ARCADIS Design & Consultancy for natural and built assets

Mr. Steve Calanog
Federal On-Scene Coordinator
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, California 94105

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320 Commerce
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California 92602
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Subject:
Biological Evaluation
Administrative Settlement Agreement and Order on Consent
CERCLA Dockets No. 09-2017-02 and 06-02-17
Haystack No. 1 AUM Site
McKinley County, New Mexico

ENVIRONMENT

Date:
July 5, 2017

Contact:
Maher Zein, PhD, PE

Phone:
714.508.2667

Email:
maher.zein@arcadis.com

Our ref:
CA000860

Dear Mr. Calanog:

This letter is submitted on behalf of BNSF Railway Company (BNSF) to present the U.S. Environmental Protection Agency (EPA) with the results of a U.S. Fish and Wildlife Service (USFWS), Navajo Natural Heritage Program (NNHP), and New Mexico Department of Game and Fish (NMGF) biological resources information review for the BNSF Haystack No. 1 AUM Site, located in McKinley County, New Mexico (the Site). Per Section VIII, Paragraph 32c of the Administrative Settlement Agreement and Order on Consent (AOC, effective on May 15, 2017), inquiries into the three aforementioned agencies shall be submitted within 15 days of the AOC effective date (no later than May 30, 2017) and the results of this evaluation shall be provided to the U.S. EPA within 30 days of receipt of the requested information. Biological resources information was received from USFWS, NNHP, and NMGF on December 8, 2016, January 12, 2017, and June 6, 2017, respectively (Attachments 1, 2, and 3, respectively).

U.S. FISH AND WILDLIFE SERVICE BIOLOGICAL EVALUATION RESULTS

A USFWS Information for Planning and Conservation (IPaC) database review was conducted on December 8, 2016. The species identified during the IPaC database review are presented in Attachment 1 and are summarized below:

- Threatened – Birds: Mexican spotted owl (*Strix occidentalis lucinda)* and yellow-billed cuckoo (*Coccyzus americanus*)
- Threatened – Plants: Zuni fleabane (*Erigeron rhizomatus*)
- Endangered – Birds: Southwestern willow flycatcher (*Empidonax traillii extimus*)
- Endangered – Fish: Zuni bluehead sucker (*Catostomus discobolus yarrow*).

There was no critical habitat listed. Even though the species are listed as present or potentially present onsite, habitat for these species must be present. Habitat for most of the species listed above is not present at the Site (e.g., water bodies for fish). Table 1 summarizes the identified species and preferred habitat, along with the potential presence or absence of the habitat at the Site. Species where a field survey would be recommended to determine their presence based on habitat at the Site(s) are also identified in Table 1.

NAVAJO NATURAL HERITAGE PROGRAM BIOLOGICAL EVALUATION RESULTS

A NNHP database search was completed for the Site and the results are provided as Attachment 2. The NNHP is managed by the Navajo Nation Department of Fish and Wildlife. Search results indicated five potential bird species onsite or near the Site that are included on the Navajo Endangered Species List (NESL):

- Golden eagle (*Aquila chrysaetos*) NESL Group 3 (G3)
- Ferruginous hawk (*Buteo regalis*) NESL G3
- Burrowing owl (*Athene cunicularia*) NESL Group 4 (G4)
- Mountain plover (*Charadius montanus*) NESL G4
- Peregrine falcon (*Falco peregrinus*) NESL G4.

Species listed as G3 are species whose survival or recruitment is likely to be in jeopardy in the foreseeable future. G4 species are species where there is currently not enough information available to the Navajo Nation to be listed as a Group 2 or G3 species. Therefore, and as noted in the NESL, G4 species are not afforded legal protection. Based on the database search, only two G3 species may be present in the area immediately surrounding the Site (Table 1).

To formally determine if the project will have "No Effect" on the above-listed species, Arcadis recommends the implementation of a formal nesting survey on and immediately adjacent to the Site, specifically focused on the golden eagle and ferruginous hawk, if construction activities were to occur during the nesting season (Spring/Summer). The survey shall be completed during the nesting season. While these species are not expected to be present onsite based on a habitat evaluation from aerial photographs, a ground survey is recommended to formally confirm this assumption. In addition, Arcadis recommends inclusion of all five species in the nesting survey. If the proposed construction activities are planned outside the nesting season of these species, a nesting survey will not be required.

NEW MEXICO DEPARTMENT OF GAME AND FISH BIOLOGICAL EVALUATION RESULTS

NMGF maintains county lists for New Mexico Wildlife of Concern. A review for McKinley County, where the Site is located, was conducted by Arcadis on May 29, 2017. The detailed results are included as Attachment C[1] and are summarized below.

- Threatened – Birds: Bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), arctic peregrine falcon (*Falco peregrinus tundrius*), Costa's hummingbird (*Calypte costae*), and gray vireo (*Vireo vicinior*)
- Endangered – Plants: Zuni fleabane (*Erigeron rhizomatus*), Parish's alkali grass (*Puccinellia parishii*), and Goodding's onion (*Allium gooddingii*)
- Endangered – Birds: Southwestern willow flycatcher (*Empidonax traillii extimus*) and least tern (*Sternula antillarum)*
- Endangered – Fish: Zuni bluehead sucker (*Catostomus discobolus yarrowi*).

Similar to the evaluation for federally-listed species, a species presence on a county list does not necessarily mean that suitable habitat exists and supports a species at the Site. A detailed analysis by species is included in Table 1. This table also includes those species where a field survey would be recommended. Based upon absence of nests on or proximate to the Site, the project will be determined to have "No Effect" for the evaluated species.

To formally determine if the project will have "No Effect" on the multiple bird species listed, Arcadis recommends a formal nesting survey on and immediately proximate to the Site if construction activities were to occur during the nesting season (Spring/Summer). The surveys should be completed within the respective nesting season. While these species are not expected based upon evaluation of habitat from aerial photograph interpretation, a ground survey is recommended to formally confirm these assumptions. The surveys should focus on bald eagle, peregrine falcon, and gray vireo. If the proposed construction activities are planned outside the nesting season of these birds, a nesting survey will not be required.

RECOMMENDATIONS

Arcadis recommends completion of a pre-construction nesting survey to determine whether bird nests are present on or immediately adjacent to the Site if construction activities were to occur during the nesting season (Spring/Summer). While not expected, if any bird nests are identified, they will be recorded and their location(s) will be mapped. Based on habitat, evidence of other USFWS, NNHP, or NMGF species will also be recorded during the field survey. The field survey will be conducted during the nesting season and before construction activities so that proper planning or corrective actions (if required) can be implemented. If the proposed construction activities are planned to occur outside the nesting season of the birds of interest, a nesting survey will not be required.

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[1] Threatened and endangered plant species occurring within McKinley County were referenced using the New Mexico Rare Plants Website (http://nmrareplants.unm.edu/). A formal report that included only threatened and endangered plant species by county was not available, and; therefore; is not included in Attachment C.

Sincerely,

Arcadis U.S., Inc.

Maher Zein, PhD, PE
Project Manager

Copies:
Warren Zehner – U.S. EPA Region 6
Dr. Donald Benn, Navajo Nation EPA
Vivian Craig – Navajo Nation EPA
Jeff Lewellin – New Mexico Environment Department
DJ Ennis – New Mexico Mining and Minerals Division
Mike Makerov – BNSF
Martina Schlauch Jones, Todd O'Brien, and Drew Werth – Arcadis

Enclosures:

Table

1 Threatened and Endangered Species Documented in the Project Area

Attachments

1 U.S. Fish and Wildlife Service Information for Planning and Conservation Search Results
2 Navajo Nation Heritage Program Database Search Results
3 New Mexico Department of Game and Fish Database Search Results

TABLE

Table 1
Threatened and Endangered Species Documented in the Project Area
Haystack No. 1 AUM Site
McKinley County, New Mexico

Common Name	Scientific Name	Federal Protection	State Protection	Navajo Nation Protection*	Habitat Evaluation	Determination of Effect
Plants						
Goodding's Onion	*Allium gooddingii*	NA	Endangered	NA**	Normally found at base of steep slopes and moist drainage bottoms in the shade of spruce fir and mixed conifer forest, as well as aspen stands between 6,500 and 9,400 feet amsl. Primarily occurs in National Forest lands.	Absence of habitat. No Effect.
Parish's Alkali Grass	*Puccinellia parishii*	NA	Endangered	NA**	Typically found at alkaline springs, seeps, and seasonally wet areas that occur at the heads of drainages or on gentle slopes at 2,600 to 7,200 feet amsl. The species requires continuously damp soils during its late winter to spring growing period.	Absence of habitat. No Effect.
Zuni Fleabane	*Erigeron rhizomatus*	Threatened	Endangered	NA**	Typically found on hillslopes at elevations between 7,300 and 8,000 feet amsl. Site elevation is approximately 7,000 feet amsl.	Absence of habitat. No Effect.
Fish						
Zuni Bluehead Sucker	*Catostomus discobolus yarrowi*	Endangered	Endangered	NA**	Requires perennial waterbody that is not found onsite.	Absence of habitat. No Effect.
*Birds***						
Arctic Peregrine Falcon	*Falco peregrinus tundrius*	NA	Threatened	NA**	Typically breeds in the Arctic tundra and inhabits coastlines and mountains from Florida to South America in the winter.	Species not expected to nest in New Mexico. Foraging habitat possible for migrating individuals, but individuals will modify behavior to avoid construction areas. Assuming no active nesting is identified, the project will be determined to have No Effect.
Bald Eagle	*Haliaeetus leucocephalus*	NA	Threatened	NA**	Primarily water-oriented, and most populations occurring in New Mexico are found near streams and lakes. There are some dry land areas where these eagles occur regularly, most notably in the region between the Pecos Valley and the Sandia, Manzano, Capitan, Sacramento mountains, and on the Mogollon Plateau. The birds typically night-roost in groups in trees, usually in protected sites such as canyons.	Nesting not expected in the few isolated trees onsite, and lack of water body. Foraging habitat possible, but individuals will modify behavior to avoid construction areas. A nesting survey is recommended before construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Burrowing Owl	*Athene cunicularia*	NA	NA	G4	Found in open areas with sparse vegetation.	Habitat is not expected due to previous land use disturbances. A nesting survey is recommended prior to construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Costa's Hummingbird	*Calypte costae*	NA	Threatened	NA**	Typically a desert scrub species of the southwestern United States and northern Mexico, with only a limited and irregular presence in southern New Mexico. It relies on nectar-producing native vegetation along the interface of desert and foothill/montane shrub habitats.	Absence of suitable habitat (i.e., diverse flowering native vegetation). A nesting survey is recommended prior to construction work. Assuming no active nesting is identified, the species is expected to modify behavior to avoid the construction areas, and; therefore, the project will have No Effect.
Ferruginous Hawk	*Buteo regalis*	NA	NA	G3	Primarily found in open areas such as grasslands that are arid or semiarid. May include outcrops, shallow canyons, or gullies.	Nesting not expected in the few isolated trees onsite. Foraging habitat is likely, but individuals will modify behavior to avoid construction areas. A nesting survey is recommended before construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.

Table 1
Threatened and Endangered Species Documented in the Project Area
Haystack No. 1 AUM Site
McKinley County, New Mexico

Common Name	Scientific Name	Federal Protection	State Protection	Navajo Nation Protection*	Habitat Evaluation	Determination of Effect
Golden Eagle	*Aquila chrysaetos*	Bald and Golden Eagle Protection Act	NA	G3	Found in open country around mountains, hills, and cliffs. Nests on cliffs and steep escarpments.	Nesting not expected in the few isolated trees onsite. Foraging habitat is likely, but individuals will modify behavior to avoid construction areas. A nesting survey is recommended before construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Gray Vireo	*Vireo vicinior*	NA	Threatened	NA**	A small, gray songbird, found in the dry foothills and bajadas west of the Great Plains in New Mexico, and is associated with juniper, piñon pine, and oak	Nesting and/or foraging habitat is not expected. Previously identified in southwestern corner of County. A nesting survey is recommended prior to construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Least Tern	*Sternula antillarum*	Endangered	Endangered	NA**	Occurs on coastal flats and river sandbars. In New Mexico, they breed regularly only at Bitter Lake National Wildlife Refuge, and occur occasionally elsewhere along the Pecos River Valley. Transients observed at Holloman Wetlands.	Absence of habitat. No Effect.
Mexican Spotted Owl	*Strix occidentalis lucida*	Threatened	NA	NA**	Uses rocky canyons as habitat and for nesting.	Nesting habitat not expected to be onsite. Foraging habitat is possible, but individuals will modify behavior to avoid construction areas. A nesting survey is recommended before construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Mountain Plover	*Charadrius montanus*	NA	NA	G4	Habitat is short grass prairie and shrub steppes.	Absence of habitat. No Effect.
Peregrine Falcon	*Falco peregrinus*	NA	Threatened	G4	Preferred habitat is open country and cliffs.	Nesting habitat not expected to be onsite. Foraging habitat is possible, but individuals will modify behavior to avoid construction areas. A nesting survey is recommended before construction work. Assuming no active nesting is identified, the project will be determined to have No Effect.
Southwestern Willow Flycatcher	*Empidonax traillii extimus*	Endangered	Endangered	NA**	Found in moist microclimate and vegetative conditions. Requires dense riparian vegetation for breeding.	Absence of habitat. No Effect.
Yellow-billed Cuckoo	*Coccyzus americanus*	Threatened	NA	NA**	Found in wooded habitat with dense cover and water nearby.	Absence of habitat. No Effect.

Notes:
*Species listed as G3 are endangered. A G4 designation indicates that Navajo Nation Fish and Wildlife does not have sufficient information to list the species as G3 but has reason to consider it endangered.
**Not identified by Navajo Nation Fish and Wildlife to occur on or proximate to the Site
***All birds listed here are protected under the Migratory Bird Treaty Act.
amsl = above mean sea level
NA = not applicable

ATTACHMENT 1

U.S. Fish & Wildlife Service Information for Planning and Conservation Search Results

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

Endangered species

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service. The species below are potentially affected by activities in this location.

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.

This resource list is for informational purposes only and should not be used for planning or analyzing project level impacts.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by creating a project and making a request from the Regulatory Review section.

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 either from the Regulatory Documents section in IPaC or from the local field office directly.

Birds

Mexican Spotted Owl CH Strix Occidentalis Lucida	Threatened
Southwestern Willow Flycatcher CH Empidonax Traillii Extimus	Endangered
Yellow-billed Cuckoo CH Coccyzus Americanus	Threatened

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Not for Consultation

Fishes

Zuni Bluehead Sucker CH Catostomus Discobolus Yarrowi	Endangered

Flowering Plants

Zuni Fleabane Erigeron Rhizomatus	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.

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ATTACHMENT 2

Navajo Nation Heritage Database Search Results

NNHP
Navajo Natural Heritage Program

PO Box 1480
Window Rock, AZ
86515

P 928.871.6472
F 928.871.7603

http://nnhp.nndfw.org

17arcd101

12-January-2017

Todd Udvig - Project Ecologist
Arcadis U.S., Inc.
430 First Avenue North
Suite 720
Minneapolis, MN 55401

SUBJECT: Haystack Area Abandoned Uranium Mine (AUM) Sites

Todd Udvig,

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 (http://nnhp.nndfw.org/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 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

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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 the 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

None

2. Potential Species

Species

AQCH = Aquila chrysaetos / Golden Eagle NESL G3
ATCU = Athene cunicularia / Burrowing Owl NESL G4
BURE = Buteo regalis / Ferruginous Hawk NESL G3
CHMO = Charadrius montanus / Mountain Plover NESL G4
FAPE = Falco peregrinus / Peregrine Falcon NESL G4

3. Quadrangles (7.5 Minute)

Quadrangles

Bluewater (35107-C8) / NM

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

SITE	EO1MI	EO3MI	QUAD	MSO	POTS	AREAS
Bibo Trespass	None	None	Bluewater (35107-C8) / NM	None	FAPE, CHMO, BURE, ATCU, AQCH	Area 2, Area 3
Haystack	None	None	Bluewater (35107-C8) / NM	None	FAPE, CHMO, BURE, ATCU, AQCH	Area 2
Haystack No. 1	None	None	Bluewater (35107-C8) / NM	None	FAPE, CHMO, BURE, ATCU, AQCH	Area 2, Area 3
Section 24	None	None	Bluewater (35107-C8) / NM	None	FAPE, CHMO, BURE, ATCU, AQCH	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 http://www.nndfw.org/clup.htm.

B. **Raptors** – If raptors are known to occur within 1 mile of project location: Contact Chad Smith at 871-7070 regarding your evaluation of potential impacts and mitigation.
o **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 http://nnhp.nndfw.org/docs_reps/gben.pdf.
o **Ferruginous Hawks** – Refer to "Navajo Nation Department of Fish and Wildlife's Ferruginous Hawk Management Guidelines for Nest Protection" http://nnhp.nndfw.org/docs_reps.htm for relevant information on avoiding impacts to Ferruginous Hawks within 1 mile of project location.
o **Mexican Spotted Owl** - Please refer to the Navajo Nation Mexican Spotted Owl Management Plan http://nnhp.nndfw.org/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 http://nnhp.nndfw.org/sp_account.htm. Surveyors on the Navajo Nation must be permitted by the Director, NNDFW. Contact Jeff Cole at (928) 871-7068 for permitting procedures. Questions pertaining to surveys should be directed to the NNDFW Zoologist (Chad Smith) for animals at 871-7070, and Botanist (Andrea Hazelton) for plants at (928)523-3221. Questions regarding biological evaluation should be directed to Jeff Cole at 871-7068.

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 Electrocution Prevention Regulations found at http://nnhp.nndfw.org/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

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7. Resources

National Environmental Policy Act

Navajo Endangered Species List:
http://nnhp.nndfw.org/endangered.htm

Species Accounts:
http://nnhp.nndfw.org/sp_account.htm

Biological Investigation Permit Application
http://nnhp.nndfw.org/study_permit.htm

Navajo Nation Sensitive Species List
http://nnhp.nndfw.org/study_permit.htm

Various Species Management and/or Document and Reports
http://nnhp.nndfw.org/docs_reps.htm

Consultant List
(Coming Soon)

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

NNHP
Navajo Natural Heritage Program

PO Box 1480
Window Rock, AZ
86515

P 928.871.6472
F 928.871.7603

http://nnhp.nndfw.org

Invoice for 17arcd101

1/12/2017

Please make payable to NAVAJO NATION

Project Measurements

Total Number of Quads:	1
Number of Additional Quads:	0
Cost ($75 plus $5 each additional Quad):	$75.00

(Please cut along the dashed line and return with payment)

Navajo Natural Heritage Program
PO Box 1480
Window Rock, AZ 86515

1/12/2017

PLEASE PAY THIS AMOUNT

Payment for Data Response 17arcd101 | $75.00

Please make payable to NAVAJO NATION

ATTACHMENT 3

New Mexico Department of Game and Fish Database Search Results

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Biota Information System of New Mexico

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Report County TES Table for

McKinley

NEW MEXICO WILDLIFE OF CONCERN

For complete up-dated information on federal-listed species, including plants, see the US Fish & Wildlife Service website at http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action. For information on state-listed plants, contact the NM Energy, Minerals and Natural Resources Department, Division of Forestry, or go to http://nmrareplants.unm.edu/. If your project is on Bureau of Land Management, contact the local BLM Field Office for information on species of particular concern. If your project is on a National Forest, contact the Forest Supervisor's office for species information. E = Endangered; T = Threatened; s = sensitive; SOC = Species of Concern; C = Candidate; Exp = Experimental non-essential population; P = Proposed

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Common Name	Scientific Name	NMGF	US FWS	Critical Habitat
Canada Lynx	Lynx canadensis		T	
Bald Eagle	Haliaeetus leucocephalus	T		
Peregrine Falcon	Falco peregrinus	T		
Arctic Peregrine Falcon	Falco peregrinus tundrius	T		
Least Tern	Sternula antillarum	E	E	
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	
Mexican Spotted Owl	Strix occidentalis lucida		T	Y
Costa's Hummingbird	Calypte costae	T		
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y
Gray Vireo	Vireo vicinior	T		
Zuni Bluehead Sucker	Catostomus discobolus yarrowi	E	E	Y

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