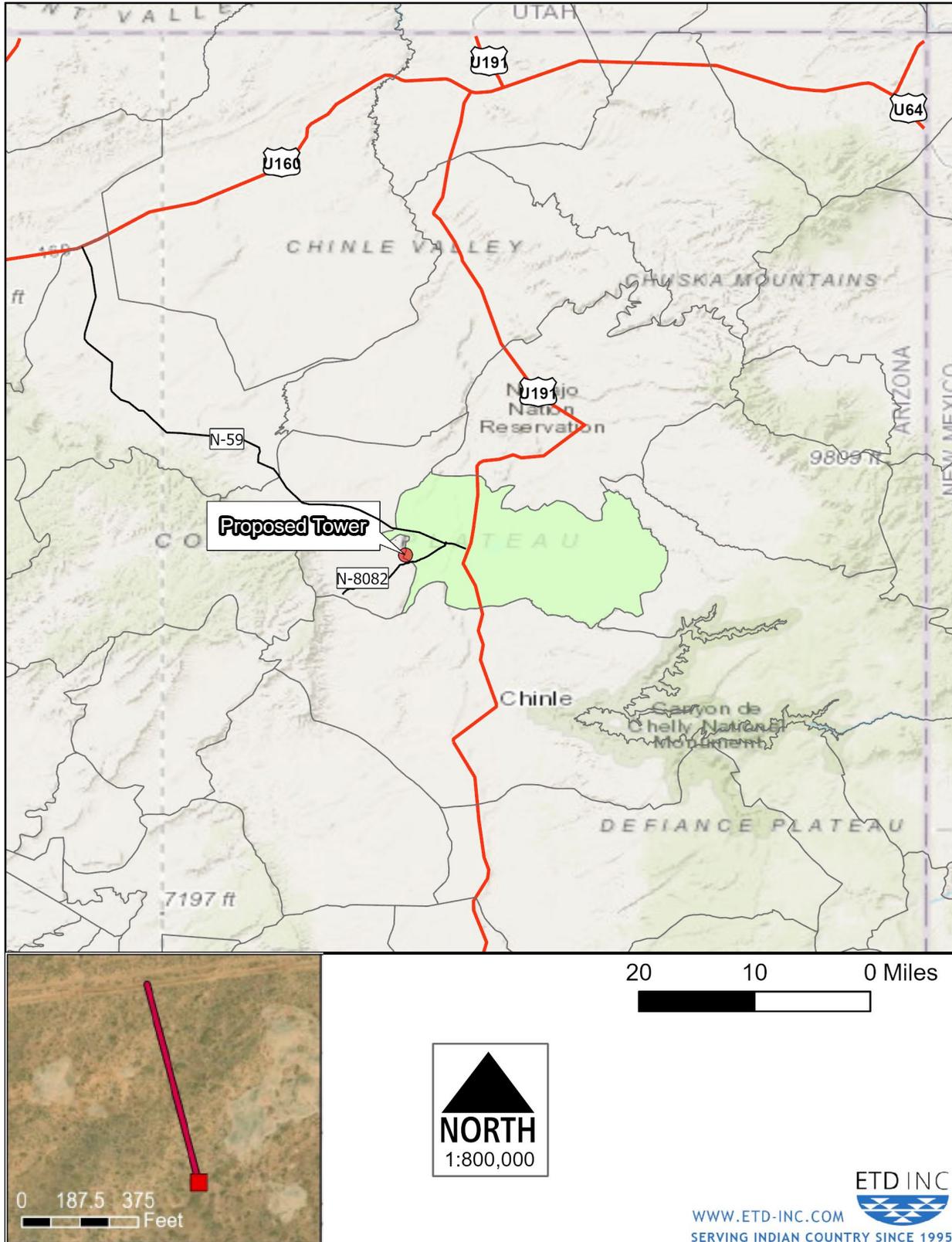


FIGURE 1. GENERAL LOCATION OF PROJECT AREA AND ACCESS ROAD.

2.0 Proposed Action and No-Action Alternative

This chapter describes the Proposed Action and the No-Action Alternative. No other alternatives were identified for the project.

2.1 Proposed Action

Under the Proposed Action, *CellularOne* will construct a self-supporting 180-foot telecommunications lattice tower on a 50-foot x 50-foot lease area in northeastern Arizona. The project sponsor will work with the Navajo Tribal Utility Authority (NTUA) to acquire a power service line extension to the site.

Project activities will involve: (1) grading and clearing surface vegetation in the lease area; (2) erecting forms and pouring concrete pads in the lease area; (3) installing the 180-foot self-supporting lattice tower; and (4) constructing a fence around the lease area. The estimated timeframe for completing the installation of the tower is one month. Construction equipment will include a mini-excavator, bobcat, and small crane for the tower. No borrow material will be necessary.

There are several processes and factors involved in the location of a new site to be added to the network. First, an objective for coverage is determined. A “search ring” is then drafted, typically by outlining a circle of a given radius around the ideal candidate location. The search ring is delivered to the development team, where site acquisitionists work to find the best candidate within the ring. The candidate is compared against the coverage objectives of the search ring. All aspects of the candidate are considered – how well the coverage objectives are met, can the candidate connect to the rest of the network via microwave backhaul, is there access to the site, and how close is commercial power. At that point the candidate is pursued for leasing and eventual cell site construction. The location of this site was determined to be ideal and therefore no alternative sites were further considered for evaluation in this report.

2.2 No-Action Alternative

Under the No-Action Alternative, the proposed tower site would be denied and there would be no change or impact to the existing natural or human environment. *CellularOne* would continue to provide communication services in other areas of the Navajo Nation, but this area of the reservation would continue to have limited internet for services like distance learning, telehealth, e-commerce, and access to public safety services and emergency response.

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3.0 Affected Environment

3.1 Introduction

This chapter describes the current resources and conditions of the project area in order to establish baseline conditions upon which the potential impacts are evaluated in **Chapter 4**. Resources are described according to land, water, atmospheric, biotic, and cultural resources, socioeconomics, resource use patterns, and other values.

3.2 Land Resources

This section discusses the geology and mineral resources, topography, and soils in and around the project area.

3.2.1 Geology and Mineral Resources

The project site is situated on the Glen Canyon Group from the late-to-early Jurassic period, which consists of conspicuous red, cross-bedded Wingate Sandstone and cross-bedded, eolian, red to buff Navajo Sandstone that can form prominent cliffs in northern Arizona. These two sandstone types are interspersed with variably colored siltstone, silty sandstone, and sandstone of the Kayenta and Moenave Formations. To the west, younger layers of sedimentary rocks of the Late Cretaceous Period cap Black Mesa and overlay older sections of the Morrison Formation, San Rafael Group, Glen Canyon Group, and Chinle Formation, which are exposed by erosion in the Chinle Valley. To the east, exposed units increase in age until the Chuska Mountains expose younger uplifted layers. Further east, Holocene surficial deposits associated with modern fluvial patterns are found. See **Figure 2** for representation of geologic units in the area.

The Navajo Nation Abandoned Mine Land Reclamation Department (NAMLRD) keeps record of abandoned uranium mines on the Navajo Nation. This source indicates there are no active or abandoned uranium mines within 5 miles of the site (NAMLRD, 2022). USGS maintains a database of mine sites in their Mineral Resource Data System (MRDS). According to this source, there are no mines within 1 mile of

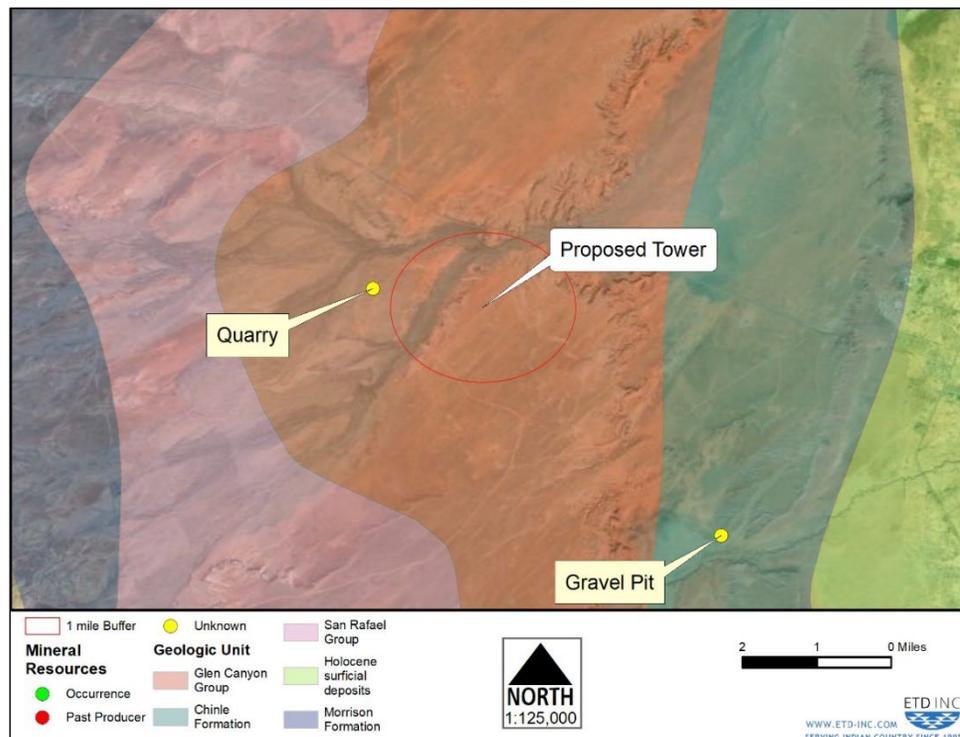


FIGURE 2. GEOLOGY AND MINERAL RESOURCES OF PROJECT AREA.

the proposed tower site. In the surrounding area, there is a stone quarry (USGS Deposit ID 10185634) 1.2 miles to the west and a gravel pit (USGS Deposit ID 10112935) 4 miles to the southeast. Neither site is considered economically significant, and their production status is unknown (USGS, 2023). See **Figure 2** for locations of these sites.

3.2.2 Topography

The proposed project site is in a mountainous and mesa-filled area of northeastern Arizona on the Colorado Plateau. The eastern side is flanked by the Chuska Mountains, which rise to heights of 10,000 feet above main sea level (amsl). The nearly 8,000-foot-high Defiance Plateau continues south of the mountains, and is intersected by Canyon De Chelly, dipping to 6,000 feet elevation amsl. North of the area, the San Juan River flows to the west just above the Utah Border. To the west, Black Mesa has an elevation of over 7,000 feet amsl and is outlined by numerous broken mesas on its eastern border. The general topography slopes gradually down through the project area to the east.

The site itself is perched on Carson Mesa, at 5,600 feet amsl. The mesa sits about 300 feet above the Many Farms Chapter center. It is north-sloping and subducted by the Ventana Mesa on its southern side and split by the Chinle Valley. The slopes from the mesa are gradual and continue eastward down to the Many Farms Chapter.

3.2.3 Soils

Soil information was collected using the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey. At the Many Farms West Tower site, there was 1 soil complex identified: the Sheppard-Needle-Rock outcrop, with 1 to 12 percent slopes. These soils are composed of eolian sands derived from sandstone over residuum weathered from sandstone. Ecological sites associated with these soils include R035XB204AZ - Sandstone Upland 6-10" p.z. and R035XB217AZ - Sandy Upland 6-10" p.z (NRCS 2023a). The sandy soil types and rock outcrops within the project vicinity have restricted water holding capacity. Typical profiles of these soils include fine sand, sand, and bedrock. They are well drained to excessively drained and low to negligible runoff class. There is no frequency of flooding or ponding, and the soils are not considered to be prime farmland (NRCS, 2022).

3.3 Water Resources

This section describes the surface water, wetlands, groundwater, and floodplains found in and around the project area.

3.3.1 Surface Water and Wetlands

Rivers/Drainage Paths. According to the USGS Watershed Boundary Dataset, the project area is within the 16-digit Hydrological Unit Code 12-140802041103 Chinle watershed boundary within the Upper Colorado River Region (USGS, 2021). The general drainage pattern of this region is northward towards the San Juan River. In the project area, drainage is eastward off the mesas to the Many Farms Lake. Drainages near the site include Black Mountain Wash, Hipbone Wash, Chinle Wash, and several other unnamed washes (See **Figure 3**).

Lakes/Springs. The Many Farms Lake, 6 miles from the site, was once a large body of water, hosting several species of fish and wildlife. Today, the lake is considered ephemeral due to the continued drought of the west. See **Figure 3**.

Wetlands. According to the National Wetlands Inventory, wetlands near the project area include Black Mountain Wash, Chinle Wash, Red Water Wash, Sheep Dip Creek, and Many Farms Lake. The nearest wetland feature to the project area is an unnamed, intermittently flooded riverine streambed located approximately 0.42 miles west of the project area (See **Figure 3**) (USFWS, 2021).

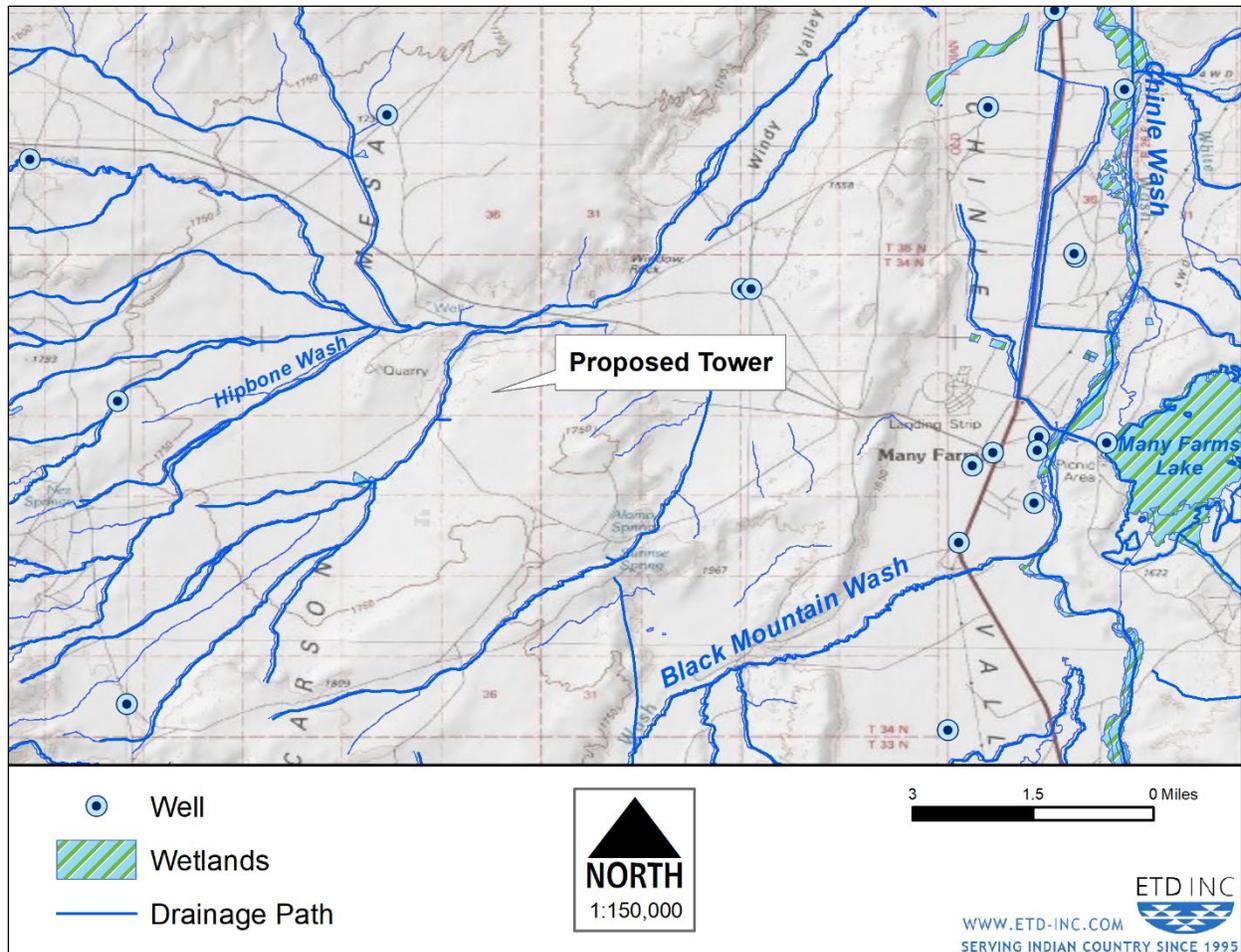


FIGURE 3. WATER RESOURCES OF PROJECT AREA.

3.3.2 Groundwater

Generally, the aquifers in the Colorado Plateau area are composed of permeable, moderately to well-consolidated sedimentary rocks. These rocks range in age from Permian to Tertiary and vary greatly in thickness, lithology, and hydraulic characteristics (Leving, GW et al., 1996). According to information from the Arizona Department of Water Resources (ADWR) Ground Water Site Inventory (GWSI) and data prepared for the USEPA through an interagency agreement with the US Army Corps of Engineers, there are no wells within 1 mile of the project area (See **Figure 3**). The nearest well to the project area is 10T-253, a tribally owned and operated well with a depth of 1425 feet located 2.8 miles to the east. Wells in the surrounding area pull water from local aquifers of the Navajo Sandstone of Glen Canyon Group and Shinarump Member of the Chinle Formation at depths of 360-1508 feet. The wells are operated by the tribe and NTUA (ADWR, 2022; USACE, 2018).

3.3.3 Floodplains

The Federal Emergency Management Agency (FEMA) provides floodplain hazard maps called Flood Insurance Rate Maps (FIRMs), which are viewable on the National Floodplain Hazard Layer online viewer. Most of the Navajo Nation has not been surveyed by FEMA for floodplain hazards. The project area is within FEMA FIRM panel 04001C1225E, which has not been surveyed or printed. The project site is located on a mesa below a larger mesa to the west which drops further in elevation to the east. The closest stream is the Chinle Wash, which is fed by the washes that run off the mesa. The soil report of the area indicated that it is not likely to flood. It is unlikely that the project area is within a floodplain (FEMA, 2021)

3.4 Atmospheric Resources

This section describes the air quality/visibility and climate change conditions within the project area.

3.4.1 Air Quality/Visibility

Visibility is a critical resource value in the southwest, particularly because Navajo Nation is located near National Parks, Recreation, and wilderness areas where visibility requirements are most stringent. The National Ambient Air Quality Standards (NAAQS) establishes ambient levels for criteria pollutants using health and welfare-based criteria. While air quality is “unclassified” for NAAQS on the Navajo Nation, it is assumed to be in-attainment of these standards according to maps posted on the USEPA website (USEPA, 2020). Information on this website is provided to USEPA by the Navajo Nation Environmental Protection Agency (NNEPA), who has air quality monitoring stations around the Navajo Nation that monitor for criteria pollutants under NAAQS. Air quality summaries presented by this source corroborate that the area is in-attainment (AirNow, 2022).

3.4.2 Climate Change

The Western Regional Climate Center maintains climate data summaries collected at a number of cooperative stations across that nation; the nearest co-op weather station is Many Farms School (#025204). Based on data from this station, the average annual precipitation in this region is 7.10 inches. The highest monthly average maximum temperature occurs in July, reaching 92.5°F, and the lowest monthly average minimum temperature occurs in January, reaching 17.0°F. Winds in this region are generally from the west and southwest (WRCC, 2021).

Human activities (primarily the burning of fossil fuels) have fundamentally increased the concentration of greenhouse gases in Earth’s atmosphere, warming the planet (NASA, 2021). Both Arizona, New Mexico, and Utah’s climate has warmed approximately 2°F in the last century, and this trend is expected to continue. These increases have been linked to recent swings on the Navajo Nation between intense drought and unusually wet periods. Ongoing drought and changes to climate in the region have also impacted livestock health through increased stress of availability of forage. Throughout the southwestern United States, heat waves are becoming more common, snow is melting earlier in spring, and unusual weather events are predicted to become more likely. In the coming decades, changing the climate is likely to decrease the flow of water in the Colorado River, threaten the health of livestock, increase the frequency and intensity of wildfires, and convert some rangelands to desert (USEPA, 2016). Climate change threatens natural resources and the public health of tribal communities. Rising temperatures and increasing drought are likely to decrease the availability of certain fish, game, and wild plants on which the Navajo and other tribes have relied for generations. Water may be less available for domestic consumption, especially for those who are not served by either municipal systems or reliable wells. This

includes about 30% of the people on the Navajo Nation, who must haul water to meet daily needs. Recurring drought and rising temperatures may also degrade the land itself. In western Navajo Nation, for example, the Great Falls Dune Field has advanced almost a mile in the last 60 years, threatening roads, homes, and grazing areas. Extreme heat may also create health problems for those without electricity, including about 40% of the people on the Navajo reservation (Nania et al., 2014).

3.5 Biotic Resources

This section discusses vegetation, wildlife, threatened and endangered species within the project area. A Biological Evaluation (BE) was conducted by Jean Marie Rieck, Senior Wildlife Biologist of JE Fuller Hydrology & Geomorphology in April of 2023, which is also summarized here.

3.5.1 Vegetation

The project area is in the Plains and Great Basin Grassland biotic community. It is characterized by mixed or short-grass communities; the landscape is usually dominated by species like blue grama and other perennial grasses in scattered populations. Certain shrubs like saltbush, sagebrush, and winterfat can also be seen, but are much less prominent. Like other grassland communities, it is at risk of invasion from junipers. Site surveys of the area identified the following plants around the project area; Mormon-tea, rubber rabbitbrush, broom snakeweed, prickly pear, narrowleaf yucca, rose heath, plains spring-parsley, evening primrose, scarlet globemallow, puncturevine, blue grama, James' galleta, and sand dropseed. Russian thistle, a non-native, invasive species, was also identified during field survey (JE Fuller, 2023).

3.5.2 Wildlife

The project area provides potential habitat for a variety of terrestrial wildlife species. Bird species observed during survey include horned lark, common raven, and American Kestrel. Multiple kangaroo rat and mouse burrows were observed in and around the site as well as local domestic dogs. The site appeared to be heavily grazed (JE Fuller, 2023).

3.5.3 TES Species

Section 7 of the Federal Endangered Species Act (ESA) requires that federally funded projects and federally approved projects must have a determination of whether the continued existence of Federally listed endangered or threatened species are likely to be affected and whether projects will result in their critical habitats being destroyed or adversely modified. Similarly, the Navajo Endangered Species List (NESL) requires comparable determination for tribally listed species. The Navajo Nation Department of Fish and Wildlife (NNDFW) is responsible for ensuring compliance with the NESL, the ESA, and laws that protect birds under the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA).

JE Fuller Hydrology & Geomorphology (JE Fuller) sought information regarding special-status species that are known or have the potential to occur in or around the project area under NNDFW Data Request #23etd101. A Navajo Nation Endangered Species List (NESL) was provided upon request from NNDFW on March 23, 2023 (NNDFW, 2023, available in **Appendix A**). Many species listed by US Fish & Wildlife Service (USFWS) as threatened, endangered, or candidate under the ESA and birds protected under the MBTA and BGEPA were also included in the NNDFW consultation letter. Additionally, a list of threatened, endangered, or candidate species was also obtained from the US Fish and Wildlife Service (USFWS) Information Planning and Consultation System (IPaC) (USFWS, 2023), which is included in **Appendix B**.

The species list obtained from NNDFW included potential and known federally and tribally protected species from the proposed Many Farms West site as well as two other sites proposed in nearby areas. The species are delineated by site location and status and listing of species; the full list of species for all three sites is presented in **Appendix A and B**. TES species listed by NNDFW as known to occur between 1 and 3 miles of the Many Farms West site includes golden eagle. Species listed as potentially occurring within the Many Farms West project area include the following: golden eagle (*Aquila chrysaetos*), ferruginous hawk (*Buteo regalis*), burrowing owl (*Athene cunicularial*), mountain plover (*Charadrius montanus*), banner-tailed kangaroo rat (*Dipodomys spectabilis*), kit fox (*Vulpes macrotis*), alcove death camas (*Anticlea vaginatus*), Navajo sedge (*Carex specuicola*), Rydberg’s thistle (*Cirsium rydbergii*), and alcove bog orchid (*Plantanthera zothecina*) (NNDFW, 2023). The USFWS IPaC list identified Mexican spotted owl (*Strix occidentalis lucida*), yellow-billed cuckoo (*Coccyzus americanus*), northern Mexican gartersnake (*Thamnophis eques megalops*), razorback sucker (*Xyrauchen texanus*), monarch butterfly (*Danaus plexippus*), and Navajo sedge (*Carex specuicola*) as having potential habitat in the vicinity of the project area (USFWS, 2023).

Existing literature was reviewed for each species to determine whether specific species and/or their habitat may be affected by the proposed project. JE Fuller conducted a habitat evaluation survey of the proposed tower site on March 31, 2023, to assess the presence or absence of habitat within the project area. The habitat evaluation survey was conducted within a 200-foot buffer of the 50-foot x 50-foot lease area (JE Fuller, 2023). Species listed by USFWS and NNDFW were evaluated and are listed in **Table 2**. Rows highlighted in blue indicate species that were retained for detailed analysis. A discussion of the potential effects of the Proposed Action for each retained species is provided in **Chapter 4**. The Navajo Nation is divided into six types of wildlife areas to direct development to areas where impacts to wildlife and their habitats will be less significant. The project area is located within land designated as Area 3, which is considered to be a “less sensitive area” with few restrictions on development (NNDFW, 2023).

Species	Status	Habitat Analysis	Occurs Within 1-3 Miles of Project
Golden Eagle	NESL G3 BGEPA	Golden eagle requires tall trees or cliff ledges for nesting purposes and uses forest clearings and open grasslands for foraging. This species generally occupies cliff ledges composed of sandstone, limestone, or volcanic rock and prefers to nest on ledges typically higher than 30 meters at elevations between 4,000- and 10,000-foot elevation (AGFD, 2022; Mikesic, 2008). This species is listed as occurring in the vicinity of the project areas (NNDFW, 2023) and is retained for analysis .	Yes, listed as occurring between 1 and 3 miles of the Many Farms site
Ferruginous hawk	NESL G3	Ferruginous hawks are found in badlands, flat or rolling desert grasslands and desert scrublands. Their distribution extends from North Dakota to northern Texas and west to Nevada. On the Navajo Nation, ferruginous hawks can be found year-round. Nesting habitat includes small buttes, short cliffs (<30 meters in height), or rock pinnacles, and occasionally in the tops of trees	No, but listed as potentially occurring in the vicinity of the

		(Mikesic, 2008, AGFD, 2013). This species is listed as occurring in the vicinity of the project areas (NNDFW, 2023) and is retained for analysis.	Many Farms site.
Burrowing owl	NESL G4	A suitable nest burrow is a critical requisite for burrowing owls, and the species rarely dig their own burrows (Mikesic, 2008). Burrowing owls favor areas of flat open ground with very short grass or bare soil; and prairie-dog towns or other burrowing fossorial mammal populations that prepare ideal habitat for this owl (AGFD 2022). This species is listed as potentially occurring in the vicinity of the project areas (NNDFW, 2023) and is retained for analysis.	No, but listed as potentially occurring in the vicinity of the Many Farms site.
Mountain Plover	NESL G4	Mountain plover is listed as potentially occurring within or near the project area but is not documented as occurring within 3 miles of the project area (NNDFW, 2023). This species typically nests in flat to slightly rolling expanses of grassland, semi-desert, or badland, in areas with short, sparse vegetation, extensive bare ground, and locations with ground disturbance (e.g., grazed) (Mikesic, 2008). This species is listed as potentially occurring in the vicinity of the project areas (NNDFW, 2023) and is retained for analysis.	No, but listed as potentially occurring in the vicinity of the Many Farms site.
Mexican spotted owl	NESL G3, LT	Historical and current range of the species includes Utah, Colorado, Arizona, New Mexico, west Texas, and of Mexico between 2,700-10,000 feet elevation, with ideal habitat primarily between 5,500-7,000 feet elevation. Mexican spotted owl is usually found in cool microclimates of rocky canyons and dense closed-canopy forests. Forests used for roosting and nesting often contain mature or old growth stands characterized by multi-layered structure of mixed-conifer or pine/oak forest. There is no cool microclimate narrow canyon or multi-storied mixed conifer forest habitat representing suitable habitat for the species within the project area (AGFD, 2023; Mikesic, 2008). No further analysis of this species is provided.	No, but listed as potentially occurring in the vicinity by USFWS.
Yellow-billed cuckoo	LT	Yellow-billed cuckoo is found mainly in mature cottonwood-willow stands, and to a lesser extent in willows or isolated cottonwoods mixed with tall mesquites. It is also found in streamside cottonwood, willow groves, and larger mesquite bosques for migrating and breeding. Rarely a transient in xeric desert or urban settings (AGFD, 2022). Breeding may occur at all elevations on the Navajo Nation but is currently only known to occur along the San Juan River. Potential habitat may also occur along other canyons and streams with appropriate habitat (Mikesic, 2008). There are no suitable riparian or streamside habitats within the project area that represent suitable habitat for the species and all riparian habitats are located farther than 0.25-mile from tower sites. No further analysis of this species is provided.	No, but listed as potentially occurring in the vicinity by USFWS.

Banner-tailed Kangaroo Rat	NESL G4	The range of banner-tailed kangaroo rat on Navajo Nation includes small remnant populations just west of Chinle and possibly near Navajo Mountain, with patches of the desert lands in New Mexico also being occupied. The potential range of this species also includes all desert lands east of the Chuska Mountains, and east and north of Black Mesa in Apache County, Arizona and San Juan County, Utah. The presence of bunch grasses is necessary, and in general, habitats at the extremes (very low or very high) of vegetation density and height are avoided (Mikesic, 2008). This species is listed as potentially occurring in the vicinity of the project area (NNDFW, 2023) and is retained for analysis .	No, but listed as potentially occurring in the vicinity of the Many Farms site.
Kit Fox	NESL G4	Kit foxes are known to occur on the Navajo Nation east of the Chuska Mountains and Chinle Valley in Arizona and Utah. As the kit fox has the potential to occur in all desert lands on Navajo Nation and two of the sites offer suitable habitat (Mikesic, 2008), this species is retained for further analysis .	No, but listed as potentially occurring in the vicinity of the Many Farms site.
Northern Mexican gartersnake	LT	Northern Mexican gartersnake is generally known to occur between 3,000 and 5,000 ft amsl but may venture up to 8,000 ft. It is found in both lotic and lentic habitats such as cienegas and stock tanks, as well as river habitat pools and backwaters. It forages along the banks of waterbodies feeding primarily upon fish and adult and larval frogs. The species is likely extant in fragmented populations within the Middle/Upper Verde River drainage, Middle/Lower Tonto Creek, and the Cienega Creek drainage, as well as a small number of isolated wetland habitats in southeastern Arizona (AGFD, 2012). All tower sites are far enough away from aquatic/riparian habitats to not provide suitable habitat for this species. Therefore, no further analysis of this species is provided .	No, but listed as potentially occurring in the vicinity by USFWS.
Razorback sucker	LE	Razorback sucker is found in the Colorado River and a few of its warm-water tributaries: Lake Mohave, Upper Green River, and Lower Yampa River. It is rare along the mainstem Colorado River in Marble Canyon and the mouth of the Little Colorado River, the San Juan arm of Lake Powell, and upstream within the San Juan River. The species generally uses mainstream portions of rivers, pre- and post-spawning suckers mostly use low-flow areas, but shallow to deep runs over sandbars and seasonally-flooded shorelines are also important. There are no perennial streams within or near the project area that represent suitable habitat for the species (Mikesic, 2008). No further analysis is provided .	No, but listed as potentially occurring in the vicinity by USFWS.
Monarch Butterfly	C	Breeding areas are virtually all patches of milkweed in North America. Monarchs in Arizona migrate to known overwintering destinations in both Mexico and California; small numbers overwinter in the lower deserts of southwestern Arizona (NatureServe 2022a). The monarch is listed as potentially	No, but listed as potentially occurring in the vicinity by

		occurring within or near the project area (USFWS, 2023). No milkweed species were identified but various species of milkweed are known to occur within 20 kilometers of two of the project sites. Therefore, this species is retained for analysis .	USFWS.
Navajo Sedge	NESL G3, FT	Navajo sedge is typically found in seeps and hanging gardens, on vertical sandstone cliffs and alcoves. The species is known to occur between 4,600 and 7,200 feet. Four areas are now known to harbor the most known populations: the upper tributaries of Navajo Creek, the canyons that drain Skeleton Mesa, canyons that drain Cedar Mesa, and isolated populations along the length of Chinle Wash and its tributaries (AGFD 2015; Roth 2001). The project site lacks seeps and hanging gardens in vertical sandstone cliffs and alcoves representing suitable habitat for the species. No further analysis of this species is provided.	No, but listed as potentially occurring in the vicinity of the Many Farms site.
<p><i>LE (ESA Listed Endangered)</i> <i>LT (ESA Listed Threatened)</i> <i>C (ESA Candidate)</i> <i>NESL G3 (Group 3): "Endangered" — survival/recruitment likely to be in jeopardy in near future</i> <i>NESL G4 (Group 4): Not enough info for listing in Group 2/3 but sufficient reason for concern</i></p>			

3.5.4 Agriculture and Livestock

Family farms and livestock grazing are a significant part of the agricultural activities within the Navajo Nation. According to the 2017 Census of Agriculture Navajo Nation Chapter Profile of Many Farms, there are 336 farms and ranches in the Many Farms Chapter. Crop and livestock sales were both substantial. The livestock grazed is mostly sheep, with cattle, goats, and ponies also kept. Corn is the major crop, and there is also melon and squash and other vegetables produced (USDA-NASS, 2017).

3.6 Cultural Resources

Cultural resources are tangible remains of past human activity. A cultural resource or cultural property has a definite location of human activity, occupation, or use, normally greater than 50 years of age, and is identifiable through field inventory, historical documentation, or oral evidence. They may include archaeological, historical, or architectural sites, structures, or places with important public and scientific uses, or traditional cultural or religious importance to specified social and/or cultural groups (USDA, 2022). The Navajo Nation Heritage and Historic Preservation Department (NNHHPD) has authority to determine if any historic cultural artifacts are present within sites. Traditional Cultural Properties (TCPs) on the Navajo Nation include but are not limited to sites that have been blessed, sites where ceremonies occurred, trail shrines, rock art, marked and unmarked graves, places for gathering plants and minerals, prayer offering places, places associated with Navajo, clan, custom, or Holy Being origin stories and ceremonies, places that possess supernatural power, and places associated with individual life cycle rituals. If a TCP meets the criteria and criteria exceptions (36 CFR 800.2), it may qualify for the National Register of Historic Places (NRHP) and protection by Section 106 of the National Historic Preservation Act.

A Cultural Resource Inventory (CRI) was conducted under NNHHPD permit number B22999 by Mathilda Burke, Archaeologist of MBurke Consulting in April of 2023 involving a records search, consultation with the NNHHP Traditional Cultural Program, field survey, and preparation of a report. The records search indicated that 3 cultural resource projects were conducted within 100-meters of the project area and no

sites were recorded. A review of NNHPD-Traditional Cultural Program files revealed that 2 known TCPs (TCP 363a – Carson Mesa and TCP 1041 – Carson Mesa Rim) occur within 2 miles of the project area. After consulting with the Traditional Cultural Program it was concluded that the project will have no effect on the TCPs (MBurke, 2023).

A Class III pedestrian inventory was conducted using parallel pedestrian transects spaced no more than 7.5 meters apart. A cultural survey was conducted on the 50-foot x 50-foot project area. A 150-foot radius was also surveyed around the project area, which provided 100% coverage of the project area. No cultural resources were identified during survey. An ethnographic interview was conducted with Roland Tso, Many Farms Chapter Grazing Official and Devon Begay, Tsaile Chapter President, concerning burials, sacred places, and plant/herb gathering areas in order to determine if there were any potential TCPs in or near the project area. Each stated that they had no knowledge of any known TCPs occurring in or near the project area. Each also stated the Chapter’s need for the telecommunication tower due to the lack of cellular service in the Chapters. These services would help provide cellular services for emergency response and being able to provide students with mobile services for virtual learning (MBurke, 2023).

3.7 Socioeconomics

This section discusses demographics, economics, and community infrastructure in the project area.

3.7.1 Demographics

Members of the Navajo Nation live a combination of traditional and modern lifestyles and their language is still thriving. Many have contemporary occupations both on and off the Navajo Nation while maintaining aspects of their culture, customs, and traditional lifestyles. Many Farms, or Dá’ák’eh Halani, originated as a small farming community in 1937 when the area’s reservoir was dammed, and water resources became plentiful. Numerous agricultural plots were formed along with a booming meat canning industry. With the continued drought, the chapter faces agricultural challenges and lost business (Yurth, 2013). Aside from agricultural work, residents of the Chapter work locally in places like the Many Farms Pre-school, Elementary, Community, and High Schools, Many Farms Health Station and Dental Clinic, and various local governmental positions (WIND, 2022). Several members also travel to surrounding communities for work in healthcare, natural resources, construction, and governmental positions. Other income sources include livestock sales, rugs and jewelry making, and food vending. Major influences on sociocultural conditions include cultural beliefs and values, socioeconomic trends including poverty, limited employment opportunities, high unemployment, housing shortages, and lack of infrastructure (BOR, 2016).

According to the US Census Bureau 2020 ACS 5-Year Estimates, the population of Many Farms has shrunk over the past 10 years, with the loss of 182 people. 96.1% of the population identify as Native American. There are 637 households in total across Many Farms, with an average of 3.32 people per household, much higher than the U.S. average of 2.60 people per household. The average median age of Many Farms is 32.2, compared to the U.S. median age of 38.8 (US Census Bureau, 2020). **Table 3** presents population data for Many Farms.

	2010	2020	Average Annual Growth	Median Age	Persons per Household
Many Farms	2,738	2,556	-6.5%	32.2	3.32
Navajo Nation	150,011	140,766	-6.1%	33.3	3.45

State of Arizona	6,392,017	7,151,502	11.9%	37.9	2.65
US National Average	308,745,538	331,449,281	7.4%	38.8	2.60

3.7.2 Economics

According to the U.S. Census Bureau 2020 ACS 5-Year Estimates, the major industry in Many Farms, like that of Navajo Nation, Arizona, and the US is educational services, health care, and social assistance. **Table 4** presents the economic summaries for the Many Farms Chapter in comparison with the Navajo Nation, Arizona, and US National Averages from U.S. Census Bureau (2020). Many Farms Chapter experiences a lower unemployment rate at 6.9% than Navajo Nation as a whole (13.5%). Arizona Rates are significantly lower at 5.8% while the US average is comparable to the Chapter at 6.3%. The average median household income of Many Farms is \$22,297, which is significantly lower than the average for the Navajo Nation (\$30,275), State of Arizona (\$69,056), and the U.S. average (\$69,717). Poverty rates in Many Farms (45.9%) are also significantly higher than the average for the Navajo Nation (33.9%), State of Arizona (9.1%), and the U.S. average (9.1%) (US Census Bureau, 2020).

	Major Industry	Unemployment Rate	Poverty Rate	Median Household Income
Many Farms	Educational services, health care, and social assistance (56.8%)	6.9%	45.9%	\$22,297
Navajo Nation Total	Educational services, health care, and social assistance (42.3%)	13.5%	33.9%	\$30,275
State of Arizona	Educational services, health care, and social assistance (22.0%)	5.8%	9.1%	\$69,056
U.S. National Average	Educational services, health care, and social assistance (23.5%)	6.3%	9.1%	\$69,717

3.7.3 Community Infrastructure

Utilities. NTUA is the primary utility provider for power, water, and wastewater across the Navajo Nation. Power lines currently run near to the tower sites. The project sponsor will work with NTUA to obtain a service line extension to the tower sites. No wastewater utilities are required for the proposed project.

Transportation Networks. Roads are an especially important infrastructure and stretch 14,221 miles across the Navajo Nation. Major interstate and U.S. Highways on the reservation include Interstate 40, U.S. Highways 64, 89, 89A, 191, 163, 160, and 491. Roads also include State Highways and Roads, BIA Roads, paved and unpaved Tribal Roads, county roads, and several unmarked and undocumented dirt roads. Roads are managed by Navajo Nation Department of Transportation, Bureau of Indian Affairs Department of Transportation, Counties, and the Arizona Department of Transportation. Major roads of the community include U.S. Route 191 and Indian Route 59. The site is accessible by these and an unnamed access road.

Educational Facilities. Educational institutions within the chapter include the Many Farms High School, Many Farms Community School, and Many Farms Public School. Additionally, the Boys & Girls Club of Many Farms offers services to the community.

3.7.4 Environmental Justice

Environmental justice has been defined as the pursuit of equal justice, protection, and involvement under law for all environmental status and regulations without discrimination based on race, ethnicity, and/or socioeconomic status (USEPA, 2022). As described in **section 3.7.1**, the population of the Navajo Nation is primarily Navajo or Native American. No environmental justice issues have been identified.

3.8 Resource Use Patterns

This section discusses resource use patterns including recreation, hunting, fishing, and gathering; timber harvesting; and land use plans.

3.8.1 Recreation, Hunting, Fishing, and Gathering

The NNDFW oversees outdoor recreation, fishing, and hunting on the Navajo Nation. There are no recreational trails or sites near the site. The Many Farms Lake once offered fishing opportunities but has lost many of these resources and is frequently dry depending on weather conditions and season. It is unlikely that it offers significant fishing opportunities today. The project area is within NNDFW big game hunting unit 11; however, the area is unlikely to host big game as it is exposed, in proximity to development in the chapter and offers limited foliage.

3.8.2 Timber Harvesting

The Navajo Nation Forestry Department (NFD) is responsible for regulating the Nation's forests. There is currently no commercial or industrial timber harvesting on the Navajo Nation, except for individual firewood collection. NFD issues permits for said firewood collection. The project area is not within 5 miles of any forestland and no trees will be removed for construction or use of the tower.

3.8.3 Land Use Plans

The Navajo Nation passed the Navajo Nation Local Governance Act (LGA) (Title 26 of the Navajo Nation Code) to recognize Chapter-level governance on the Nation. Under this act, Chapters can develop Community- Based Land Use Plans (CLUPs) that can be used to administer land. The Many Farms Chapter has not established an LGA certified CLUP.

3.9 Other Values

This section discusses various other characteristics involved throughout the project area, including wilderness; noise and light; visual setting; public health and safety; Indian Trust assets; and hazardous waste.

3.9.1 Wilderness

In 1964, the Wilderness Act was passed, establishing a network of over 800 federally designated wilderness areas in the National Wilderness Preservation System. This act essentially prohibits commercial activities and infrastructure additions from occurring in wilderness areas and aims to preserve and protect the natural ecosystems and wild areas "where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain" (16 U.S.C. 1131-1136). The nearest designated wilderness area is the Petrified Forest National Wilderness Area, 82 miles to the south; it is managed by the National Park Service. There is also the National Park Service-managed Mesa Verde Wilderness 90 miles to the northeast and the U.S. Forest Service-managed Dark Canyon Wilderness 89 miles to the north.

3.9.2 Noise and Light

The Noise Control Act of 1972 (42 U.S.C. §4901 et seq.) was passed to preserve the health and welfare of the U.S. population, especially in urban areas. Noise restrictions and orders are largely controlled by State and Local Governments. Manufactured noise and natural sound sources near the project sites include traffic along roads, activities at the school and in the surrounding community, and natural phenomena such as wind, thunder, and rain. The Navajo Nation does not have any noise regulations or requirements that would be applicable to this project. As the tower height does not exceed 200-feet, it will not require lighting.

3.9.3 Visual Setting

According to the Navajo Nation's Environmental Protection Act (§903): "The Navajo Nation shall employ its governmental authority pursuant to section 2 hereof, using all practicable means consistent with other essential government functions, for the following purposes: ... (B) To assure for all residents and/or visitors to the Navajo Nation a safe, healthful, productive, aesthetically pleasing and culturally appropriate environment; ... (F) To preserve important... natural aspects of the Navajo Nation." The proposed 180-foot tower might be seen locally by community members in a relatively rural area below the mesa on which it sits. There are existing dirt roads near the project area. The site appears to be heavily grazed, and an existing power line runs east-west to the north of the site.

3.9.4 Public Health and Safety

The Navajo Division of Public Safety provides first response services within the exterior boundaries of the Navajo Nation. Chinle Police Departments provide these services in Many Farms. Additionally, they provide the following programs: correctional services, internal affairs, police services, criminal investigation, emergency management, fire and rescue, and emergency medical. BIA agency offices in Chinle provide wildfire fighting services. The nearest healthcare facilities include the Chinle Comprehensive Care Facility, Many Farms Health and Dental Clinic, and Many Farms Health Station.

3.9.5 Indian Trust Assets

Indian Trust Resources includes property and interests in property: "(1) that are held in trust by the U.S. for the benefit of a tribe or individual Indians; or (2) that are subject to restrictions upon alienation," (25 CFR Part 1000.352). The proposed project is located on Navajo Tribal Trust Land. In 2012 Congress enacted the *Helping Expedite and Advance Responsible Tribal Homeownership (HEARTH) Act* amendments to the Indian Long-Term Leasing Act. This Act provides authority for Indian tribes to lease tribal trust lands directly pursuant to tribal law, without further Secretarial approval. The status of the project area is under Tribal Trust. Use and delegation of trust lands require approval by the Navajo Nation GLDD.

3.9.6 Hazardous Waste

Sites regulated under the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and the Toxic Substance Control Act (TSCA) are recorded and tracked by the USEPA. RCRA and CERCLA share jurisdiction with respect to hazardous materials, and Underground Storage Tanks (USTs) containing petroleum products RCRA gives USEPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA Subtitle C addresses hazardous waste; Subtitle D addresses non-hazardous solid waste, and Subtitle I addresses USTs. CERCLA was passed in 1980 in response to unacceptable hazardous waste practices and management occurring in the 1970s

and authorizes cleanup responses including: short-term removal and long-term environmental remediation. These actions can be conducted only at sites listed on USEPA's National Priorities List. Sites managed under this program are referred to as "Superfund" sites. TSCA authorizes USEPA to issue rules requiring the testing of specific chemicals and to establish regulations that restrict the manufacturing, processing, distribution, use, and disposal of chemicals and mixtures.

USEPA provides an online tool for identifying proximity of controlled sites and environmental concerns to areas of interest. According to this webpage and field observation, there are no RCRA, CERCLA, or TSCA sites within 1 mile of the project site. The nearest site is the Many Farms Public School and USDOJ BIA Chinle Boarding School, RCRA sites 9 miles to the northeast (USEPA, 2022). See **Appendix C** for the detailed report of the proposed project area.

4.0 Environmental Consequences

This chapter discusses short-term and long-term impacts and effects of the Proposed Action and the No-Action Alternative on the resources described in **Chapter 3**. Impacts or effects can be direct or indirect and can be cumulative. Direct effects generally occur at the same time and place as the action. Indirect effects occur later in time or farther away in distance but are still reasonably foreseeable. This chapter also identifies mitigation measures and Best Management Practices (BMPs) aimed at minimizing, mitigating, or eliminating action-caused impacts and/or compensating for their impact and maintaining compliance with applicable laws and regulations.

4.1 Land Resources

Geology, topography, and mineral resources will not be impacted by the Proposed Action or the No-Action Alternative. Impacts on soils are described below.

4.1.1 Soils

Under the Proposed Action, there will be minor, short-term impacts to the soils from the use of heavy machinery used for clearing and grading during construction of the tower. This impact will cease following construction.

Under the No-Action Alternative, there will be no change and therefore no impact on soils of the project area.

4.1.2 Mitigation Measures and BMPs

During intense precipitation events, stormwater can flow over a site and erode soils or contaminate soil from a spill or leak. Soil erosion and sedimentation is controlled under NNEPA to ensure compliance with the Navajo Nation Surface Water Quality Standards (NNSWQS). The Proposed Action will not disturb 1 acre or more and is exempt under Section 402 of the Clean Water Act (CWA) (33 USS §1251 et seq.) and the Navajo Nation Clean Water Act (Title 4, NNC), from obtaining a National Pollutant Discharge Eliminating System (NPDES) Construction General Permit. BMPs such as fugitive dust suppression can minimize erosion on site.

4.2 Water Resources

There will be no impact to groundwater, floodplains, or wetlands under the Proposed Action or the No-Action Alternative. Impacts on surface water are described below.

4.2.1 Surface Water

Under the Proposed Action, there will be minor, short-term impacts on surface water from erosion and runoff due to construction and associated ground disturbing activities. This impact will cease following construction.

Under the No-Action Alternative, there will be no change and therefore no impact on surface water in the project area.

4.2.2 Mitigation Measures and BMPs

During intense precipitation events, stormwater can flow over a site and erode soils or contaminate soil from a spill or leak. Soil erosion and sedimentation is controlled under NNEPA to ensure compliance with NNSWQS. The Proposed Action will not disturb 1 acre or more and is exempt under Section 402 of the

Clean Water Act (CWA) (33 USS §1251 et seq.) and the Navajo Nation Clean Water Act (Title 4, NNC), from obtaining a NPDES Construction General Permit. BMPs such as fugitive dust suppression can minimize erosion on site.

4.3 Atmospheric Resources

There will be no impact to climate under the Proposed Action or No-Action Alternative. This section discusses impacts on air quality and visibility.

4.3.1 Air Quality and Visibility

Under the Proposed Action, there will be short-term, minor impacts to air quality and visibility as increased levels of dust and emissions are caused by construction activities. These impacts will subside following construction.

Under the No-Action Alternative, there will be no change and therefore no impact on air quality and visibility.

4.3.2 Mitigation Measures and BMPs

Activities that increase the generation of fugitive dust above natural levels are road building, tillage, construction activities, etc., and the disturbance of bare soil by wheels, blades, etc. (EPA, 2009). Control techniques for fugitive dust include watering, dust abatement, chemical stabilization, and windbreaks.

4.4 Biological Resources

The project activities include clearing vegetation within the site boundaries. The impacted sites will recover soon after construction with erosion control and revegetation measures. Therefore, the impact on vegetation will be minimal and short-term.

Disturbances and sounds created from construction of the tower site are expected to deter wildlife from the area. However, this minor impact will be short-term and cease following construction.

A BE conducted by JE Fuller (2023) documented special-status species with suitable habitat within or near the project site. Analysis of potential impacts of the Proposed Action on species retained or analysis is provided in **Table 3**.

Species	Analysis of Effects	Findings
Golden Eagle	Golden eagles are listed as occurring between 1 and 3 miles of the Many Farms West site (NNDFW, 2023). During the habitat evaluation survey, one large stick nest and whitewash was observed approximately 0.45-mile northeast of the Many Farms West site. While no raptor activity was observed at the time of the habitat evaluation survey around either site, there appeared to be an active breeding pair of ravens at each site either perched on/near the nests and whitewash or circling above. Scattered cliffs and large rock outcrops surround the Many Farms West site between 0.8 and 1.5 miles of the site to the west, north, and east. These features were scanned during the habitat evaluation survey for evidence of nesting raptors. No additional whitewash or stick nests were observed opportunistically during the habitat evaluation survey. While it was not definitively proven that ravens were	Direct impacts to golden eagles are not anticipated. Very minor indirect impacts may occur temporarily.

	<p>occupying the nests mentioned earlier in this section, it seemed unlikely that other species would also be currently using these nests given the active presence of breeding pairs of ravens in the immediate area.</p> <p>According to the BGEPA, "Taking" bald or golden eagles, including their parts (including feathers), nests, or eggs is prohibited under the BGEPA and would not occur. "Take" is defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb." "Disturb" is defined as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." Direct impacts to golden eagles are not anticipated. Potential prey items occur within the vicinity of the tower site, and there could be very minor, indirect, short-term effects to prey availability during and after cell tower construction; however, prey abundance would likely return to current levels after construction. Given the abundance of relatively undisturbed habitat in the region surrounding the Many Farms West site, it is unlikely that construction of the tower site would have an adverse effect on golden eagles or their suitable habitats. No "take" as defined by the BGEPA would occur as a result of this project. Therefore, further consultation with USFWS is not necessary.</p>	<p>No "take" as defined by the BGEPA would occur as a result of this project. The project is not likely to adversely affect species or its habitat.</p>
<p>Ferruginous hawk</p>	<p>No ferruginous hawks were detected during the habitat evaluation survey. Ferruginous hawks are listed as occurring in the vicinity of the Many Farms West site (NNDFW, 2023). During the habitat evaluation survey, one large stick nest and whitewash was observed approximately 0.45-mile northeast of the Many Farms West site. While no raptor activity was observed at the time of the habitat evaluation survey around the site, as mentioned earlier there appeared to be an active breeding pair of ravens at the site either perched on/near the nest or circling above. Scattered cliffs and large rock outcrops surround the Many Farms West site between 0.8 and 1.5 miles of the site to the west, north, and east. These features were scanned during the habitat evaluation survey for evidence of nesting raptors. No additional whitewash or stick nests were observed opportunistically during the habitat evaluation survey. While it was not definitively proven that ravens were occupying the nests mentioned earlier in this section, it seemed unlikely that other species were currently using the nest given the active presence of breeding pairs of ravens.</p> <p>The MBTA prohibits taking, killing, or possessing migratory birds. Direct impacts to ferruginous hawks are not anticipated. Potential prey items for ferruginous hawks may occur within the vicinity of the Many Farms West site, and there could be very minor, indirect, short-term effects to prey availability during construction; however, prey abundance would likely return to current levels after construction. Given the abundance of undisturbed habitat in the region surrounding the sites, it is unlikely that the proposed project would have a significant effect on foraging or nesting ferruginous hawks. Construction shall avoid the migratory bird breeding season or a pre-construction survey shall be performed if work occurs during this time period to determine if active nests are within the limits of vegetation removal</p>	<p>Direct impacts to ferruginous hawks are not anticipated. Very minor indirect impacts may occur temporarily. No violation of the MBTA would occur as a result of this project. The project is not likely to adversely affect species or its habitat</p>

	<p>associated with the project. No taking, killing, or possessing of ferruginous hawks would occur as a result of this project. Therefore, further consultation with USFWS is not necessary.</p>	
Burrowing owl	<p>The MBTA prohibits taking, killing, or possessing migratory birds. Direct impacts to burrowing owls are not anticipated. Burrowing owl is listed as potentially occurring in the vicinity of the Many Farms West site (NNDFW, 2023). The habitat evaluation survey identified no evidence of burrowing owls or potential burrowing owl burrows in the vicinity of the site. While dry, open grasslands and/or desert scrub are found at the site, no prairie dog colonies or requisite burrows were observed within the area surveyed around the cell tower site, which included a 200-foot buffer or more around the site. Additionally, given the abundance of more suitable habitat in the region surrounding the project areas, the proposed project is not anticipated to directly affect breeding burrowing owls. Very minor indirect impacts may occur temporarily through decreased prey availability during construction. Several kangaroo rat burrows or burrow networks were observed at the site, but the burrows did not show any evidence of burrowing owl activity (whitewash, feathers, pellets, ornamentation, etc.). Given the signs observed around the entrances of the burrows, kangaroo rats clearly occupied the burrows.</p> <p>It is possible that individual burrowing owls could pass through the areas surrounding the cell tower site while foraging or dispersing from more suitable habitat in the region; however, the construction of the tower is not likely to adversely impact the species because construction would be brief and prey populations would likely return to the area shortly after construction. A pre-construction migratory bird nest search shall be conducted if vegetation is removed during breeding season to ensure that there will be no impacts to migratory birds. No taking, killing, or possessing of burrowing owls would occur as a result of this project. Therefore, further consultation with USFWS is not necessary.</p>	<p>Direct impacts to burrowing owls are not anticipated. Very minor indirect impacts may occur temporarily. No violation of the MBTA would occur as a result of this project. The project is not likely to adversely affect species or its habitat</p>
Mountain Plover	<p>The MBTA prohibits taking, killing, or possessing migratory birds. Direct impacts to mountain plovers are not anticipated. No mountain plovers were detected during the habitat evaluation survey. Mountain plovers are listed as potentially occurring in the vicinity of the Many Farms West site (NNDFW, 2023). Given this species' preference for areas with short or sparse vegetation, or large bare areas that may be disturbed, potentially suitable habitat features were confirmed to exist at the Many Farms West site. Therefore, it is possible that mountain plovers could potentially utilize the project area for either nesting or foraging. However, due to the size and scope of the project (50-foot by 50-foot cell tower pads) and the extensive availability of suitable habitat for the species throughout the Navajo Nation, the proposed action may affect individual mountain plovers but is not likely to adversely affect the species or its habitat. Very minor indirect impacts may occur temporarily through avoidance of the area during construction. A pre-construction migratory bird nest search shall be conducted if vegetation is removed during breeding season to ensure that there will be no impacts to migratory birds. No taking, killing, or possessing of mountain plovers would occur as a result of this project. Therefore, further consultation with USFWS is not necessary.</p>	<p>Direct impacts to mountain plovers are not anticipated. Very minor indirect impacts may occur temporarily. No violation of the MBTA would occur as a result of this project. The project is not likely to adversely affect species or its habitat</p>
Banner-tailed	<p>This species is listed as potentially occurring in the vicinity of the Many Farms West site (NNDFW, 2023). Kangaroo rat and pocketmouse burrows were observed at</p>	<p>May affect individuals,</p>

<p>Kangaroo Rat</p>	<p>and around this proposed tower site. While many of the burrows appeared to be active, there were also many inactive or collapsed burrows around the bases of Ephedra plants. Although relatively sparse in the general vicinity, bunchgrasses (a necessary food source) were documented in the area. This project could impact individuals of this species during construction or excavation activities if there are active banner-tailed kangaroo rate burrows in the area; however, the project footprint at this site is small (50 feet by 50 feet) for the tower pad (the access route would not require extensive excavation) and there is abundant similar habitat in the region. Therefore, this project is unlikely to adversely affect the species or its habitat. With the implementation of conservation/mitigation measures, adverse effects will be avoided or minimized. If any special-status species are detected before or during construction of the cell tower, NNDFW would be notified, and care and management of the species would commence as recommended by NNDFW.</p>	<p>not likely to adversely affect species or its habitat</p>
<p>Kit Fox</p>	<p>No kit fox individuals, burrows/dens (active or inactive), or other sign were observed during the habitat evaluation survey. The kit fox is listed as potentially occurring in the vicinity of the Many Farms West site (NNDFW, 2023). Presence of this species near this site is possible, as the species has potential to occur in all desert lands on the Navajo Nation (Mikesic 2008I), and the soils at the Many Farms West site are conducive to burrow construction (soft, loamy sands). Individual foxes and prey populations may vacate the project area during construction due to the presence of equipment and people but would likely return to the area after the project is complete. Given the abundant optimal habitat surrounding this site and the lack of observed burrows or dens within the area surveyed the proposed project is not likely to adversely affect the kit fox or suitable habitat for the species. With the implementation of conservation/mitigation measures, adverse effects will be avoided or minimized. If any special-status species are detected before or during construction of the cell tower, NNDFW would be notified, and care and management of the species would commence as recommended by NNDFW.</p>	<p>May affect individuals, not likely to adversely affect species or its habitat</p>
<p>Monarch Butterfly</p>	<p>There were no monarchs or nectar producing milkweed species observed within or near the project sites during the habitat evaluation survey. The species' host plants in the Asclepias genus were not observed during the habitat evaluation survey and did not appear on the SEINet species list for the Many Farms West site. Several types of flowers/forbs were observed at each site; but should a monarch prefer feed from any of these species, the vast quantities or similar habitat in the vicinity of the project area would offer plenty of opportunity. Therefore, given the lack of milkweed species in the project area and the vast quantity of project-similar habitat in the nearby vicinity, the proposed action would have no effect on the species or its habitat.</p>	<p>No effect to the species or its habitat</p>

This BE documents special-status species with suitable habitat within or near the three proposed cell towers, however, with implementation of the mitigation/conservation measures described below, adverse effects to these Navajo Nation special-status species and migratory birds would be avoided or minimized. Therefore, JE Fuller recommends that the proposed project be allowed to proceed. However, if any special-status species are detected before or during construction of the cell towers, NNDFW would be notified, and care and management of that species would commence as recommended by NNDFW.

The NNDFW concurred with the findings of the BE and issued a Biological Resource Compliance Form (BRCF) on August 29, 2023 (See Appendix D) with conditional approval, listing the Ferruginous hawk and golden eagle as potentially impacted species. Avoidance/mitigation measures and conditions of compliance cited in the BRCF are listed in 4.4.1 below.

Under the No-Action Alternative, there would be no change and therefore no impact on biological resources of the project area.

4.4.1 Mitigation Measures and BMPs

Avoidance/Mitigation measures are as follows:

1. The NNHP recommends that the project sponsor implement BMPs for erosion control and invasive weed prevention and mitigation. NNHP also recommends that temporary disturbance areas shall be reseeded with a native species mix that matches the species in surrounding non-disturbed areas.
2. The NNHP strongly recommends the project sponsor shall implement BMPs for invasive weed prevention and mitigation across all areas where ground disturbance or vegetation removal occurs.

Conditions of Compliance are as follows:

1. The NNHP recommends the project sponsor shall avoid vegetation clearing during breeding season or conduct a pre-construction nest search 10 days prior to vegetation removal activities.
2. NNHP recommends the project sponsor shall avoid the migratory bird breeding season (March 1 – August 31, or any year). A pre-construction survey should be performed if work occurs during this time period to determine if active nests are within the limits of vegetation removal associated with the project.

Survey protocols and habitat descriptions for the species listed above can be found in the species accounts available on NNHP's website at https://www.nndfw.org/nnhp/sp_account.htm. Surveys must be conducted during the appropriate time of year (for plants, during the fruiting/flowering season) by an experienced biologist who is permitted by the Navajo Nation. See here for a list of permitted consultants (https://www.nndfw.org/bi_consult_list2022.pdf). Survey reports need to be sent to NNHP prior to construction activities taking place. The survey contractor shall consult with the NNHP botanist and zoologist for positive identification and development of mitigation strategies if NESL plants and or wildlife species are found during surveys.

4.5 Cultural Resources

No cultural resources were identified within the project vicinity and a determination of "no historic properties affected" was recommended for the proposed undertaking. It was recommended that the client be allowed to proceed with construction as planned. The NNHHPD concurred with this finding and issued a Cultural Resources Compliance Form (CRCF) on August 2, 2023 (See Appendix E).

There will be no impact on cultural resources under the Proposed Action or No-Action Alternative.

4.5.1 Mitigation Measures and BMPs

The CRCF was issued with a standard discovery clause, as follows:

In the event of a discovery [“discovery” means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Heritage and Historic Preservation Department must be notified at (928) 871-7198.

4.6 Socioeconomic

Under the Proposed Action, socioeconomic impacts of increased communication and connectivity from additional broadband connection would be beneficial and long-term.

Under the No-Action Alternative, there would be no effect to the surrounding natural resources, however, there would be continued impacts to residents and nearby travelers of limited access to the internet. This impact is moderate and long-term.

No environmental justice issues were identified.

4.7 Resource Use Patterns

There will be no impact on recreation, hunting, fishing, and gathering, timber harvesting, or land use plans under the Proposed Action or the No-Action Alternative due to the lack of these resources in the immediate vicinity of the project area.

4.8 Other Values

There will be no impact on wilderness areas, Indian Trust assets, or hazardous waste under the Proposed Action or No-Action Alternative due to the lack of these resources within the immediate vicinity of the project area. Impacts on noise and light, visual setting, and public health and safety are described below.

4.8.1 Noise and Light

During construction, there will be an increased level of noise associated with heavy machinery use. This impact will be short-term and minor and cease following construction.

Under the No-Action Alternative, there will be no change and therefore no impact on the noise and light conditions of the area.

4.8.2 Visual Setting

Under the Proposed Action, the 180-foot tower will be seen in the rural areas of Many Farms and nearby roads. An existing power line runs east-west to the north of the site. There will be a minor, long-term impact on the visual setting.

Under the No-Action Alternative, there will be no change and therefore no impact on the visual setting.

4.8.3 Public Health and Safety

Under the Proposed Action, telecommunication services will be improved, which will improve response times by police, fire, and emergency medical services. This impact will be long-term and beneficial.

Under the No-Action Alternative, the area would continue to have limited connection to and from health and public safety entities.

4.9 Cumulative Impacts

The CEQ regulations (40 CFR 1500-1508) implementing the procedural provisions of NEPA, as amended (42 USC 4321) defines cumulative impacts as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other action (40 CFR 1508.7).”

Impacts associated with construction of the Proposed Action are limited, short-term, and minor. due to the lack of overlap with similarly impactful projects in time or location, there are no cumulative impacts predicted. The long-term impacts associated with the Proposed Action are also limited and minor; the tower will be built in an area near existing structures, roads, and infrastructure and will not cause a major change in viewshed. In conjunction with other projects increasing broadband connection throughout the Navajo Nation, cumulative benefits of improved connection will benefit a variety of services for amenities like distance learning, telehealth, telework, e-commerce, public safety, and emergency response. Impacts of similar projects will be evaluated in individual EAs or Categorical Exclusions for the projects.

5.0 Document Preparers' Qualifications and Signature

This document has been prepared by Eunice L. Tso, NEPA Specialist, ETD, Inc., and Madelyn Norstrem, Environmental Scientist, ETD, Inc. Madelyn Norstrem holds a B.S. Degree in Environmental Science, with an Emphasis on Resource Management. Ms. Tso has over 25 years of experience in environmental regulatory compliance in Indian Country and is an expert in the environmental policies and regulations that affect development in Indian country. She holds an M.S. Degree in Environmental Geology from Northern Arizona University.



Eunice L. Tso, M.S. Geology
NEPA Specialist

10/5/2023

Date



Madelyn Norstrem, B.S. Environmental Science
Environmental Scientist

10/05/2023

Date

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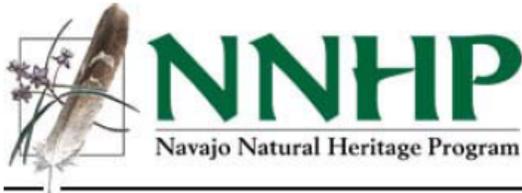
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Appendix A NNDFW Data Request Letter

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23etd101

23-March-2023

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SUBJECT: Proposed Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers

Madelyn Norstrem,

NNHP has performed an analysis of your project in comparison to known biological resources of the Navajo Nation and has included the findings in this letter. The letter is composed of seven parts. The sections as they appear in the letter are:

1. **Known Species** – a list of all species within relative proximity to the project
2. **Potential Species** – a list of potential species based on project proximity to respective suitable habitat
3. **Quadrangles** – an exhaustive list of quads containing the project
4. **Project Summary** – a categorized list of biological resources within relative proximity to the project grouped by individual project site(s) or quads
5. **Conditional Criteria Notes** – additional details concerning various species, habitat, etc.
6. **Personnel Contacts** – a list of employee contacts
7. **Resources** – identifies sources for further information

Known Species lists “species of concern” known to occur within proximity to the project area. Planning for avoidance of these species is expected. If no species are displayed then based upon the records of the Navajo Nation Department of Fish and Wildlife (NNDFW) there are no “species of concern” within proximity to the project. Refer to the Navajo Endangered Species List (NESL) Species Accounts for recommended avoidance measures, biology, and distribution of NESL species on the Navajo Nation (https://www.nndfw.org/nnhp/sp_account.htm).

Potential Species lists species that are potentially within proximity to the project area and need to be evaluated for presence/absence. If no species are found within the Known or Potential Species lists, the project is not expected to affect any federally listed species, nor significantly impact any tribally listed species or other species of concern. Potential for species has been determined primarily on habitat characteristics and species range information. A thorough habitat analysis, and if necessary, species specific surveys, are required to determine the potential for each species.

Species of concern include protected, candidate, and other rare or otherwise sensitive species, including

Page 1 of 7

certain native species and species of economic or cultural significance. For legally protected species, the following tribal and federal statuses are indicated: NESL, federal Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and Eagle Protection Act (EPA). No legal protection is afforded species with only ESA candidate, NESL group 4 status, and species listed on the Sensitive Species List. Please be aware of these species during surveys and inform the NNDFW of observations. Reported observations of these species and documenting them in project planning and management is important for conservation and may contribute to ensuring they will not be up listed in the future.

In any and all correspondence with NNDFW or NNHP concerning this project please cite the Data Request Code associated with this document. It can be found in this report on the top right corner of every page. Additionally please cite this code in any biological evaluation documents returned to our office.

1. Known Species *(NESL=Navajo Endangered Species List, FE=Federally Endangered, FT=Federally Threatened, FC=Federal Candidate)*

Species

AQCH = *Aquila chrysaetos* / Golden Eagle NESL G3
 ASSA = *Asclepias sanjuanensis* / San Juan Milkweed NESL G4
 BURE = *Buteo regalis* / Ferruginous Hawk NESL G3
 URAR = *Ursus arctos* / Grizzly or Brown Bear NESL G1

All or parts of this project currently are within Ferruginous Hawk Guideline Areas; consult with NNDFW zoologist or EA reviewer for more information and recommendations.

2. Potential Species

Species

ALFO = *Aliciella formosa* / Aztec Gilia NESL G3
 ALGO = *Allium gooddingii* / Gooding's Onion NESL G3
 ANVA = *Anticlea vaginatus* / Alcove Death Camas NESL G3
 AQCH = *Aquila chrysaetos* / Golden Eagle NESL G3
 ASSA = *Asclepias sanjuanensis* / San Juan Milkweed NESL G4
 ATCU = *Athene cunicularia* / Burrowing Owl NESL G4
 BURE = *Buteo regalis* / Ferruginous Hawk NESL G3
 CASP = *Carex specuicola* / Navajo Sedge NESL G3 FT
 CHMO = *Charadrius montanus* / Mountain Plover NESL G4
 CIME = *Cinclus mexicanus* / American Dipper NESL G3
 CIRY = *Cirsium rydbergii* / Rydberg's Thistle NESL G4
 CYUT = *Cystopteris utahensis* / Utah Bladder-fern NESL G4
 DISP = *Dipodomys spectabilis* / Banner-tailed Kangaroo Rat NESL G4
 EMTREX = *Empidonax traillii extimus* / Southwestern Willow Flycatcher NESL G2 FE
 ERSI = *Erigeron sivinskii* / Sivinski's Fleabane NESL G4
 LIPI = *Lithobates pipiens* / Northern Leopard Frog NESL G2
 MUNI = *Mustela nigripes* / Black-footed Ferret NESL G1 FE
 PHNA = *Physaria navajoensis* / Navajo Bladderpod NESL G3
 PLZO = *Platanthera zothecina* / Alcove Bog-orchid NESL G3
 SCCLBR = *Sclerocactus cloveriae* ssp. *brackii* / Brack Hardwall Cactus NESL G3
 VUMA = *Vulpes macrotis* / Kit Fox NESL G4

3. Quadrangles (7.5 Minute)

Quadrangles

Many Farms SW (36109-C6) / AZ
 Moncisco Wash (36108-D2) / NM
 Red Cornfield Mesa (36109-C3) / AZ

4. Project Summary (EO1 Mile/EO 3 Miles=elements occurring within 1 & 3 miles., MSO=mexican spotted owl PACs, POTS=potential species, RCP=Biological Areas)

SITE	EO1MI	EO3MI	QUAD	MSO	POTS	RCP
Moncisco Mesa Site	BURE	ASSA, BURE	Moncisco Wash (36108-D2) / NM	None	ALFO, AQCH, ASSA, ATCU, BURE, CHMO, EMTREX, MUNI, SCCLBR	Area 3
Proposed New Many Farms Site	None	AQCH	Many Farms SW (36109-C6) / AZ	None	ANVA, AQCH, ATCU, BURE, CASP, CHMO, CIRY, DISP, PLZO, VUMA	Area 3
Proposed New Ram Pasture Site	None	URAR	Red Cornfield Mesa (36109-C3) / AZ	None	ALGO, ANVA, AQCH, CASP, CHMO, CIME, CIRY, CYUT, EMTREX, ERSI, LIPI, PHNA, PLZO	Area 3

5. Conditional Criteria Notes (Recent revisions made please read thoroughly. For certain species, and/or circumstances, please read and comply)

A. Biological Resource Land Use Clearance Policies and Procedures (RCP) - The purpose of the RCP is to assist the Navajo Nation government and chapters ensure compliance with federal and Navajo laws which protect, wildlife resources, including plants, and their habitat resulting in an expedited land use clearance process. After years of research and study, the NNDFW has identified and mapped wildlife habitat and sensitive areas that cover the entire Navajo Nation.

The following is a brief summary of six (6) wildlife areas:

1. **Highly Sensitive Area** – recommended no development with few exceptions.
2. **Moderately Sensitive Area** – moderate restrictions on development to avoid sensitive species/habitats.
3. **Less Sensitive Area** – fewest restrictions on development.
4. **Community Development Area** – areas in and around towns with few or no restrictions on development.
5. **Biological Preserve** – no development unless compatible with the purpose of this area.
6. **Recreation Area** – no development unless compatible with the purpose of this area.

None - outside the boundaries of the Navajo Nation

This is not intended to be a full description of the RCP please refer to the our website for additional information at <https://www.nndfw.org/clup.htm>.

B. Raptors – If raptors are known to occur within 1 mile of project location: Contact the NNHP zoologist at 871-7070 regarding your evaluation of potential impacts and mitigation.

Golden and Bald Eagles- If Golden or Bald Eagle are known to occur within 1 mile of the project, decision makers need to ensure that they are not in violation of the *Golden and Bald Eagle Nest Protection Regulations* found at https://www.nndfw.org/nnhp/docs_reps/gben.pdf.

Ferruginous Hawks – Refer to *Navajo Nation Department of Fish and Wildlife's Ferruginous Hawk Management Guidelines for Nest Protection* (https://www.nndfw.org/nnhp/docs_reps.htm) for relevant information on avoiding impacts to Ferruginous Hawks within 1 mile of project location.

Mexican Spotted Owl - Please refer to the *Navajo Nation Mexican Spotted Owl Management Plan* (https://www.nndfw.org/nnhp/docs_reps.htm) for relevant information on proper project planning near/within spotted owl protected activity centers and habitat.

C. Surveys – Biological surveys need to be conducted during the appropriate season to ensure they are complete and accurate please refer to NN Species Accounts https://www.nndfw.org/nnhp/sp_account.htm. Surveyors on the Navajo Nation must be permitted by the Director, NNDFW. Contact Jeff Cole at (928) 871-6450 for permitting procedures. Questions pertaining to surveys should be directed to the NNDFW the NNHP Zoologist for animals, and the NNHP Botanist for plants. Questions regarding biological evaluation should be directed to Jeff Cole at 871-6450.

D. Oil/Gas Lease Sales – Any settling or evaporation pits that could hold contaminants should be lined and covered. Covering pits, with a net or other material, will deter waterfowl and other migratory bird use. Lining pits will protect ground water quality.

E. Power line Projects – These projects need to ensure that they do not violate the regulations set forth in the *Navajo Nation Raptor Electrocutation Prevention Regulations* found at https://www.nndfw.org/nnhp/docs_reps/repr.pdf.

F. Guy Wires – Does the project design include guy wires for structural support? If so, and if bird species may occur in relatively high concentrations in the project area, then guy wires should be equipped with highly visual markers to reduce the potential mortality due to bird-guy wire collisions. Examples of visual markers include aviation balls and bird flight diverters. Birds can be expected to occur in relatively high concentrations along migration routes (e.g., rivers, ridges or other distinctive linear topographic features) or where important habitat for breeding, feeding, roosting, etc. occurs. The U.S. Fish and Wildlife Service recommends marking guy wires with at least one marker per 100 meters of wire.

G. San Juan River – On 21 March 1994 (Federal Register, Vol. 59, No. 54), the U.S. Fish and Wildlife Service designated portions of the San Juan River (SJR) as critical habitat for *Ptychocheilus lucius* (Colorado pikeminnow) and *Xyrauchen texanus* (Razorback sucker). Colorado pikeminnow critical habitat includes the SJR and its 100-year floodplain from the State Route 371 Bridge in T29N, R13W, sec. 17 (New Mexico Meridian) to Neskahai Canyon in the San Juan arm of Lake Powell in T41S, R11E, sec. 26 (Salt Lake Meridian) up to the full pool elevation. Razorback sucker critical habitat includes the SJR and its 100-year floodplain from the Hogback Diversion in T29N, R16W, sec. 9 (New Mexico Meridian) to the full pool elevation at the mouth of Neskahai Canyon on the San Juan arm of Lake Powell in T41S, R11E, sec. 26 (Salt Lake Meridian). All actions carried out, funded or authorized by a federal agency which may alter the constituent elements of critical habitat must undergo section 7 consultation under the Endangered Species Act of 1973, as amended. Constituent elements are those physical and biological attributes essential to a species conservation and include, but are not limited to, water, physical habitat, and biological environment as required for each particular life stage of a species.

H. Little Colorado River - On 21 March 1994 (Federal Register, Vol. 59, No. 54) the U.S. Fish and Wildlife Service designated Critical Habitat along portions of the Colorado and Little Colorado Rivers (LCR) for *Gila cypha* (humpback chub). Within or adjacent to the Navajo Nation this critical habitat includes the LCR and its 100-year floodplain from river mile 8 in T32N R6E, sec. 12 (Salt and Gila River Meridian) to its confluence with the Colorado River in T32N R5E sec. 1 (S&GRM) and the Colorado River and 100-year floodplain from Nautuloid Canyon (River Mile 34) T36N R5E sec. 35 (S&GRM) to its confluence with the LCR. All actions carried out, funded or authorized by a federal agency which may alter the constituent elements of Critical Habitat must undergo section 7 consultation under the Endangered Species Act of 1973, as amended. Constituent elements are those physical and biological attributes essential to a species conservation and include, but are not limited to, water, physical habitat, and biological environment as required for each particular life stage of a species.

I. Wetlands – In Arizona and New Mexico, potential impacts to wetlands should also be evaluated. The U.S. Fish & Wildlife Service's National Wetlands Inventory (NWI) maps should be examined to determine whether areas classified as wetlands are located close enough to the project site(s) to be impacted. In cases where the maps are inconclusive (e.g., due to their small scale), field surveys must be completed. For field surveys, wetlands identification and delineation methodology contained in the "Corps of Engineers Wetlands Delineation Manual" (Technical Report Y-87-1) should be used. When wetlands are present, potential impacts must be addressed in an environmental assessment and the Army Corps of Engineers, Phoenix office, must be contacted. NWI maps are available for examination at the Navajo Natural Heritage Program (NNHP) office, or may be purchased through the U.S. Geological Survey (order forms are available through the NNHP). The NNHP has complete coverage of the Navajo Nation, excluding Utah, at 1:100,000 scale; and coverage at 1:24,000 scale in the southwestern portion of the Navajo Nation. In Utah, the U.S. Fish & Wildlife Service's National Wetlands Inventory maps are not yet available for the Utah portion of the Navajo Nation, therefore, field surveys should be completed to determine whether wetlands are located close enough to the project site(s) to be impacted. For field surveys, wetlands identification and delineation methodology contained in the "Corps of Engineers Wetlands Delineation Manual" (Technical Report Y-87-1) should be used. When wetlands are present, potential impacts must be addressed in an environmental assessment and the Army Corps of Engineers, Phoenix office, must be contacted. For more information contact the Navajo Environmental Protection Agency's Water Quality Program.

J. Life Length of Data Request – The information in this report was identified by the NNHP and NNDFW's biologists and computerized database, and is based on data available at the time of this response. If project planning takes more than two (02) years from the date of this response, verification of the information provided herein is necessary. It should not be regarded as the final statement on the occurrence of any species, nor should it substitute for on-site surveys. Also, because the NNDFW information is continually updated, any given information response is only wholly appropriate for its respective request.

K. Ground Water Pumping - Projects involving the ground water pumping for mining operations, agricultural projects or commercial wells (including municipal wells) will have to provide an analysis on the effects to surface water and address potential impacts on all aquatic and/or wetlands species listed below. NESL Species potentially impacted by ground water pumping: *Carex specuicola* (Navajo Sedge), *Cirsium rydbergii* (Rydberg's Thistle), *Primula specuicola* (Cave Primrose), *Platanthera zothecina* (Alcove Bog Orchid), *Puccinellia parishii* (Parish Alkali Grass), *Zigadenus vaginatus* (Alcove Death Camas), *Perityle specuicola* (Alcove Rock Daisy), *Symphyotrichum welshii* (Welsh's American-aster), *Coccyzus americanus* (Yellow-billed Cuckoo), *Empidonax traillii extimus* (Southwestern Willow Flycatcher), *Rana pipiens* (Northern Leopard Frog), *Gila cypha* (Humpback Chub), *Gila robusta* (Roundtail Chub), *Ptychocheilus lucius* (Colorado Pikeminnow), *Xyrauchen texanus* (Razorback Sucker), *Cinclus mexicanus* (American Dipper), *Speyeria nokomis* (Western Seep Fritillary), *Aechmophorus clarkia* (Clark's Grebe), *Ceryle alcyon* (Belted Kingfisher), *Dendroica petechia* (Yellow Warbler), *Porzana carolina* (Sora), *Catostomus discobolus* (Bluehead Sucker), *Cottus bairdi* (Mottled Sculpin), *Oxyloma kanabense* (Kanab Ambersnail)

6. Personnel Contacts

Wildlife Manager

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Biological Reviewer

Vacant
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GIS Supervisor

Dexter D Prall
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7. Resources

Navajo Endangered Species List:

<https://www.nndfw.org/nnhp/angered.htm>

Species Accounts:

https://www.nndfw.org/nnhp/sp_account.htm

Biological Investigation Permit Application

https://www.nndfw.org/nnhp/study_permit.htm

Navajo Nation Sensitive Species List

<https://www.nndfw.org/nnhp/trackinglist.htm>

Various Species Management and/or Document and Reports

https://www.nndfw.org/nnhp/docs_reps.htm

Consultant List

https://www.nndfw.org/bi_consult_list_2022.pdf

23etd101



Dexter D Prall, GIS Supervisor - Natural Heritage Program
Navajo Nation Department of Fish and Wildlife

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Appendix B USFWS IPaC Consultation

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IPaC: Explore Location resources

IPaC**U.S. Fish & Wildlife Service**

IPaC resource list

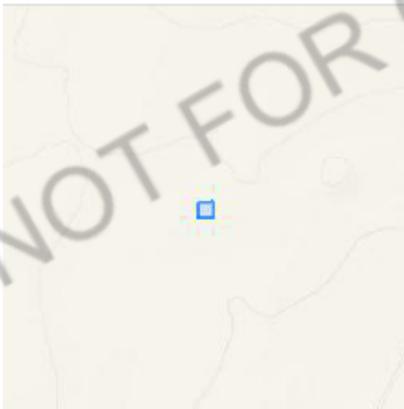
Many Farms West Site

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Apache County, Arizona



Local office

Arizona Ecological Services Field Office

☎ (602) 242-0210

📠 (602) 242-2513

9828 North 31st Ave

<https://ipac.ecosphere.fws.gov/location/RZIS5TCAPFGETI62VRUGUDYKEY/resources>

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IPaC: Explore Location resources

#c3

Phoenix, AZ 85051-2517

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

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IPaC: Explore Location resources

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
<p>Mexican Spotted Owl <i>Strix occidentalis lucida</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/8196</p>	Threatened
<p>Yellow-billed Cuckoo <i>Coccyzus americanus</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/3911</p>	Threatened

Reptiles

NAME	STATUS
<p>Northern Mexican Gartersnake <i>Thamnophis eques megalops</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/7655</p>	Threatened

Fishes

NAME	STATUS
<p>Razorback Sucker <i>Xyrauchen texanus</i></p> <p>Wherever found</p> <p>This species only needs to be considered if the following condition applies:</p> <ul style="list-style-type: none"> Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/530</p>	Endangered

<https://ipac.ecosphere.fws.gov/location/RZIS5TCAPFGETI52VRUGUDYKEY/resources>

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IPaC: Explore Location resources

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Navajo Sedge <i>Carex specuicola</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8579	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take->

<https://ipac.ecosphere.fws.gov/location/RZIS5TCAPFGETI52VRUGUDYKEY/resources>

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IPaC: Explore Location resources

[migratory-birds](#)

- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

There are no migratory birds of conservation concern expected to occur at this location.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

<https://ipac.ecosphere.fws.gov/location/RZIS5TCAPFGETI52VRUGUDYKEY/resources>

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IPaC: Explore Location resources

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of

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IPaC: Explore Location resources

presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

<https://ipac.ecosphere.fws.gov/location/RZIS5TCAPFGETI52VRUGUDYKEY/resources>

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This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

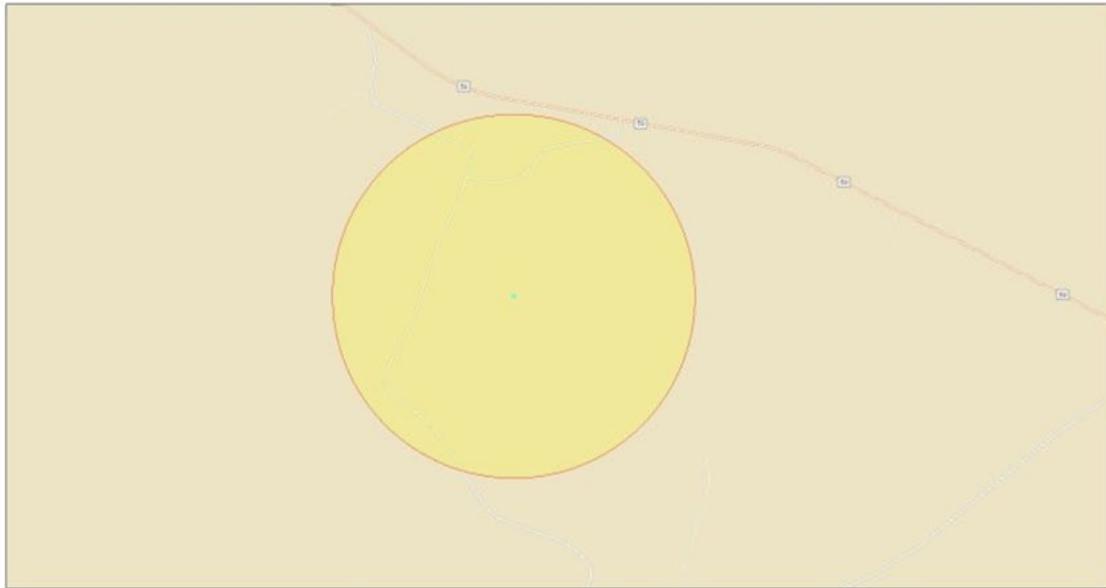
Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Appendix C NEPA Assist Report

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NEPAssist Report Many Farms Tower



July 12, 2022
 Project Buffer manyfarms_westtower Airport Polygons
 Many Farms Tower Airport Points Railroads

1:30,575
 0 0.3 0.6 1.2 mi
 0 0.5 1 2 km

Esri, HERE, Garmin, EarthStar, GeoTechnologies, Inc., Mapbox, USGS, Bureau of Land Management, EPA, NOAA, US Census Bureau, USDA, EPA, CE

Input Coordinates: 36.365255,-109.709045,36.365255,-109.708874,36.365118,-109.708874,36.365125,-109.709045,36.365255,-109.709045	
Project Area	0.00 sq mi
Within 1 mile of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Federal Land?	no
Within 1 mile of an impaired stream?	no
Within 1 mile of an impaired waterbody?	no
Within 1 mile of a waterbody?	no
Within 1 mile of a stream?	yes
Within 1 mile of an NWI wetland?	Available Online
Within 1 mile of a Brownfields site?	no
Within 1 mile of a Superfund site?	no
Within 1 mile of a Toxic Release Inventory (TRI) site?	no
Within 1 mile of a water discharger (NPDES)?	no
Within 1 mile of a hazardous waste (RCRA) facility?	no

Within 1 mile of an air emission facility?	no
Within 1 mile of a school?	no
Within 1 mile of an airport?	no
Within 1 mile of a hospital?	no
Within 1 mile of a designated sole source aquifer?	no
Within 1 mile of a historic property on the National Register of Historic Places?	no
Within 1 mile of a Toxic Substances Control Act (TSCA) site?	no
Within 1 mile of a Land Cession Boundary?	yes
Within 1 mile of a tribal area (lower 48 states)?	yes
Within 1 mile of the service area of a mitigation or conservation bank?	no
Within 1 mile of the service area of an In-Lieu-Fee Program?	yes

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Appendix D Biological Resources Compliance Form

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NNDFW Review No. 23etd101

**BIOLOGICAL RESOURCES COMPLIANCE FORM
NAVAJO NATION DEPARTMENT OF FISH & WILDLIFE
P.O. BOX 1480, WINDOW ROCK, ARIZONA 86515-1480**

It is the Department's opinion the project described below, with applicable conditions, is in compliance with Tribal & Federal laws protecting biological resources including the Navajo Endangered Species & Environmental Policy Codes, U.S. Endangered Species, Migratory Bird Treaty, Eagle Protection & National Environmental Policy Acts. This form does not preclude or replace consultation with the U.S. Fish & Wildlife Service if a Federally-listed species is affected.

PROJECT NAME & NO.: Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers

DESCRIPTION: Three 180 ft Self-Supporting Lattice Telecommunications Towers on 50 ft x 50 ft lease areas.

LOCATION:

1. Moncisco Mesa/ NMSJ02333A - Huerfano Chapter - 36° 28'34.30" N, 108°14'50.53" W
2. Many Farms West – Many farms Chapter - 36 20' 47.85" N, 109 41' 48.39" W
3. Ram Pasture Tsaile Chapter - 36 16' 59.40" N, 109 20' 6.87" W

REPRESENTATIVE: Madelyn Norstrom - Environmental Scientist, ETD, Inc.

ACTION AGENCY: CellularOne

B.R. REPORT TITLE/ DATE/PREPARER: Request for Biological Review & Compliance/ 26 APR 2023/ETD, Inc.

SIGNIFICANT BIOLOGICAL RESOURCES FOUND: Area 3, Low Wildlife Sensitivity for all 3 sites

POTENTIAL IMPACTS

NESL SPECIES POTENTIALLY IMPACTED:

Ferruginous Hawk (*Buteo regalis*) NESL G3
Golden Eagle (*Aquila chrysaetos*) NESL G3

FEDERALLY-LISTED SPECIES POTENTIALLY IMPACTED: NA

OTHER SIGNIFICANT IMPACTS TO BIOLOGICAL RESOURCES: NA

AVOIDANCE / MITIGATION MEASURES:

For all site locations:

1. NNHP recommends that the project sponsor shall implement Best Management Practices for erosion control and invasive weed prevention and mitigation. NNHP also recommends that temporary disturbances areas shall be reseeded with a native species mix that matches the species in surrounding non-disturbed areas.

2. NNHP strongly recommends the project sponsor shall implement Best Management Practices (BMPs) for invasive weed prevention and mitigation across all areas where ground disturbance or vegetation removal occurs.

CONDITIONS OF COMPLIANCE*:

For all site locations:

1. NNHP recommends the project sponsor shall avoid vegetation clearing during breeding season or conduct pre-construction nest search 10 - days prior to vegetation removal activities.
2. NNHP recommends the project sponsor shall avoid the migratory bird breeding season (March 1 - August 31, of any year). A pre-construction survey should be performed if work occurs during this time period to determine if active nests are within the limits of vegetation removal associated with the project.

Moncisco Mesa Site –

Ferruginous hawk (*Buteo regalis*) Time of Year Restriction

- a). All construction activity shall avoid the breeding and chick rearing time of the year March 1 - July 31, of any year.

FORM PREPARED BY / DATE: T. Kim Yazzie/11 JUL 2023; Revised, L. Begay/25 AUG 2023

COPIES TO: (add categories as necessary)

_____ _____

2 NTC § 164 Recommendation:

Approval:

Conditional Approval (with memo):

DR# 23etd101 - Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers

Pending (with memo):

Disapproval (with memo):

Categorical Exclusion (with request letter):

None (with memo):

Gloria M. Tom, Director
Fish & Wildlife

Navajo Nation Department of

Signature:



8/29/23
Date

*I understand & accept the conditions of compliance, & acknowledge that lack of signature may be grounds for the Department not recommending the above-described project for approval to the Tribal Decision-maker.

Representative's signature

NNDFW -B.R.C.F.: FORM REVISED 04 MAR 2022

Date

Page 2 of 3



SERVING INDIAN COUNTRY SINCE 1995

WWW.ETD-INC.COM

ENVIRONMENTAL COMPLIANCE | PROJECT MANAGEMENT | COMMUNITY RELATIONS

March 20, 2023

Navajo Nation Department of Fish and Wildlife
Navajo Natural Heritage Program
P.O. Box 1480
Window Rock, Arizona 86515
ATTN: Dexter Prall

RE: Data Request for Proposed Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers

Dear Mr. Prall:

ETD is hereby, requesting data on the concurrence of species concern for this project. The proposed action is to construct 3 180-foot self-supporting lattice telecommunication towers on 50 x 50-foot lease areas. Maps and Google Earth kmz files showing the project sites are attached and below you will find project location information.

Name/Number	Chapter	Tower Center Lat/Long	Legal Location (G&SRPM)	USGS 7.5' Quadrangle
Moncisco Mesa / NMSJ02333A	Huerfano	36° 28'34.30" N 108°14'50.53" W	Section 20, T.26N, R.13W	Moncisco Wash, NM (1966)
Many Farms West	Many Farms	36 20' 47.85" N 109 41' 48.39" W	Section 18, T.34N, R.25E	Many Farms SW, AZ (1968)
Ram Pasture / AZAP0386A	Tsaille/ Wheatfields	36 16' 59.40" N 109 20' 6.87" W	Section 9, T.33N, R.28E	Sonsala Butte 2SE, AZ (1955)

*Datum is NAD83 Zone 12 N

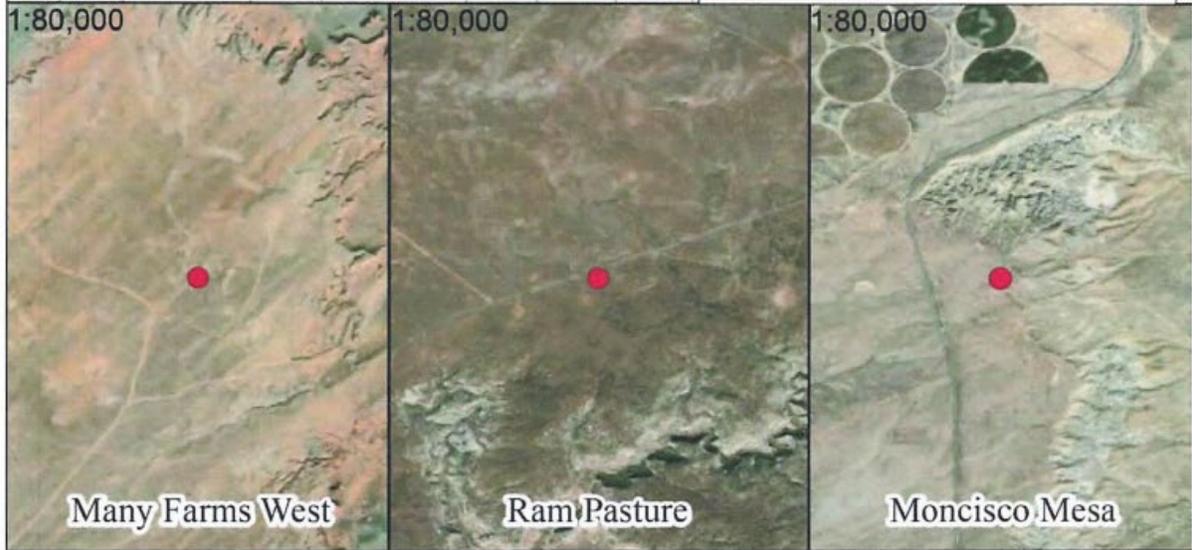
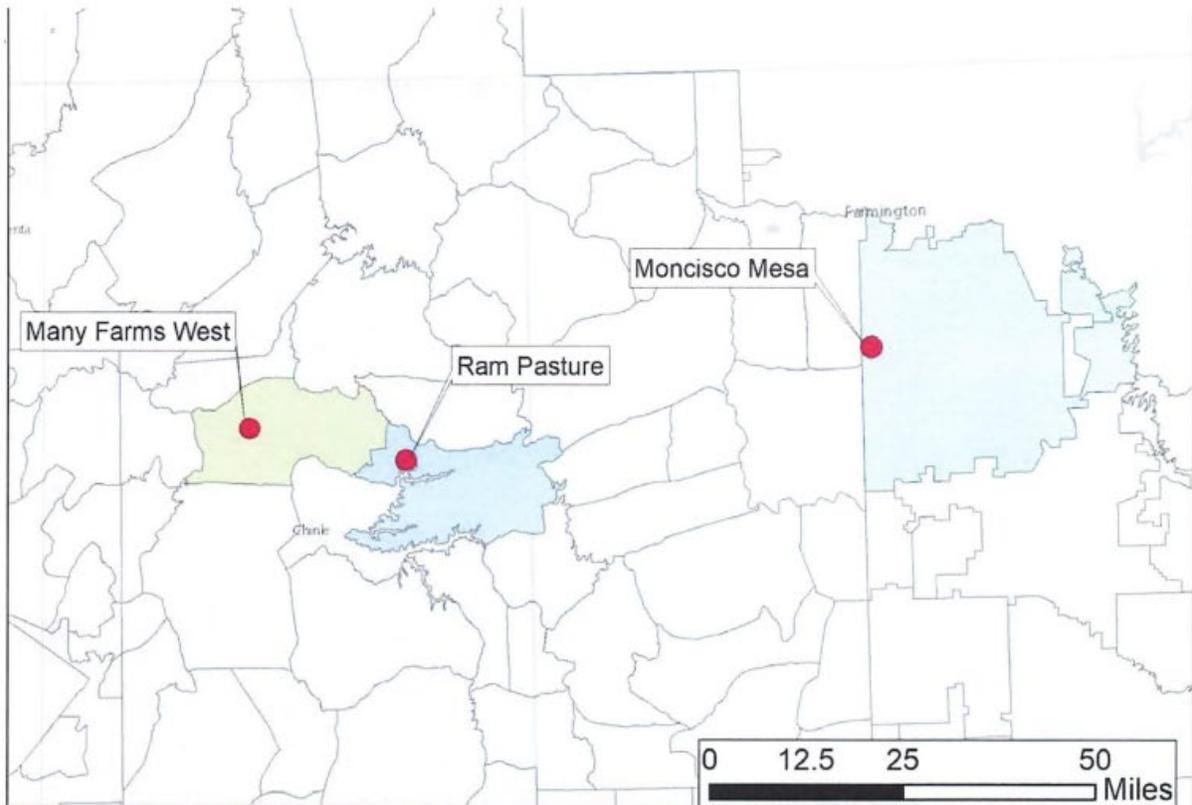
Should you have any questions, please contact me at (928) 266-0044 or email me at eunicet@etd-inc.com. Thank you.

Sincerely,

Eunice Tso, Project Manager
ETD, Inc.

2501 N. 4th Street, Suite 24; Flagstaff, Arizona 86004

(928) 266-0044



Legend

-  Huerfano
-  Tsaiile/Wheatfields
-  Many Farms





DR. BUU NYGREN *PRESIDENT*
RICHELLE MONTOYA *VICE PRESIDENT*

The Navajo Nation | Yideeskáądi Nitsáhákees

7/11/2023

DR# 23etd101

Madelyn Norstrom, Environmental Scientist
ETD, Inc
928.266.0044
madelyn@etd-inc.com
2501 N. 4th St., Suite 24
Flagstaff, AZ 86004

Dear Madelyn,
The Navajo Nation Department of Fish and Wildlife (NNDFW) and the Navajo Natural Heritage Program (NNHP) have reviewed a BE & BRCF request form for Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers project. The purpose of this letter is to inform you that the Navajo Nation is granting the proposed project **Conditional Approval**.

Based on the information provided and information in the NNHP database and has determined that additional protective measures are required in order to protect NESL species before, during and after construction activities commence.

The **Conditional Approval conditions** are as follows for the Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers

For all site locations:

1. NNHP recommends the project sponsor shall avoid vegetation clearing during breeding season or conduct pre-construction nest search 10 - days prior to vegetation removal activities.
2. NNHP recommends the project sponsor shall avoid the migratory bird breeding season (March 1 - August 31, of any year). A pre-construction survey should be performed if work occurs during this time period to determine if active nests are within the limits of vegetation removal associated with the project.

Moncisco Mesa Site –

Ferruginous hawk (*Buteo regalis*) Time of Year Restriction

- a). All construction activity shall avoid the breeding and chick rearing time of the year March 1 - July 31, of any year.

Recommended Avoidance and Minimization of Conditional Approvals for the

Navajo Nation Department of Fish & Wildlife/ Navajo Natural Heritage Program
POST OFFICE BOX 1480 – WINDOW ROCK, AZ 86515 – PHONE: (928) 871-6450/7859
– FAX: (928) 871-7069

Moncisco Mesa, Many Farms West, and Ram Pasture 180 ft Self-Supporting Lattice Telecommunications Towers project:

For all site locations:

1. NNHP recommends that the project sponsor shall implement Best Management Practices for erosion control and invasive weed prevention and mitigation. NNHP also recommends that temporary disturbances areas shall be reseeded with a native species mix that matches the species in surrounding non-disturbed areas.
2. NNHP strongly recommends the project sponsor shall implement Best Management Practices (BMPs) for invasive weed prevention and mitigation across all areas where ground disturbance or vegetation removal occurs.

Survey protocols and habitat descriptions for the species listed above can be found in the species accounts available on NNHP's website at https://www.nndfw.org/nhnp/sp_account.htm.

Surveys must be conducted during the appropriate time of year (for plants, during the fruiting/flowering season) by an experienced biologist who is permitted by the Navajo Nation. See here for a list of permitted consultants (https://www.nndfw.org/bi_consult_list_2022.pdf). Unless otherwise indicated, plant surveys shall include a buffer of 200 ft. from all temporary and permanent ground-disturbing activities; including temporary equipment staging areas.

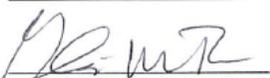
Survey reports need to be sent to NNHP prior to construction activities taking place. The survey contractor shall consult with the NNHP botanist and zoologist for positive identification and development of mitigation strategies if NESL plants and or wildlife species are found during surveys.

Please contact me via email at lbegay@nndfw.org with any questions that you have concerning the review of this project.



Leanna Begay, Wildlife Manager
Navajo Natural Heritage Program
Department of Fish & Wildlife

CONCURRENCE



Gloria Tom, Director
Department of Fish & Wildlife

7/20/23

Date

xc: CONS-100-19

BIA

Navajo Nation Department of Fish & Wildlife/ Navajo Natural Heritage Program
POST OFFICE BOX 1480 – WINDOW ROCK, AZ 86515 – PHONE: (928) 871-6450/7859
– FAX: (928) 871-7069

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Appendix E Cultural Resources Clearance Form

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THE NAVAJO NATION
Heritage & Historic Preservation Department
P.O. Box 4950 • Window Rock, Arizona 86515
(928) 871-7198 (tel) • (928) 871-7886 (fax)



CULTURAL RESOURCES COMPLIANCE FORM

NNHHPD NO.: HPD-22-1161.1

CONSULTANT REPORT NO.: MBC-22-122 ADD. 1

PROJECT TITLE: MBC-22-122 ADD I: A Cultural Resource Inventory of Two Re-Located Proposed Telecommunication Tower Sites (Many Farms West Tower and Ram Pasture Tower) for CellularOne located in Many Farms and Tsaile Chapters, Apache County, Arizona.

LEAD AGENCY: The Navajo Nation

SPONSOR: Susan Gabler, Site Development Supervisor, CellularOne, 1500 South White Mountain Road Show Low, AZ 85901

PROJECT DESCRIPTION: CellularOne is requesting archaeological clearance for two (2) re-located telecommunication tower sites that will measure 50-feet x 50-feet each. CellularOne proposes to construct a 180-foot high, self-support lattice tower on each 50-feet x 50-foot lease area. Maintenance and other activities will occur within each 50-feet x 50-foot Tower Site (225 sq. ft.).

PROJECT ARCHAEOLOGIST: Mathilda Burke

NAVAJO ANTIQUITIES PERMIT NO.: B22999

TOTAL ACREAGE INSPECTED: 3.24

DATE INSPECTED: 4/10/2023

DATE OF REPORT: 4/13/2023

METHOD OF INVESTIGATION: Class III pedestrian inventory with transects spaced 7.5 m apart

LAND STATUS: NN Tribal Trust Land

CHAPTER: Many Farms

LOCATION: Township: 34N Range: 24E Section: UP

QUAD: Many Farms SW, AZ G&SRPM

UTM: Northing: 4023183 Easting: 616943

DATUM: NAD83 Zone 12

NUMBER OF ELIGIBLE PROPERTIES: 0

NUMBER OF NON-ELIGIBLE PROPERTIES: 0

NUMBER OF UNEVALUATED PROPERTIES: 0

NUMBER OF ISOLATED OCCURRENCES: 0

NUMBER OF TCPs: 0

NUMBER OF IN-USE SITES: 0

EFFECT/CONDITIONS OF COMPLIANCE: No Properties

PROCEED RECOMMENDED: Yes

CONDITIONS: No

In the event of a discovery ["discovery" means any previously unidentified or incorrectly identified cultural resources including but not limited to archaeological deposits, human remains, or locations reportedly associated with Native American religious/traditional beliefs or practices], all operations in the immediate vicinity of the discovery must cease, and the Navajo Nation Heritage and Historic Preservation Department must be notified at (928) 871-7198.

FORM PREPARED BY: Olsen John

FINALIZED: 7/17/2023

Signature of Richard M. Begay
Richard M. Begay, Department Manager/THPO
Navajo Nation Heritage and Historic Preservation Department

Signature and Date: 07/15/23
Date

Navajo Region Approval:
Acting Signature of Gregory C. Mehojah
Gregory C. Mehojah, Regional Director
BIA- Navajo Regional Office

Signature and Date: AUG 02 2023
Date

~ DOCUMENT IS VOID IF ALTERED ~

HPD Number.: HPD-22-1161.1

PAGE 1

SPONSORS

Susan Gabler, Site Development Supervisor, CellularOne

LOCATION INFORMATION

LAND STATUS: NN Tribal Trust Land

STATE: AZ

NM

DATUM: NAD83

UTM N

UTM E

4023183

616943

4016642

649508

COUNTY(IES)

QUADRANGLE(S)

Apache

Many Farms SW, AZ

San Juan, NM

Red Cornfield Mesa, AZ

CHAPTER(S)

Township

Range

Sections

Many Farms

34N

24E

UP

Tsaile-Wheatfields

33N

29E

UP

Huerfano