Biological Resources Report

LEMMON DRIVE PROJECT

Washoe Regional Transportation Commission &
Nevada Department of Transportation

Lemmon Drive Traffic Improvements and Resiliency Project

February 2025

Acronyms and Abbreviations

BGEPA	Bald and Golden Eagle Protection Act
BLM	Bureau of Land Management
BMP	Best Management Practice
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
IBA	Important Bird Area
IPaC	USFWS Information for Planning and Consultation System
MBTA	Migratory Bird Treaty Act
NAC	Nevada Administrative Code
NDA	Nevada Department of Agriculture
NDF	Nevada Division of Forestry
NDNH	Nevada Division of Natural Heritage
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NRS	Nevada Revised Statutes
RRFB	Rectangular Rapid Flashing Beacon
RTC	Regional Transportation Commission
SWReGAP	Southwest Regional GAP Analysis Project
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

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1.0 Introduction

1.1 Project Overview

The Regional Transportation Commission (RTC) of Washoe County, in cooperation with the Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA) are proposing improvements to Lemmon Drive in the City of Reno, Washoe County, Nevada. The Lemmon Drive Traffic Improvements and Resiliency Project involves realigning Lemmon Drive to reconstruct a safer and more resilient roadway between Fleetwood Drive and Ramsey Way. The project proposes to realign Lemmon Drive to the west on an existing berm, elevating the roadway to mitigate flooding impacts. The project also includes the reconstruction of a multi-use path within the project limits and the construction of a new path connecting Lemmon Drive to Lemmon Valley Elementary School. Additionally, the project would eliminate residential driveway connections to a regional road, implement required earthwork balancing to avoid altering the base flood elevation, and stormwater improvements, including the construction of retention and equalization basins. These comprehensive measures collectively enhance safety, connectivity, and transportation resiliency in Lemmon Valley.

The purpose of this report is to evaluate and document the biological resources within the Study Area, assess the potential impacts of the proposed actions on these resources, and provide recommendations for mitigation measures to minimize adverse effects on the environment.

1.2 Purpose and Need of the Project

1.2.1 Why is the Project Needed?

In 2017, Lemmon Drive was overtopped by floodwaters and faced emergency closures and an extensive mitigation response which disrupted the community's access highlighting the need for a more resilient roadway. Washoe County has limited financial and human resources to continuously provide flood mitigation for Lemmon Drive and private property. The total cost for maintenance, HESCO barrier placement, and continuous pumping for the 2017-2019 flood event was $11.6 million (RTC Washoe County, 2022).

In addition, multimodal enhancements were identified as a community need in the RTC's North Valleys Regional Transportation Study (RTC Washoe County, 2017).

1.2.2 What is the Purpose of the Project?

The purpose of the project is to provide a safe and reliable regional road with at least one dry lane in each direction of travel during a 100-year flood event and provide safe access for all multi-modal users.

1.3 Proposed Action and Alternatives

1.3.1 Build Alternative

The Build Alternative would reconstruct and raise the profile of the existing roadway from Fleetwood Drive to Palace Drive along the existing alignment. The section of roadway would provide two through lanes in each direction with a raised median. Dedicated left- and right-turn

lanes would be provided at the intersections of Fleetwood Drive, Patrician Drive, and Palace Drive.

As the roadway extends to the north it would transition to provide one lane in each direction with a raised center median. In the northbound direction, dedicated right turn pockets would be provided at Arkansas Street, Chickadee Drive, Arizona Street, and Oregon Drive. Just north of Deodar Way the roadway alignment would shift west of the existing roadway. This realigned segment of roadway would run along the east side of an existing berm allowing the roadway to be constructed above the existing Federal Emergency Management Agency (FEMA) 100-year flood elevation. Arkansas Street, Chickadee Drive, and Arizona Street would be extended to tie into the new, realigned roadway. Near Oregon Drive the roadway alignment would tie into the existing roadway alignment with full reconstruction extending to Ramsey Way. **See Exhibit 1**.

The Build Alternative would also involve modifications to cross-street direct access realigned Lemmon Drive at Nectar Street, Tupelo Street, Waterash Street, Idaho Street, Pompe Way, and Dillon Way. Pompe Way and Dillon Way would be connected via a new frontage road which would provide access to Lemmon Drive at Ramsey Way. Idaho Street and Waterash Street would utilize rehabilitated existing Lemmon Drive as local frontage road access to Arizona Street or Chickadee Drive which would then provide access to the realigned Lemmon Drive. A new connection from the Matterhorn Drive and Tupelo Street intersection to Chickadee Drive would provide access to the realigned Lemmon Drive also.

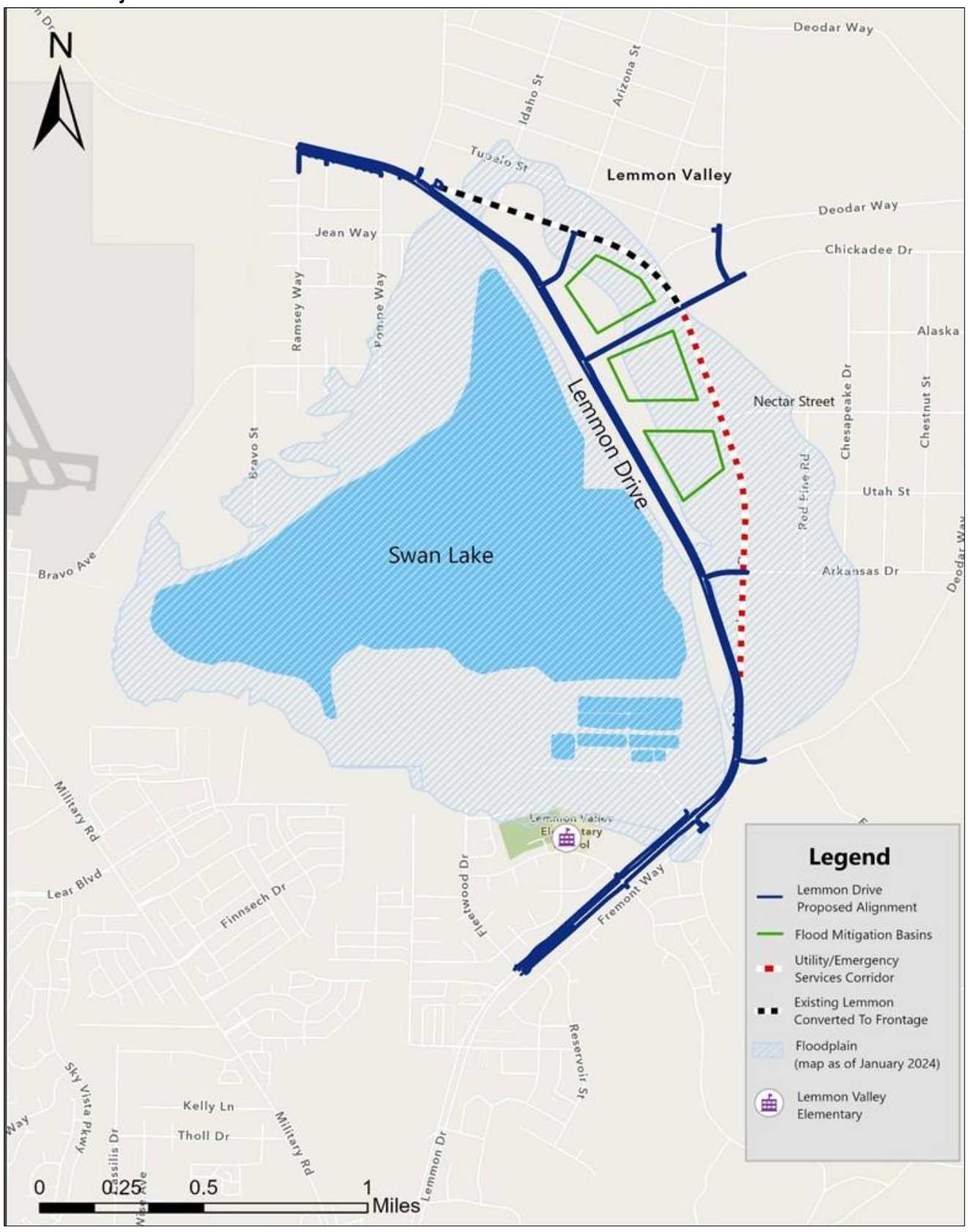
In addition to roadway improvements, substantial drainage improvements would also be constructed under the Build Alternative. Key drainage features would include rehabilitation of the existing drainage channel from Fleetwood Drive to Palace Drive. Equalization culverts would be constructed to replicate existing drainage between the east and west side of the existing berm during higher Swan Lake water elevations. These equalization culverts would be located at existing breaks in the berm north of Deodar Way and near Idaho Street. Volumetric mitigation basins would also be constructed between the new, realigned Lemmon Drive and existing Lemmon Drive within the FEMA floodplain. This mitigation would provide 1.3 cubic yards of basin excavation for everyone 1 cubic yard of embankment placed within the FEMA 100-year floodplain.

Additional items to be constructed with the Build Alternative include a 10-foot wide shared use path along the reconstructed and realigned Lemmon Drive roadway, intersection lighting, signing, striping, and reconstruction of the Patrician Drive rectangular rapid flashing beacon (RRFB). Additional pedestrian enhancements would be constructed from Lemmon Drive to the Lemmon Valley Elementary School along Patrician Drive.

1.3.2 No Build Alternative

The No Build Alternative would not construct any improvements to Lemmon Drive and only routine maintenance would continue. Lemmon Drive would remain below the FEMA 100-year floodplain. The No Build Alternative would eliminate the costs associated with construction of the project but would not meet the project's purpose and need.

Exhibit 1. Project Location



2.0 Applicable Laws and Regulations

2.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) is a federal law, signed in 1970, that requires federal agencies to assess environmental effects of their proposed actions prior to making decisions. Through the NEPA process, agencies evaluate environmental and related social and economic effects of their proposed actions. Title 1, Section 102 of the NEPA requires detailed statements of assessment commonly referred to as Environmental Impact Statements (EIS) and Environmental Assessments (EA). In 1978, regulations to implement the NEPA were issued (40 Code of Federal Regulations [CFR] Parts 1500–1508) and were recently amended in 2020.

2.2 Endangered Species Act of 1973

The Endangered Species Act (ESA) of 1973 provides a program to protect and conserve threatened and endangered plants and animals and their habitat. The lead agency for implementing the ESA for terrestrial and freshwater organisms is the U.S. Fish and Wildlife Service (USFWS). Section 7 of the ESA requires federal agencies to consult with USFWS to ensure that actions they are undertaking, funding, permitting, or authorizing are not likely to jeopardize the continued existence of any listed species or destroy or adversely modify designated critical habitat.

2.3 Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits destruction or disturbance of nesting activities or nests that results in loss of eggs or young. All wild birds are protected under the MBTA, except for non-native, human-introduced species, and a few families not mentioned in the underlying treaties. A list of all birds protected by MBTA are in the 10.13 list, published annually by USFWS (USFWS, 2025a). USFWS implements and enforces requirements of the MBTA. Swan Lake is a designated Important Bird Area (IBA). An IBA is a site recognized for providing essential habitat to one or more bird species during some portion of the year, such as nesting areas, crucial migration stop-over sites, or wintering grounds. These areas are identified using standardized criteria based on avian biology. The IBA program is a global effort and is led in the United States by the National Audubon Society to identify and conserve areas vital to birds and other biodiversity.

2.4 Bald and Golden Eagle Protection Act of 1940

The Bald and Golden Eagle Protection Act (BGEPA) of 1940 provides protection to Bald and Golden Eagles (*Haliaeetus leucocephalus* and *Aquila chrysaetos*, respectively) by prohibiting the taking, possession, or commerce of these birds. The BGEPA is different from the MBTA because it provides protection to eagle nests annually. USFWS implements and enforces requirements of the BGEPA.

2.5 State of Nevada Regulations

Several state agencies, including the Nevada Division of Natural Heritage (NDNH), the Nevada Department of Wildlife (NDOW), and the Nevada Division of Forestry (NDF) maintain lists and/or records of state-protected species. In addition, the following statues afford protection to state-listed species or -protected flora and fauna:

Nevada Revised Statute (NRS) 555 Noxious Weeds

The Nevada Department of Agriculture (NDA) manages the state's noxious weed program under NRS 555. The mission of this program is "to effectively coordinate resources and efforts toward proactive prevention, control, and management of invasive weed species in Nevada to benefit all land users in the state" (NDA, 2023a). Currently, there are 31 Category A weeds, 12 Category B weeds, and 11 Category C weeds listed statewide (NDA, 2023b). Category A weeds are generally limited throughout the state and subject to active exclusion and eradication. Category B weeds are established in scattered populations but are also excluded where possible and eradicated from nursery stock. Category C weeds tend to be widespread, yet they too must be eradicated from nursery stock. The NDA updates and maintains Nevada's noxious weed lists on an annual basis.

Nevada Revised Statute (NRS) 527.260-527.300 Protection and Propagation of Selected Species of Native Flora

List of fully protected species declared to be threatened with extinction; special permit required for removal or destruction.

Nevada Administrative Code (NAC) 527.250-527.360 Protection and Preservation of Timbered Lands, Trees, and Flora

It is unlawful for any person, firm, company or corporation, his, her, its, or their agent or agents, willfully or negligently: To cut, destroy, mutilate, pick or remove any flora that has been placed on the list of fully protected species pursuant to NRS 527.270 from any lands within the State of Nevada not otherwise described in paragraphs (a) and (b) without obtaining a special permit from the NDF.

NAC 527.500 Protection of Cacti and Yucca

Protection of Christmas trees, cacti, and yucca.

NAC 503.090-503.093 Protection of Wildlife

No person shall capture, kill, or possess any part thereof of protected wildlife without the prior written permission by NDOW.

NAC 503.030 Protected, Threatened, and Sensitive Mammals

Protected, endangered, and threatened species. All species listed are protected, and some are further classified as sensitive, threatened, or endangered.

3.0 Affected Environment

3.1 Biological Study Area

The 380-acre Study Area is 10 miles north of the City of Reno, Washoe County, Nevada along Lemmon Drive, from west of Ramsey Way at the northern boundary to south of Fleetwood Drive at the southern boundary. According to the Public Land Survey System, the project is in the following sections: Sections 21, 22, 26, 27, 34, and 35 of Township 21 North, Range 19 East. The approximate coordinates for the southern and northern termini of the Study Area are 39.6393 degrees latitude, -119.8411 degrees longitude and 39.6765 degrees latitude, -119.8544 degrees longitude, respectively.

The Study Area encompasses the entire area shown in **Exhibit 1**; however, impact areas may be smaller than the Study Area. The following section describes background information collected via desktop analysis (comprising a literature review and a review of maps and aerial photographs) and a field survey of the Study Area conducted in September 2023.

3.2 Environmental Conditions

The desktop analysis included reviewing various sources such as aerial imagery, topographic maps, and data from the Southwest Regional GAP Analysis Project (SWReGAP). Key documents reviewed included the Bedell Flat Quadrangle, Nevada, U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, and relevant data from the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPaC) website. The analysis also incorporated environmental data from the USGS and Google Earth satellite imagery to assess vegetation communities, wildlife habitat, and potential occurrences of special status species.

On September 26 and September 27, 2023, qualified AtkinsRéalis biologists Hayden Ripple and Nathaniel Yost conducted a field evaluation of biological resources within the Study Area. A summary of the vegetation communities, wildlife habitat, and special status species with the potential to occur within the Study Area is detailed below.

3.2.1 Vegetation Communities and Wildlife Habitat

The Study Area falls within the Sierra Nevada-Influenced Semiarid Hills and Basins (13aa) Level IV Ecoregions (Bryce et al., 2003). This region includes basins and lower mountain slopes east of the Sierra Nevada. Three large river systems: the Truckee, Carson, and Walker flow through this region. The semiarid shrub community (common to this region) includes plants with slightly high moisture requirements (Bryce et al., 2003). As represented on the Bedell Flat Quadrangle, Nevada, USGS 7.5-minute topographic quadrangle (USGS, 2018), the Study Area is a generally flat contour, with elevation approximately 4,920 feet above mean sea level. Land use in the Study Area is primarily City Parks, Greenways, and Open Space.

Table 1 summarizes the vegetation communities found within the 380-acre Study Area. Representative photos of the vegetation communities that occur within and adjacent to the

Study Area are presented in **Appendix A**. **Exhibits 2** through **Exhibit 3f** show the distribution of vegetation communities and land usage in the Study Area. The base data were obtained from the SWReGAP) (USGS, 2005), and further modifications were made to these data based on both ground-truthing during the field survey and through an analysis of aerial imagery.

Table 1: Summary of Vegetation Communities Located within the Study Area

Vegetation Community	Vegetation Community Description	Area (Acres)
Developed	Areas that are part of the built environment. Includes roadways, trails, sidewalks, ornamental landscaping, and other non-vegetated areas.	42.53
Greasewood Shrubland	Areas containing a mix of greasewood, grasses, and forbs.	103.05
Big Sagebrush Shrubland	Areas containing a mix of big sagebrush, grasses, and forbs.	118.12
Woody Riparian	Areas dominated by woody riparian vegetation.	0.72
Emergent Wetlands	Wetlands that are dominated primarily by herbaceous vegetation.	5.31
Open Water	Areas containing open water.	10.04
Weedy Forbland	Areas dominated by weedy and invasive forbs.	97.13
Invasive Riparian	Areas dominated by introduced riparian woody species such as *Tamarix* spp.	3.51
	TOTAL	**380.41**

Developed

Developed land includes all man-made features associated with roadways, sidewalks, paths, buildings, and ornamental or non-native landscaping (e.g., Kentucky bluegrass [*Poa pratensis*] and ornamental trees, such as maple species [*Acer* spp.]). Developed land was not categorized into further land use or zoning classifications for the purpose of this report, as the focus of this report is on natural or native habitat. Vegetation in these areas, if present, consisted of mustards, such as broad-leaved pepperweed (*Lepidium latifolium*) (Category C noxious weed) and clasping pepperweed (*Lepidium perfoliatum*); and common roadside weeds, such as prickly lettuce (*Lactuca serriola*), burningbush (*Bassia scoparia*), Palmer's amaranth (*Amaranthus palmeri*), Russian thistle (*Salsola tragus*), and puncturevine (*Tribulus terrestris*) (Category C noxious weed) (**Photos 1–2, Appendix A**).

Greasewood Shrubland

Greasewood shrublands were one of the two dominant vegetation communities in the Study Area (along with Big Sagebrush Shrubland) and were overwhelmingly dominated by greasewood (*Sarcobatus vermiculatus*) and weedy forbs, such as broad-leaved pepperweed (Category C noxious weed). Additionally, Big sagebrush (*Artemisia tridentata*), saltbush (*Atriplex* spp.), rubber rabbitbrush (*Ericameria nauseosa*), and yellow rabbitbrush (*Chrysothamnus viscidiflorus*) were present infrequently (**Photos 3–4, Appendix A**).

Exhibit 2. Vegetation Communities within the Study Area (Overview)

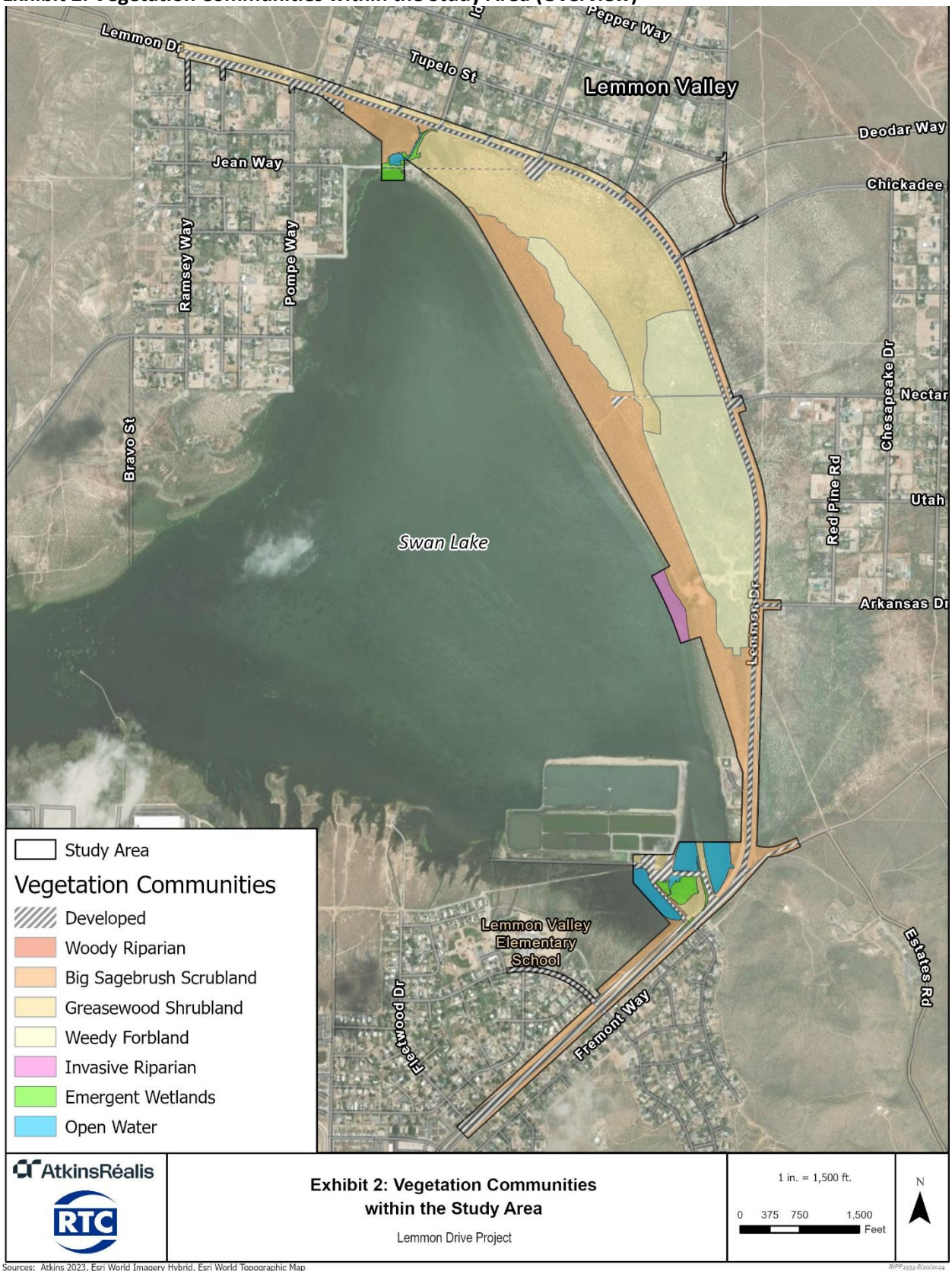


Exhibit 3a. Vegetation Communities within the Study Area (Details)

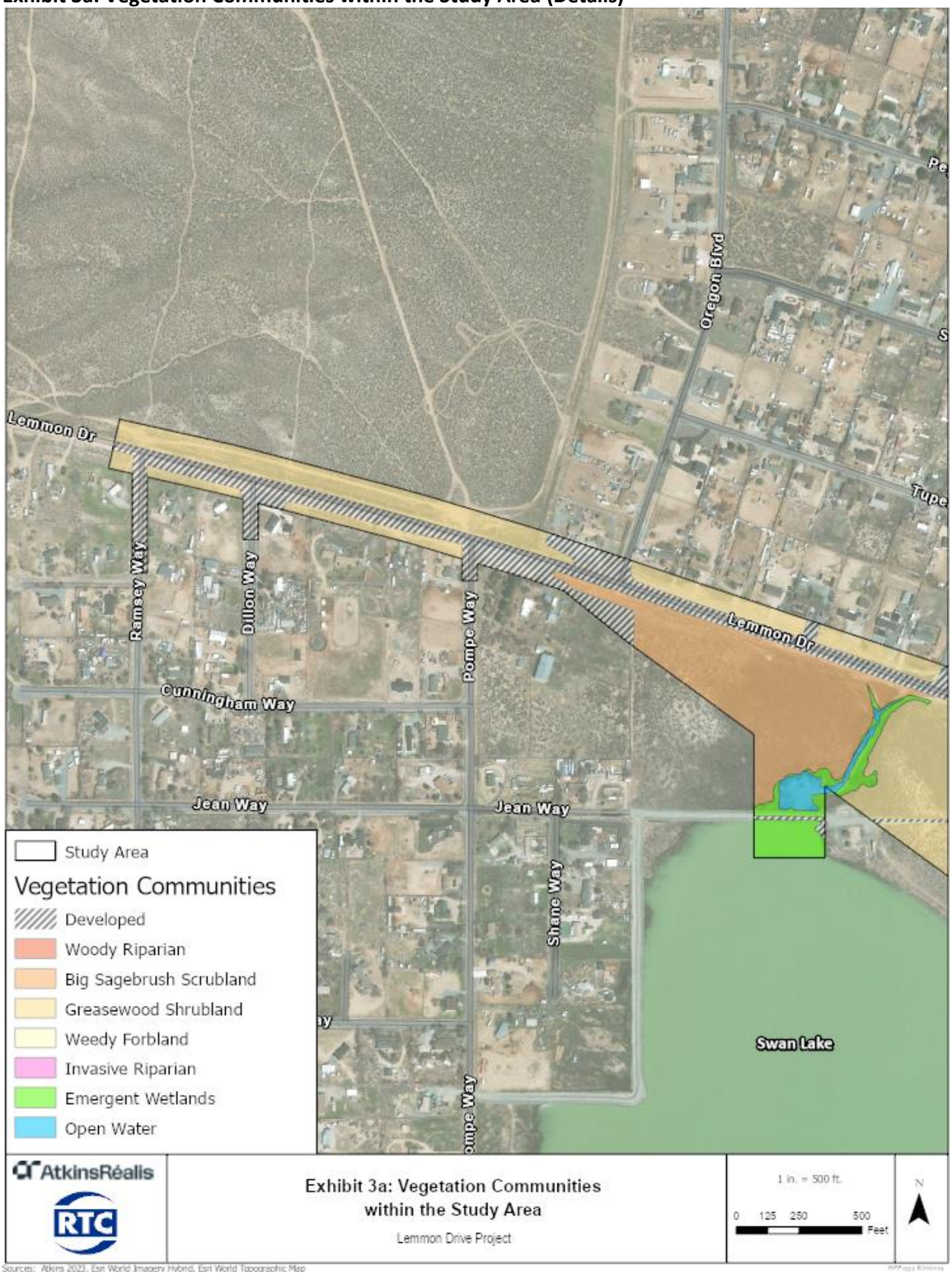


Exhibit 3b. Vegetation Communities within the Study Area

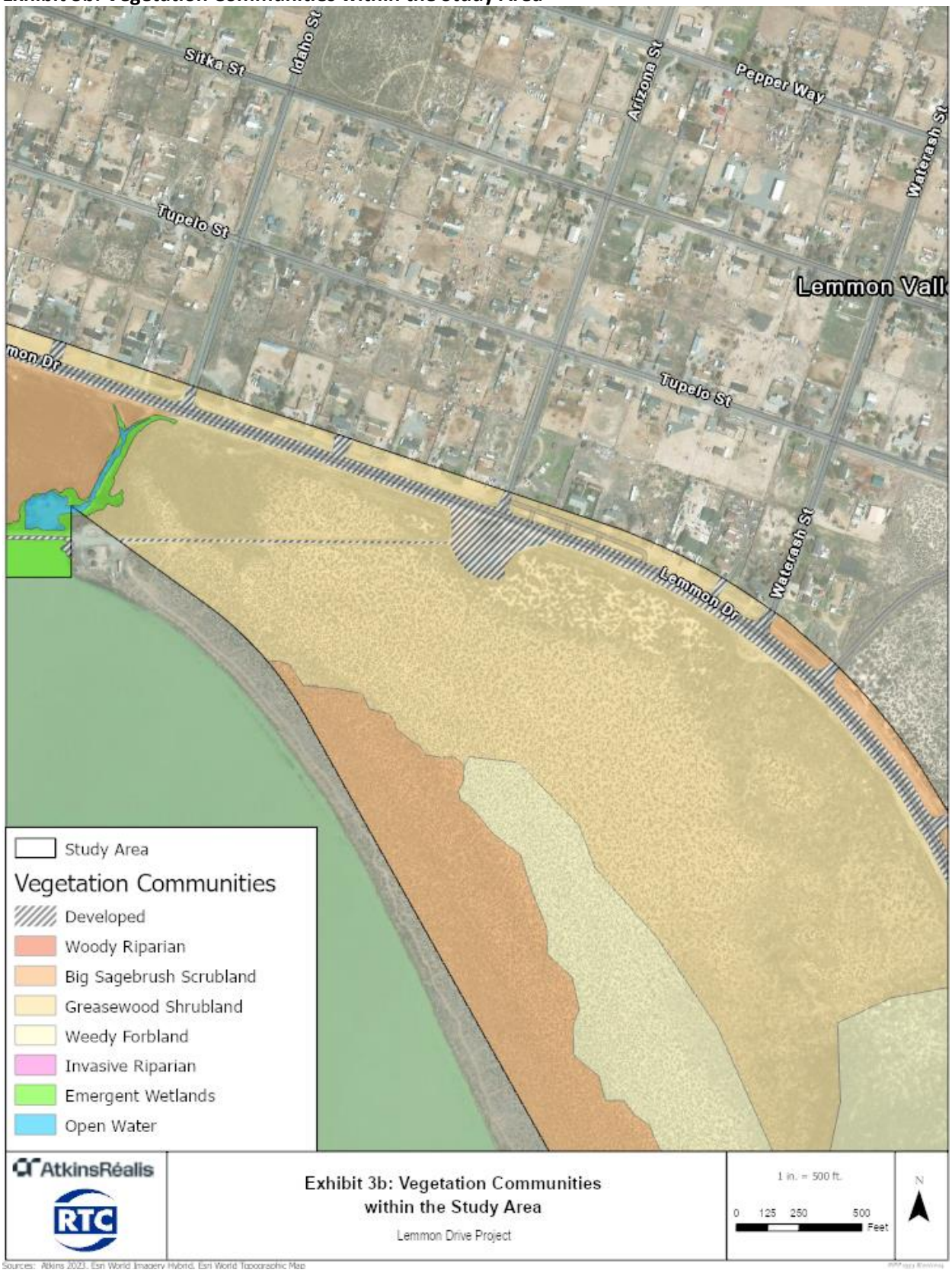


Exhibit 3c. Vegetation Communities within the Study Area

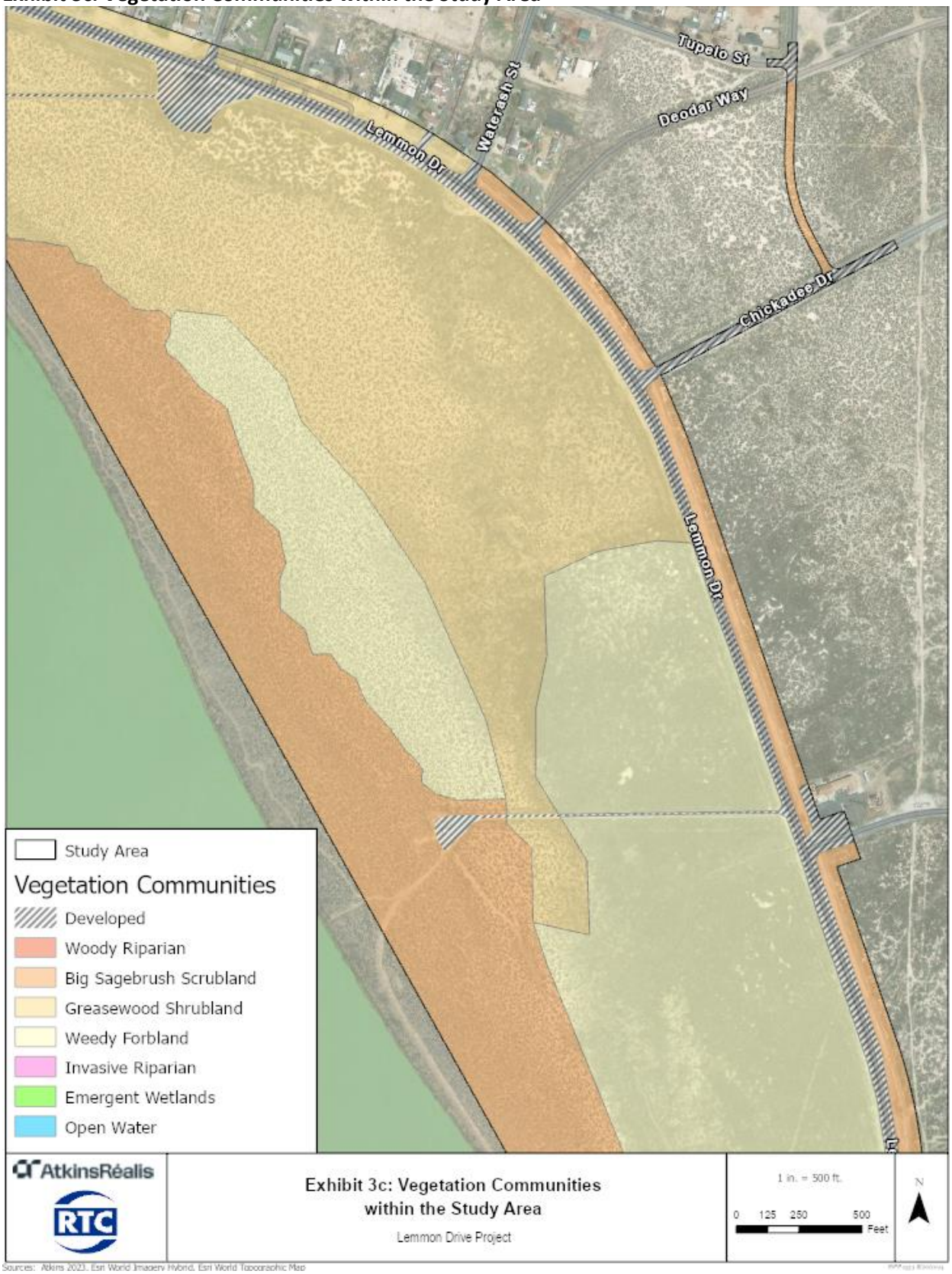


Exhibit 3d. Vegetation Communities within the Study Area

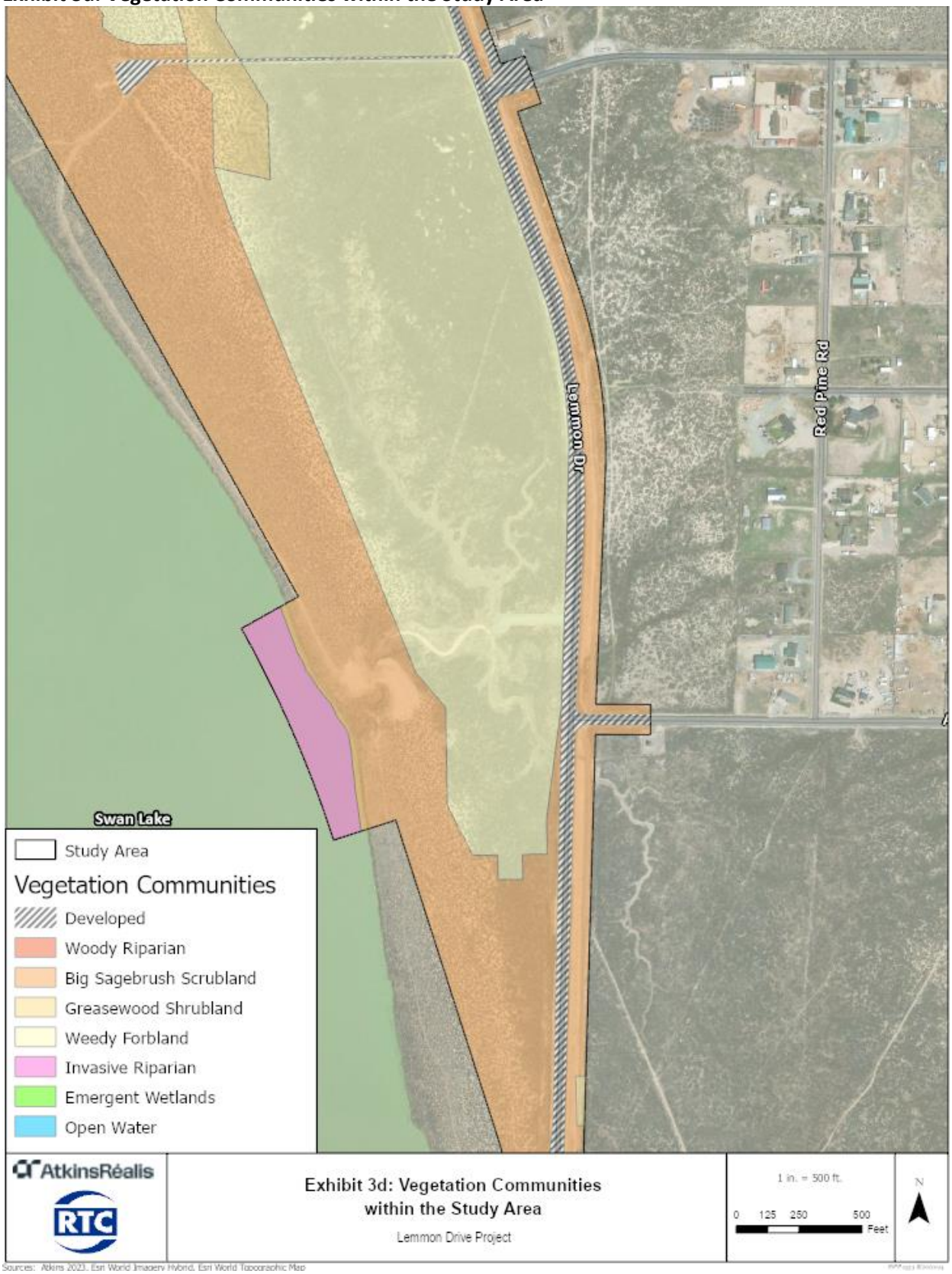


Exhibit 3e. Vegetation Communities within the Study Area

Exhibit 3f. Vegetation Communities within the Study Area

Graminoids encountered included Indian ricegrass (*Achnatherum hymenoides*), thickspike wheatgrass (*Elymus lanceolatus*), Idaho fescue (*Festuca idahoensis*), needle-and-thread grass (*Hesperostipa comata*), western wheatgrass (*Pascopyrum smithii*), and cheatgrass (*Bromus tectorum*); however, these were also present infrequently. In areas adjacent to developed land (i.e., along roadsides), common roadside weeds, such as prickly lettuce, burningbush, Palmer's amaranth, Russian thistle, and puncturevine (Category C noxious weed) were encountered. There was considerable overlap and intermixing between this vegetation community and the Big Sagebrush Shrubland community.

Big Sagebrush Shrubland

Big Sagebrush Shrublands were one of the two dominant vegetation communities in the Study Area (along with Greasewood Shrubland) and were overwhelmingly dominated by big sagebrush and weedy forbs, such as broad-leaved pepperweed (Category C noxious weed). Additionally, greasewood, saltbush, rubber rabbitbrush, and yellow rabbitbrush were present infrequently (**Photos 5–6, Appendix A**). This community is very similar in composition to the Greasewood Shrubland community, but with big sagebrush dominant instead of greasewood. Composition and occurrence of non-dominant species was essentially identical to that in the Greasewood community.

Woody Riparian

Woody Riparian vegetation areas were dominated by sandbar willow (*Salix exigua*) and tamarisk (Category C noxious weed), interspersed with Fremont cottonwood (*Populus fremontii*), reed canarygrass (*Phalaris arundinacea*), annual rabbit's-foot grass (*Polypogon monspeliensis*); seepweeds (*Suaeda* spp.), alfalfa (*Medicago sativa*), short-rayed alkali aster (*Symphyotrichum frondosum*), and occasional emergent wetland species, such as narrowleaf cattail (*Typha angustifolia*) and hardstem bulrush (*Schoenoplectus acutus*) (**Photos 7–8, Appendix A**). These areas were observed lining the drainage canals and along outside borders of Emergent Wetland areas near the southern end of the Study Area.

Emergent Wetlands

These areas were dominated by narrowleaf cattail, hardstem bulrush, Nevada bulrush (*Amphiscirpus nevadensis)*, spikerush (*Eleocharis* spp., usually *Eleocharis palustris*), annual rabbit's-foot grass, short-rayed alkali aster, tamarisk (Category C noxious weed), moss, and pale smartweed (*Persicaria lapathifolium*). Seepweeds and alfalfa occurred around outer margins. There were two main Emergent Wetland areas: a complex of several wetlands associated with drainage canals and holding ponds near the southern end of the Study Area and a large wetland area at the northern

tip of Swan Lake. Generally, vegetation coverage in these areas was quite dense (**Photos 9–10, Appendix A**).

Open Water

Open Water areas in the Study Area were unvegetated. All of the Open Water areas in the Study Area were associated with a holding pond or an Emergent Wetland area (**Photos 11–12, Appendix A**).

Weedy Forbland

Weedy Forblands were primarily in the center of the Study Area and in between Lemmon Drive and Swan Lake. In general, they were found closer to Lemmon Drive. Historic aerial imagery reveals that Swan Lake flooded in 2017 (Google, 2023), and the extent of the flooding roughly aligns with boundaries of the Weedy Forbland vegetation community. Based on field observations, it appears that these areas were likely either Greasewood Shrubland or Big Sagebrush Shrubland before the flood. The flood killed most of the shrubby species, creating a gap that has been filled almost exclusively by weedy species, such as broad-leaved pepperweed (Category C noxious weed) (**Photos 13–14, Appendix A**).

Invasive Riparian

One area of Invasive Riparian vegetation exists on the shores of Swan Lake and in the center of the Study Area. This vegetation community is dominated by tamarisk (Category C noxious weed), with incidental salt-tolerating plants like rough cocklebur (*Xanthium strumarium*), seepweeds, western sea purslane (*Sesuvium verrucosum*), and oak-leaf goosefoot (*Oxybasis glauca*) occurring infrequently (**Photos 15–16, Appendix A**).

3.2.2 Noxious Weeds

Table 2 lists four noxious weed species that were recorded within the Study Area at the time of the field survey (September 2023): Eurasian water-milfoil (*Myriophyllum spicatum*) (Category A noxious weed), puncturevine (Category C noxious weed), broad-leaved pepperweed (Category C noxious weed), and tamarisk (Category C noxious weed). These noxious weeds pose a threat to native plant communities and overall habitat health within and adjacent to the Study Area. Management actions, including the prevention of further spread during construction, are necessary. Infested material (e.g., soil, vegetation, gravel) generated during construction must be handled and disposed of according to Nevada Department of Agriculture regulations and project-specific BMPs to prevent contamination of construction materials or off-site disposal areas.

Table 2: State-Listed Noxious Weeds Identified within the Study Area

Species Name	NDA Category	Location	Density in Study Area
Eurasian water-milfoil (*Myriophyllum spicatum*)	Category A	Found only in the northernmost Emergent Wetland area.	Low
Puncturevine (*Tribulus terrestris*)	Category C	Found throughout the Study Area along roads.	Medium
Broad-leaved pepperweed (*Lepidium latifolium*)	Category C	Throughout the entire Study Area, but found mostly in the central zone, in between Swan Lake and Lemmon Drive. Found amongst greasewood or big sagebrush or in dense monocrops.	High
Tamarisk (*Tamarix spp.)*	Category C	Found in most wetland areas and along all water bodies in the Study Area.	Medium

3.2.3 Protected Species Considered

An official list of federally threatened, endangered, proposed, and candidate species that may occur within the Study Area was received from the USFWS's IPaC website (USFWS, 2025b) on 11/6/2023 and updated on 4/8/2025 (**see Appendix C**). The results of the federally listed species with the potential to occur within the Study Area are included in **Table 3**. Additionally, the list includes a determination of proposed- and final-designated critical habitat. No critical habitat for any species occurs within the Study Area.

The species listed in **Table 3** are also Bureau of Land Management (BLM) Sensitive Species. A large portion of the land in and around the limits of the Study Area is BLM land.

Table 3: USFWS Federally Listed Species & BLM Sensitive Species with Potential to Occur in the Study Area

Species Name	Status*	Suitable Habitat	Presence of Critical Habitat	Study Area Suitability	Potential Effects of Project
Flowering Plants					
Webber's ivesia (*Ivesia webberi*)	FT	Primarily found in the Sierra Nevada. Thrives in montane and subalpine habitats at elevations of 5,900 feet to 11,200 feet. Adapted to various soils, preferring well-drained, rocky, or sandy substrates. Often found in open meadows or partially treed areas. [†]	Not in Study Area	No suitable habitat present. Study Area is not montane or subalpine.	No effect
Birds					
California condor (*Gymnogyps californianus*)	EXPN	Prefers rugged, remote mountainous terrain, cliffs, and large trees for roosting. Requires large areas of open land for scavenging carrion. Primarily found in California, Arizona, Utah, and Baja California, Mexico. [††]	Not in Study Area.	No suitable habitat present. The Study Area lacks the necessary cliffs, roosting sites, and extensive foraging range required by the species.	No effect
Insects					
Carson wandering skipper *(Pseudocopaeodes eunus obscurus*)	FE	Habitat is characterized as lowland grassland habitats on alkaline substrates. Elevation is typically 5,000 feet with saltgrass (*Distichlis spicata*) and nectar sources in open areas near springs or water and possible geothermal activity. [†††] There is one known population found in Washoe County, in Warm Springs Valley, 13 miles away.	No Critical Habitat listed for this species.	No suitable habitat is present. Saltgrass is not dominant in any of the vegetation communities, and vegetation in the Study Area is dominated by weedy species and shrub species. Even though saltgrass is present, it does not exist in large enough continuous patches to serve as suitable larval habitat for the Carson wandering skipper.	No effect

Species Name	Status*	Suitable Habitat	Presence of Critical Habitat	Study Area Suitability	Potential Effects of Project
Monarch butterfly (*Danaus plexippus*)	PT	Monarch butterflies lay their eggs on their obligate milkweed host plant (primarily *Asclepias* spp.). Larvae then feed on milkweed before pupating to become adult butterflies. Monarchs undergo long-distance migration to California or Mexico before returning in the spring. [†††]	No Critical Habitat proposed within Nevada for this species.	No suitable breeding habitat present within the study area. No milkweed plants were identified during the field surveys in September 2023. Suitable non-breeding habitat exists throughout the Study Area due to the abundance of flowering plants that provide nectar between May-October.	May Affect, Not Likely to Adversely Affect

*Abbreviations explained here: FT=Federally Threatened, FE = Federally Endangered, EXPN = Experimental Population, Non-Essential, PT = Proposed Threatened

Sources: [†]USFWS, 2025c; [††]USFWS, 2025d; [†††]USFWS, 2007 and USFWS, 2025e; [†††]USFWS, 2025f

3.2.4 Migratory Birds

Vegetation communities in the Study Area provide a variety of habitat types for nesting birds. Birds observed during the field survey include Canada goose (*Branta canadensis*), northern shoveler (*Spatula clypeata*), mallard (*Anas platyrhynchos*), barn swallow (*Hirundo rustica*), red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), and white-crowned sparrow (*Zonotrichia leucophrys*). As mentioned previously, Swan Lake is a designated IBA, but the Study Area does not overlap with the IBA boundaries, and its status as an IBA does not impose any regulatory requirements.

3.2.5 General Wildlife

Several wildlife species were observed in or near the Study Area, either directly or through inferred presence from their signs (scat, tracks, burrows). In September 2023, a field survey of the Study Area identified mule deer (*Odocoileus hemionus*) and coyote (*Canis latrans*) scat/tracks, and various burrows potentially used by mammals or reptiles.

4.0 Impacts

A review of the Build Alternative and the No Build Alternative was conducted to assess which biological resources would be impacted, both directly and indirectly, by each alternative. This assessment focuses on impacts to vegetation communities and wildlife habitat, special status species, general terrestrial and aquatic wildlife, and noxious weeds.

4.1 Build Alternative Impacts

The construction of the Proposed Action will result in approximately 220.43 acres of impacts, with the majority of these impacts being temporary (116.91 acres) and the remainder being

permanent (103.52 acres). Permanent impacts will occur within the Proposed Action road alignment footprint and areas designated for volumetric mitigation to mitigate flooding issues.

Temporary impacts will result from temporary disturbance of areas through grading or similar activities and will be mitigated for by the restoration of native vegetation once work is complete. Temporary impact estimates are conservatively large to ensure that any potential staging areas are accounted for. These temporary impact areas will be refined as the project design plans advance toward completion.

4.1.1 Direct Impacts

Direct impacts from the Proposed Action include the removal of vegetation, disturbance to wildlife habitat, alteration of land cover types, soil compaction from construction activities, and potential harm to special status species, as discussed below.

- **Excavation and Earthwork:** Excavation will be required to prepare the new alignment footprint, including the removal of soil, vegetation, and existing structures. This process will alter the natural landscape and potentially disrupt local ecosystems, particularly in areas with sensitive habitats. The excavation will also involve grading and contouring the land to establish a stable foundation for the new road. Additionally, volumetric mitigation basins will be excavated between the new, realigned Lemmon Drive and existing Lemmon Drive within the FEMA floodplain. These basins will provide 1.3 cubic yards of excavation for every 1 cubic yard of embankment placed within the 100-year floodplain, helping to mitigate potential flood-related impacts.
- **Berm Construction:** To support the new road, a berm will be constructed along the alignment. This berm will serve as the structural base for the road, requiring the placement of large quantities of fill material, which will be sourced on-site. The construction of the berm will involve compaction and stabilization processes to ensure durability and longevity, impacting nearby vegetation and water flow patterns.
- **Road Construction:** The construction of the new road itself will involve laying down the subgrade, base, and surface layers, which typically include gravel, asphalt, and concrete. This process will result in permanent alterations to the Study Area. The road construction will also necessitate the installation of drainage systems, curbs, and potentially retaining walls, further impacts which will be assessed as design plans near completion.
- **Staging Areas and Equipment Storage:** Temporary staging areas will be established to accommodate construction vehicles, equipment, and materials. These areas, which will include cleared land and existing open spaces, will be used for the duration of the project. The use of these staging areas will result in temporary disturbances, including soil compaction, vegetation removal, and potential contamination from fuel, oil, or other construction materials.
- **Vehicle and Equipment Movement:** The movement of heavy machinery and construction vehicles throughout the Study Area will contribute to soil compaction, increased erosion, and potential damage to local flora and fauna. Access roads may need to be constructed or widened to accommodate this equipment, further expanding the footprint of the direct impacts.

4.1.1.1 Impacts to Vegetation and Wildlife

Table 4 indicates the estimated direct impacts (permanent and temporary) to the vegetation communities within the footprint of the Proposed Action from implementation of the Proposed Action based on the analysis of the 30 percent design footprint. Exhibits 4a-4f show the location and types of impacts within the Study Area, as well as the type of land cover that will be affected.

Although no active nests were observed during surveys of the Study Area, some habitat types within the Study Area contain suitable nesting habitat for migratory birds. These habitats include areas of shrubland, riparian zones, and open water. Construction activities, particularly during the breeding season (March 1 – July 31), have the potential to disturb nesting birds, leading to displacement or abandonment of nests. Mitigation measures, such as timing restrictions, will be implemented to minimize this risk. Large light poles or utility poles are planned and will need to be avian-safe to avoid electrocutions.

Additionally, the removal of vegetation and alteration of habitat during construction may result in the loss of forage, cover, and breeding sites for local wildlife. Species dependent on the impacted vegetation types, particularly those adapted to the shrubland and riparian habitats, may experience displacement due to the reduction in available habitat. Temporary impacts, such as soil compaction and vegetation removal in staging areas, could also lead to short-term disruptions in local wildlife populations, although these areas are expected to recover over time.

The roadway will introduce or increase the "barrier effect" for wildlife moving east-west between the upland areas and Swan Lake. This is of particular concern for waterfowl, including ducks and geese, which move between the lake and upland foraging areas. The barrier effect may be especially significant for flightless young, which must travel across the road, increasing the risk of bird-vehicle collisions. Roads are known to contribute to higher mortality rates for young birds, as they are unable to fly over traffic. To minimize impacts, wildlife-friendly range fencing with smooth top and bottom wires will be installed where appropriate to control access while allowing for safer wildlife movement.

While habitat will be lost during the initial construction phase of the project, post-construction restoration efforts are expected to support the re-establishment of native vegetation and provide long-term habitat recovery.

Table 4: Summary of Impacts to Vegetation Communities within the Footprint of the Proposed Action

Vegetation Community	Vegetation Community Description	Temporary Impacts (Acres)	Permanent Impacts (Acres)
Developed	Areas that are part of the built environment. Includes roadways, trails, sidewalks, ornamental landscaping, and other non-vegetated areas.	1.85	12.56
Greasewood Shrubland	Areas containing a mix of greasewood, grasses, and forbs.	30.47	34.82
Big Sagebrush Shrubland	Areas containing a mix of big sagebrush, grasses, and forbs.	29.66	18.56
Woody Riparian	Areas dominated by woody riparian vegetation.	0	0.01
Emergent Wetlands	Wetlands that are dominated primarily by herbaceous vegetation.	0	0.20
Open Water	Areas containing open water.	0	0.03
Weedy Forbland	Areas dominated by weedy and invasive forbs.	54.93	37.34
Invasive Riparian	Areas dominated by introduced riparian woody species like *Tamarix* spp.	0	0
	TOTAL	**116.91**	**103.52**

Exhibit 4a. Impacts by Land Cover Type

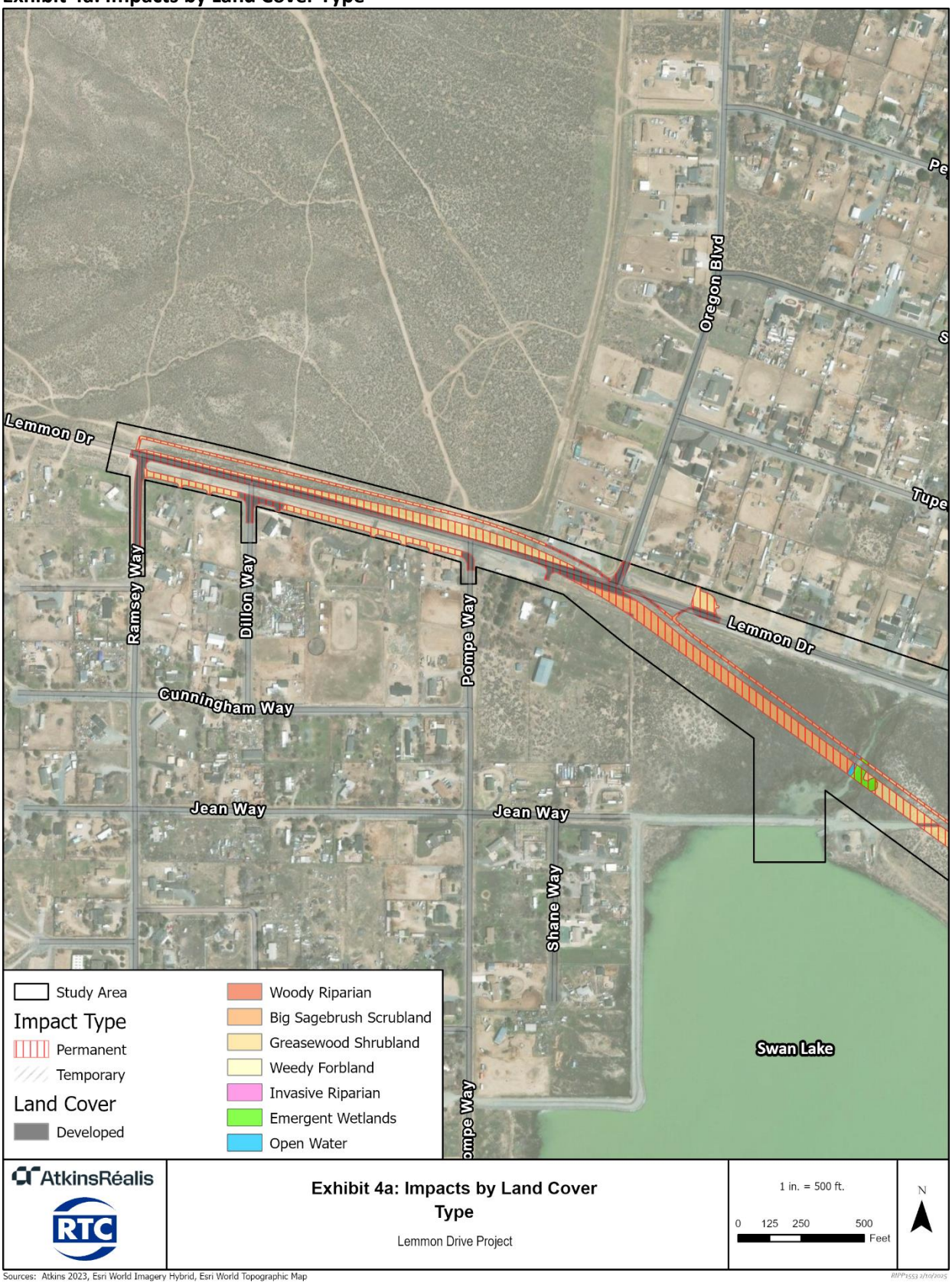


Exhibit 4b. Impacts by Land Cover Type

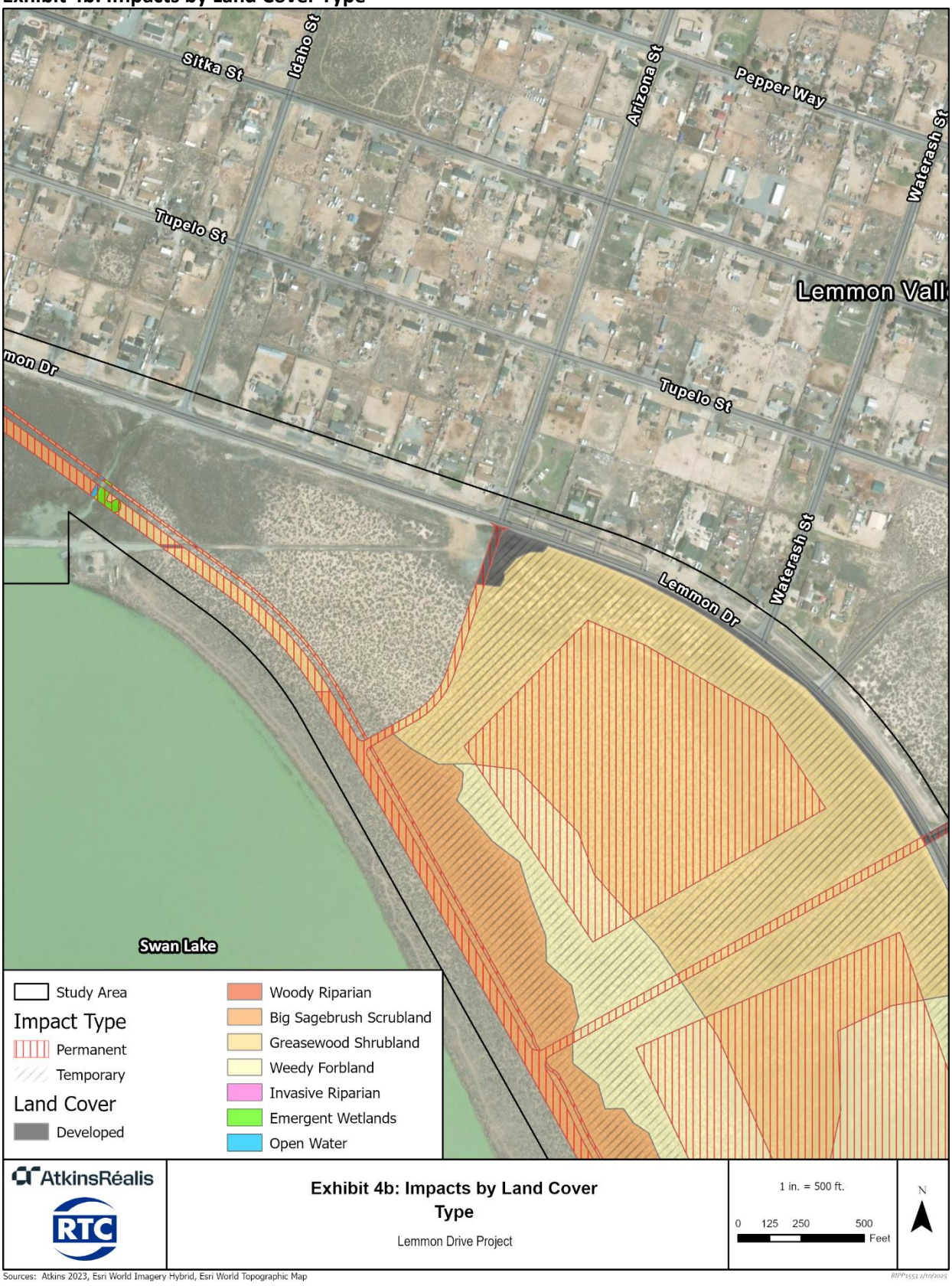


Exhibit 4c. Impacts by Land Cover Type

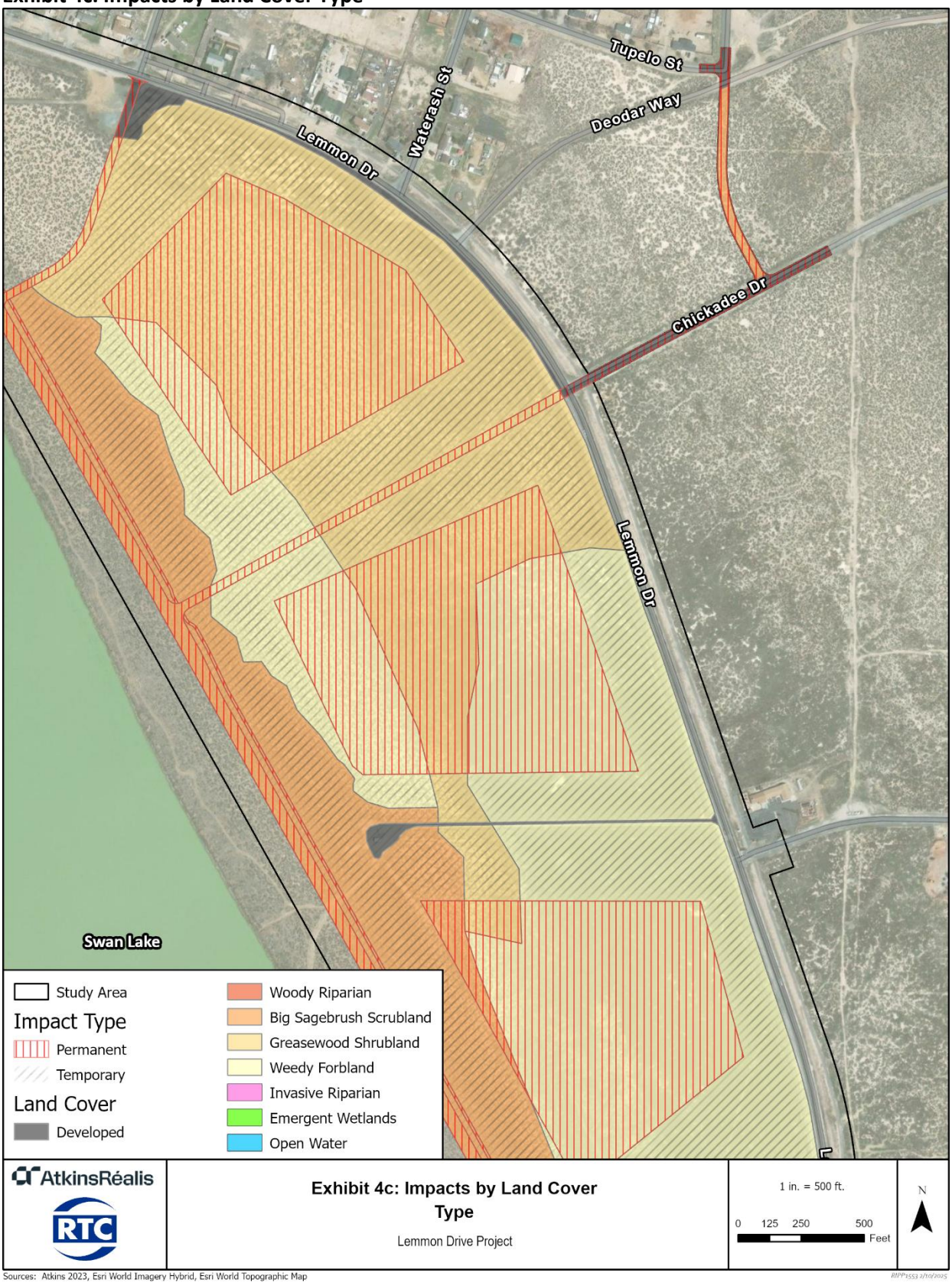


Exhibit 4d. Impacts by Land Cover Type

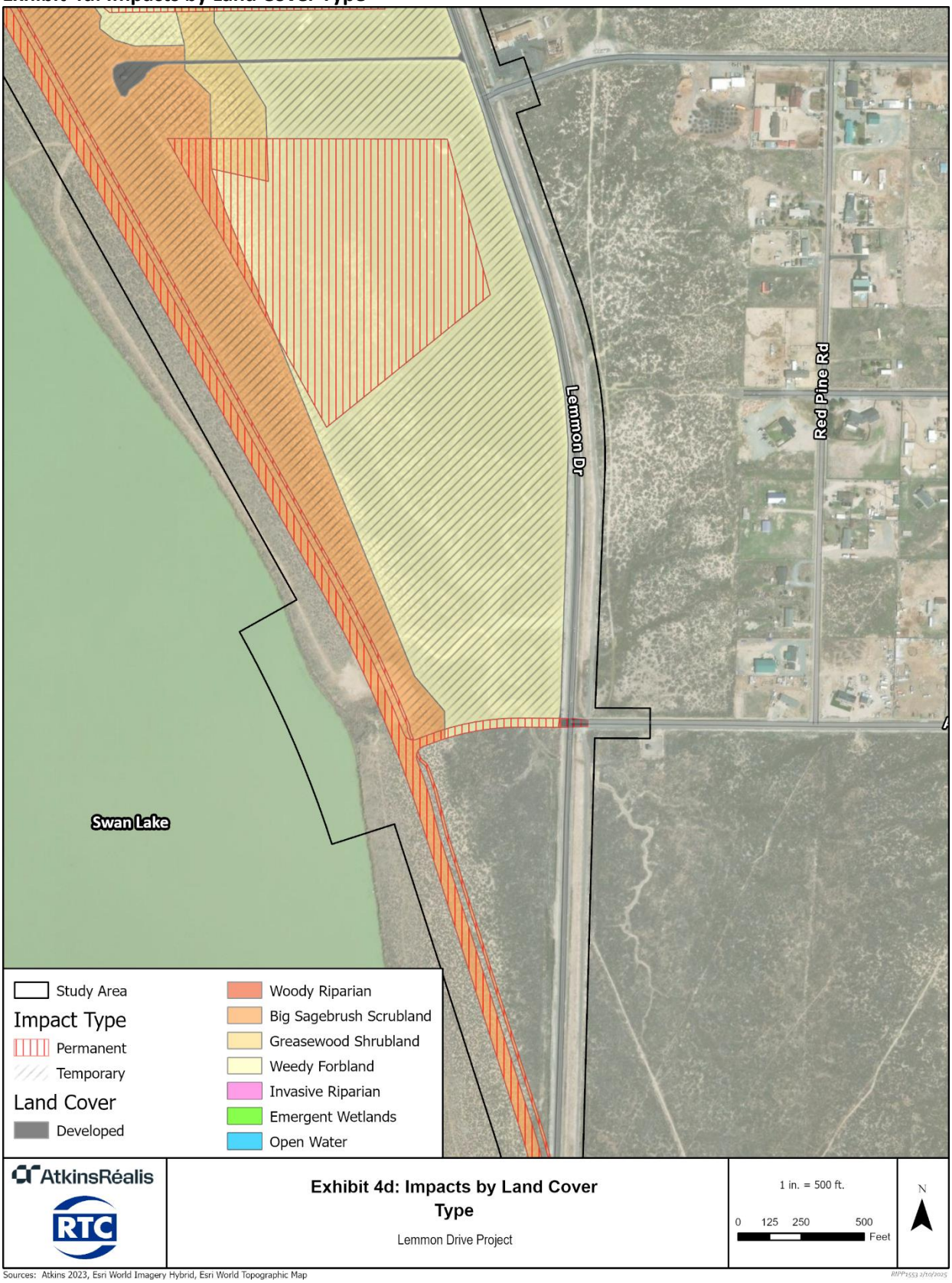
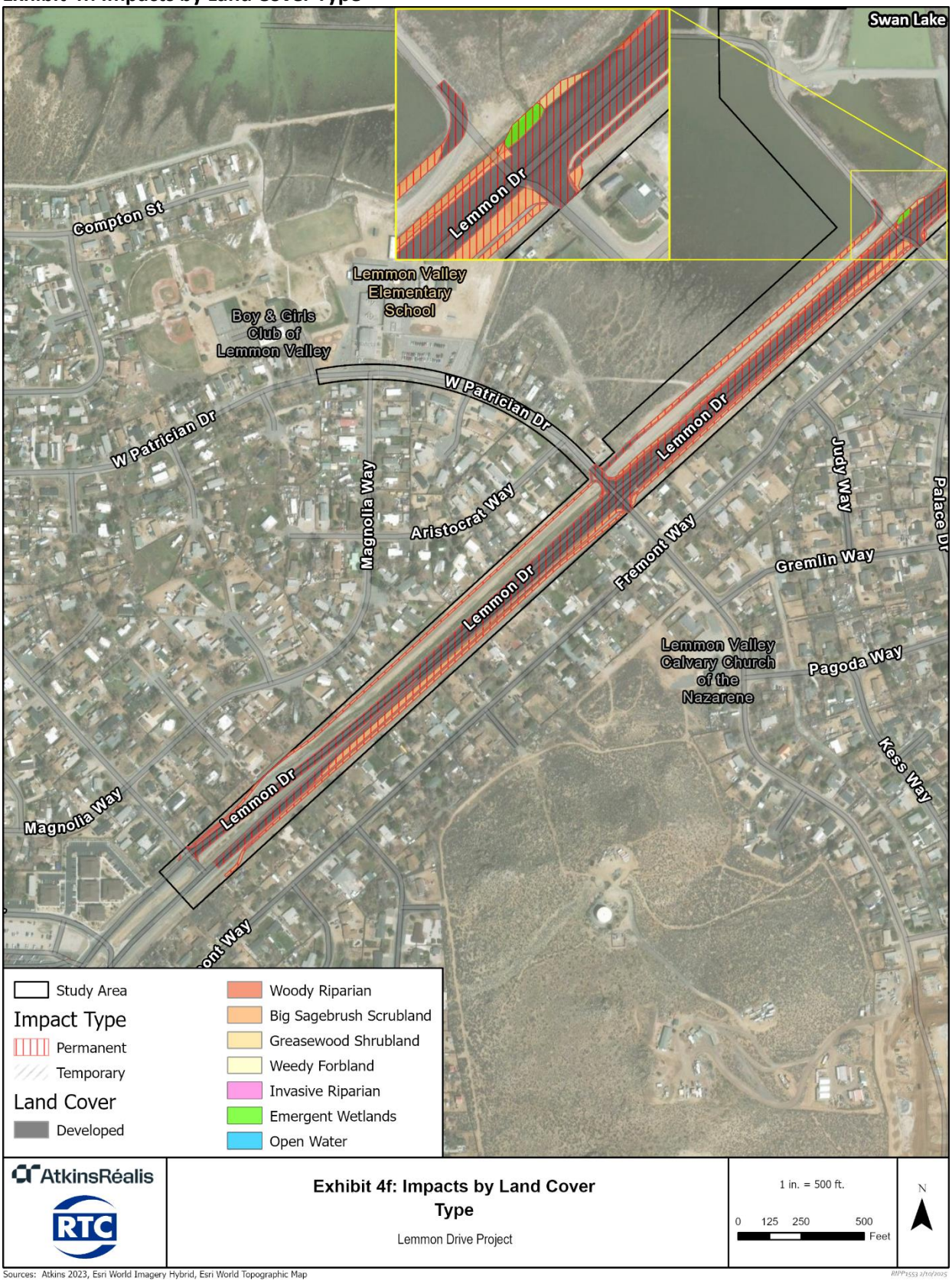


Exhibit 4e. Impacts by Land Cover Type

Sources: Atkins 2023, Esri World Imagery Hybrid, Esri World Topographic Map

Exhibit 4f. Impacts by Land Cover Type



4.1.1.2 Impacts to Protected Species

Special Status Species

There is no risk of impacts to Webber's ivesia (*Ivesia webberi*) from the construction of the Proposed Action, as there is no suitable habitat for this species within the Study Area.

There is no potential for impact to the Carson wandering skipper (*Pseudocopaeodes eunus obscurus*). The Study Area is situated within the suitable habitat range of this species, and the primary known extant populations within Washoe County lies in Warm Springs Valley (approximately 13.5 miles northwest of the Study Area) (USFWS, 2012, 2025e). Much like monarch butterfly caterpillars rely on milkweed, Carson wandering skipper caterpillars feed on saltgrass (*Distichlis spicata*). Although the Study Area lies within an appropriate elevation for Carson wandering skipper and both larval food sources (saltgrass) and adult nectar sources (alfalfa, heliotrope (*Heliotropium curassavicum*), seepweed, western sea purslane) were observed within the Study Area, the saltgrass is not present in sufficiently dense or expansive stands to provide suitable larval habitat. Therefore, the Study Area is considered unsuitable for the species overall. Extensive consultation with the USFWS (Enders, Lara, personal communication, 1/26/2024) led to this determination for the following reasons:

1. Saltgrass is not a dominant component of any of the vegetation communities.
2. Most communities are dominated by weedy species or shrub species, with little room for a saltgrass understory that would be available for use by Carson wandering skipper. Areas where there could be saltgrass are relatively small (e.g. 10 feet x 20 feet).
3. Along the shore of the lake there is no saltgrass and the community quickly transitions from water to upland species, with no suitable conditions for saltgrass. For these reasons, no potential habitat likely exists along the entire eastern shore of Swan Lake.

In line with recommendations from USFWS Carson wandering skipper experts, this project will have no effect on Carson wandering skipper or Carson wandering skipper habitat (Enders, Lara, personal communication, 1/26/2024).

Suitable non-breeding habitat for the monarch butterfly (*Danaus plexippus*) exists within the Study Area, as flowering plants that provide nectar from May to October are widespread. The impacts to non-breeding habitat within the Study Area would not place the species in jeopardy. Project activities will result in the removal of flowering plants along the new road alignment; however, many of these species are annuals and are expected to rebound in subsequent years. Impacts to perennial shrubs like rubber rabbitbrush will also occur, but as these species are common and widespread in the region, the overall impact to monarch butterfly habitat from the Proposed Action is negligible.

Additionally, a conference with the USFWS will be required for the monarch butterfly. This conference will allow for consultation on potential impacts and mitigation strategies specific to this project.

4.1.2 Indirect Impacts

Indirect impacts from the Proposed Action include dust, noise, runoff/decreased water quality, introduction of invasive species, and light pollution, as discussed below.

Dust

Activities, such as grading and driving equipment on unpaved roadways have the potential to cause indirect impacts to surrounding vegetation communities from increased levels of dust that may settle on plants. Increased levels of dust on plants can adversely affect photosynthetic capabilities of plants, adversely affect their productivity and nutritional qualities, and degrade overall health of vegetation communities, which may also adversely affect wildlife dependent on them. However, this potential impact would be a temporary impact and could be reduced by using dust suppression best management practices (BMPs).

Noise

Construction noise, particularly from heavy machinery and vehicle movement, may disturb local wildlife, including breeding birds and mammals. Noise pollution can lead to the temporary or permanent displacement of animals from their habitats, resulting in reduced reproductive success and increased mortality. While these impacts are generally adverse, they are expected to be less significant for species that are not of special conservation status.

Water Quality

Removing vegetation can cause increased soil erosion in areas without the vegetative material to intercept rainfall, reduce runoff, and stabilize soil. However, this potential impact would be a temporary impact and would be reduced by using erosion control BMPs such as silt fences, sediment traps, and the re-vegetation of disturbed areas during construction.

Introduction of Invasive Species

Construction activities, including the movement of soil and equipment, can inadvertently introduce or spread invasive plant species into the Study Area. These species can outcompete native vegetation, leading to a decline in biodiversity and altering ecosystem dynamics. Invasive species can also create challenges for habitat restoration efforts post-construction. Preventive measures, such as cleaning equipment before entering the site and monitoring for invasive species, can help reduce the risk of introduction and spread.

Light Pollution

The introduction of artificial lighting during construction, particularly if nighttime work is required, could disrupt the natural behaviors of nocturnal wildlife species. Light pollution can interfere with the foraging, mating, and navigation activities of these species, leading to stress and displacement. Additionally, artificial lighting can attract insects, which may alter local food webs. The use of shielded and directional lighting, along with minimizing nighttime work, can reduce the potential impacts of light pollution on wildlife.

4.2 No Build Alternative Impacts

The No Build Alternative would have no direct impacts on biological resources within the Study Area, as there would be no clearing/grubbing of vegetation nor any ground disturbance within the Study Area associated with the proposed reconstruction of Lemmon Drive. Indirect impacts on biological resources could occur over time due to increases in traffic volumes and traffic congestion along Lemmon Drive.

5.0 Mitigation

Mitigation measures are recommended to address potential impacts on biological resources from the Proposed Action.

5.1 Mitigation for Impacts to Biological Resources

Several general mitigation measures will be used to address potential impacts to biological resources, including migratory birds, vegetation, and noxious weeds, from the Proposed Action. **Table 5** summarizes potential impacts to these resources and recommends mitigation measures to address them. Continuous collaboration with experts from USFWS and other relevant agencies will ensure that the mitigation measures are effectively implemented and aligned with current best practices. Adjustments to mitigation strategies will be made as necessary, based on pre-construction surveys and observations of site conditions, including nesting activity and vegetation health.

Table 5: Recommended Mitigation Measures for Biological Resources

Activity	Location	Impact	Mitigation
Excavation, grading, other earthwork	Throughout the Study Area	Change of landscape, removal of vegetation will impact native plant species and increase chances of noxious weed dispersal.	Minimize earthwork on final plans. Use standard BMPs and weed-free materials (e.g., straw, wood-strand mulch) to prevent noxious weed dispersal. Revegetate disturbed areas with native species, and post-construction, promptly remove noxious weeds to support the re-establishment of native vegetation beneficial to wildlife.
Removal of trees and shrubs	Throughout the Study Area	Removal of trees and shrubs that provide wildlife habitat	Identify and protect trees and shrubs where feasible. If possible, repurpose shrubs for wildlife habitat within the project or in coordination with NDOW. Ensure restoration of disturbed areas includes plantings that support migratory birds for foraging and nesting, and supports prey species.
Construction Noise and Vibration	Throughout the Study Area	Noise and vibration from construction activities can disturb wildlife, particularly nesting birds and other sensitive species.	Implement noise reduction strategies, such as using quieter equipment and scheduling noisy activities outside of critical wildlife breeding seasons. Establish buffer zones around sensitive habitats, and where feasible, use noise barriers or acoustic screens. Monitor noise levels regularly to ensure compliance with guidelines.
Stormwater Runoff Management	Throughout the Study Area	Stormwater runoff from construction sites can lead to sedimentation and pollution of nearby water bodies, affecting aquatic habitats and water quality.	The project will incorporate water quality BMPs such as silt fences, sediment traps, and water quality ponds (detention or retention) to prevent contamination of Swan Lake, a crucial habitat for migratory birds. Consideration should also be given to the preservation of hydrological conditions that support the habitat needs of migratory birds.
Vehicle and Equipment Movement	Throughout the Study Area	Movement of heavy machinery can lead to soil compaction, damage to root zones, and increased erosion, impacting vegetation and soil health.	Designate specific routes and staging areas for vehicle and equipment movement to minimize impacts. Use matting or temporary roadways where necessary to reduce soil compaction. Restrict access to sensitive areas and provide training for operators on minimizing ecological impacts.
Dust Control	Throughout the Study Area	Dust generated from construction activities can settle on vegetation, reducing photosynthesis and overall plant health.	Apply dust suppression measures, such as water spraying, particularly during dry and windy conditions. Use soil stabilizers or mulching on exposed soil surfaces to minimize dust generation. Monitor dust levels and adjust mitigation measures as needed to protect nearby vegetation.

Activity	Location	Impact	Mitigation
Clearing/grubbing of vegetation and other earthwork	Throughout the Study Area	Removal of vegetation impacts migratory bird foraging and nesting activities, as well as monarch butterfly habitat and nectar resources	• Comprehensive surveys will be conducted from January to August, aligning with the Nevada migratory bird nesting season (March 1 – July 31), before construction to identify nesting sites for migratory birds, raptors, and monarch butterflies. • Identify and protect large trees and shrubs where feasible. Clearing vegetation can increase noxious weeds and reduce prey species for raptors, other birds, and pollinators. • If vegetation is removed, restore forage and nesting habitats by re-seeding with native species (forbs and shrubs) to support monarch butterflies and other invertebrates. • Identify areas containing native milkweed resources to ensure conservation of monarch butterfly habitat and other pollinator species.
General construction activities	Throughout the Study Area	Noise disturbance impacts nesting migratory birds.	Construction activities can impact nesting migratory birds, especially during the nesting season (March 1 – July 31) when noise may cause birds to flee their nests. Nesting surveys must be conducted on all Contractor staging areas, including stockpiles. Materials containing nests cannot be used until cleared by a biologist. Protect stockpile openings, like culverts, to prevent wildlife nesting. Minimize construction during nesting season, but if unavoidable, follow these guidelines: • Within 7 days before construction, a qualified biologist must survey for active nests within the construction zone and 500 feet beyond. • If active nests are found, establish setbacks before starting construction (25 feet for urban-adapted species, up to 500 feet for raptors).
Removing/replacing utility poles	Throughout the Study Area	Risk of electrocution or collision for migratory birds using utility poles.	Install avian-safe utility poles where replacements or new lines are installed. This will reduce the risks associated with electrocution or collision, particularly for raptors that use these poles for hunting or nesting.

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Appendix A. Photo Log

Photo 1. Roadways and residential components of the Developed community.

Photo 2. Components of the Developed community.

Photo 3. View west from Lemmon Dr toward Swan Lake – representative of the Greasewood Shrubland community.

Photo 4. View west from the open areas west of Lemmon Dr toward Swan Lake – representative of the Greasewood Shrubland community.

Photo 5. Northern portion of the Study Area showing an example of the Big Sagebrush Shrubland community.

Photo 6. Northern portion of the Study Area showing an example of the Big Sagebrush Shrubland community.

Photo 7. View north from the southern extent of the Study Area providing an example of Woody Riparian plants.

Photo 8. Woody Riparian plants observed in the southern portion of the Study Area.

Photo 9. Emergent Wetland community found in the southern portion of the Study Area.

Photo 10. Emergent Wetland community found in the southern portion of the Study Area.

Photo 11. View west from the edge of the southern ponds, showing an example of an Open Water area.

Photo 12. View west from the edge of the southern ponds, showing an example of an Open Water area.

Photo 13. View east from the levee/berm in the central portion of the Study Area toward Lemmon Dr, showing the Weedy Forbland community.

Photo 14. View east toward Lemmon Dr in the central portion of the Study Area, showing the Weedy Forbland community.

Photo 15. View north along the edge of Swan Lake at the Invasive Riparian cover type.

Photo 16. View north along the edge of Swan Lake at the Invasive Riparian cover type.

Appendix B. List of Observed Flora and Fauna

List of Observed Flora & Fauna in September 2023

Common Name	Species Name
Grasses & Forbs	
Alfalfa	*Medicago sativa*
Annual rabbit's-foot grass	*Polypogon monspeliensis*
Broad-leaved pepperweed	*Lepidium latifolium*
Burningbush \ kochia	*Bassia scoparia*
Cheatgrass \ downy brome	*Bromus tectorum*
Clasping pepperweed	*Lepidium perfoliatum*
Common spikerush	*Eleocharis palustris*
Eurasian water-milfoil	*Myriophyllum spicatum*
Hardstem bulrush	*Schoenoplectus acutus*
Idaho fescue	*Festuca idahoensis*
Indian ricegrass	*Achnatherum hymenoides*
Narrowleaf cattail	*Typha angustifolia*
Needle-and-thread grass	*Hesperostipa comata*
Nevada bulrush	*Amphiscirpus nevadensis*
Oak-leaf goosefoot	*Oxybasis glauca*
Pale smartweed	*Persicaria lapathifolium*
Palmer's amaranth	*Amaranthus palmeri*
Prickly lettuce	*Lactuca serriola*
Puncturevine	*Tribulus terrestris*
Reed canarygrass	*Phalaris arundinacea*
Rough cocklebur	*Xanthium strumarium*
Russian thistle	*Salsola tragus*
Seepweeds	*Suaeda* spp.
Short-rayed alkali aster	*Symphyotrichum frondosum*
Thickspike wheatgrass	*Elymus lanceolatus*
Western sea purslane	*Sesuvium verrucosum*
Western wheatgrass	*Pascopyrum smithii*
Trees & Shrubs	
Big sagebrush	*Artemisia tridentata*
Fremont cottonwood	*Populus fremontii*
Greasewood	*Sarcobatus vermiculatus*
Rubber rabbitbrush	*Ericameria nauseosa*
Saltbush	*Atriplex* spp.
Sandbar willow	*Salix exigua*
Tamarisk	*Tamarix* spp.
Yellow rabbitbrush	*Chrysothamnus viscidiflorus*
Birds	
Barn swallow	*Hirundo rustica*
Canada goose	*Branta canadensis*
Killdeer	*Charadrius vociferus*
Mallard	*Anas platyrhynchos*
Northern shoveler	*Spatula clypeata*
Red-tailed hawk	*Buteo jamaicensis*
White-crowned sparrow	*Zonotrichia leucophrys*
Mammals	
Mule deer (tracks & scat)	*Odocoileus hemionus*
Coyote (tracks & scat)	*Canis latrans*

Appendix C. U.S. Fish and Wildlife Species List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301

In Reply Refer To: 04/08/2025 21:28:02 UTC
Project Code: 2024-0138889
Project Name: Lemmon Drive Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service (fws.gov).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

PROJECT SUMMARY

Project Code: 2024-0138889
Project Name: Lemmon Drive Project
Project Type: Road/Hwy - New Construction
Project Description: Relocation of Lemmon Drive near Swan Lake.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.65790145,-119.83025639751301,14z

Counties: Washoe County, Nevada

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

BIRDS

NAME	STATUS
California Condor *Gymnogyps californianus* Population: Pacific Northwest NEP No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8193	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Carson Wandering Skipper *Pseudocopaeodes eunus obscurus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/674	Endangered
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

FLOWERING PLANTS

NAME	STATUS
Webber's Ivesia *Ivesia webberi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4682	Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

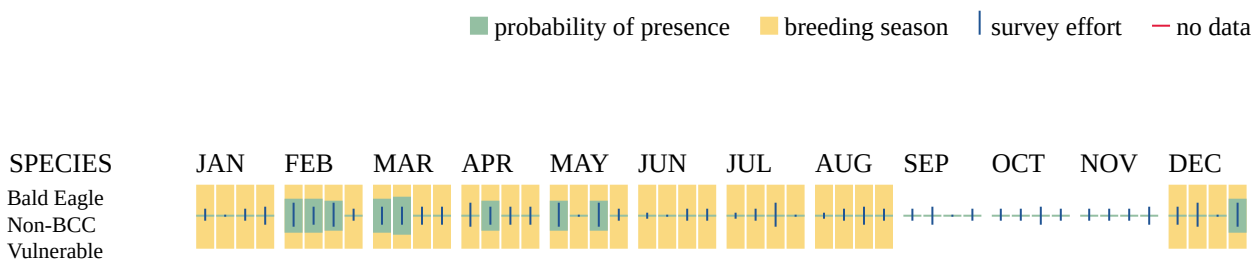
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

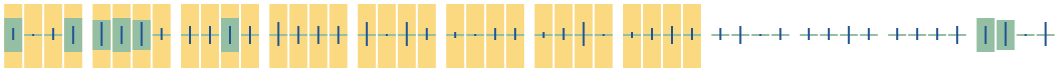
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Golden Eagle
Non-BCC
Vulnerable



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

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1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Avocet *Recurvirostra americana* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11927	Breeds Apr 21 to Aug 10
American White Pelican *pelecanus erythrorhynchos* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/6886	Breeds Apr 1 to Aug 31

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Dec 1 to Aug 31
Black Swift *Cypseloides niger* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8878	Breeds Jun 15 to Sep 10
Black Tern *Chlidonias niger surinamenisis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3093	Breeds May 15 to Aug 20
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9454	Breeds May 20 to Jul 31
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Calliope Hummingbird *Selasphorus calliope* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9526	Breeds May 1 to Aug 15
Clark's Grebe *Aechmophorus clarkii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10575	Breeds Jun 1 to Aug 31
Forster's Tern *Sterna forsteri* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/11953	Breeds Mar 1 to Aug 15
Franklin's Gull *Leucophaeus pipixcan* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10567	Breeds May 1 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

NAME	BREEDING SEASON
Lesser Yellowlegs *Tringa flavipes* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Long-eared Owl *asio otus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Marbled Godwit *Limosa fedoa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere
Northern Harrier *Circus hudsonius* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pectoral Sandpiper *Calidris melanotos* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9561	Breeds elsewhere
Pinyon Jay *Gymnorhinus cyanocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Rufous Hummingbird *Selasphorus rufus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds Apr 15 to Jul 15
Sage Thrasher *Oreoscoptes montanus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9433	Breeds Apr 15 to Aug 10
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31

NAME	BREEDING SEASON
Willet *Tringa semipalmata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10669	Breeds Apr 20 to Aug 5

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

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Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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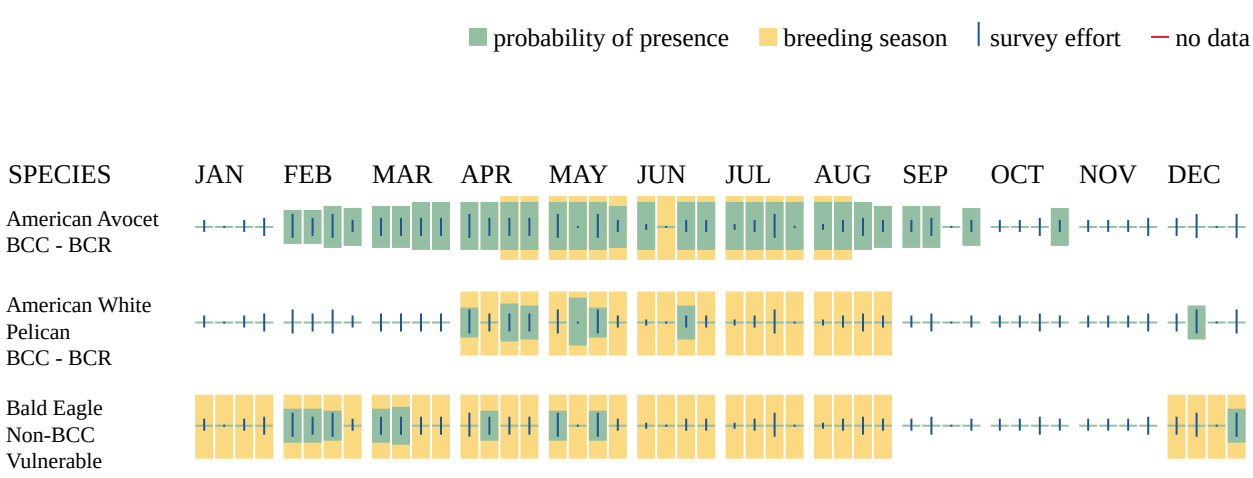
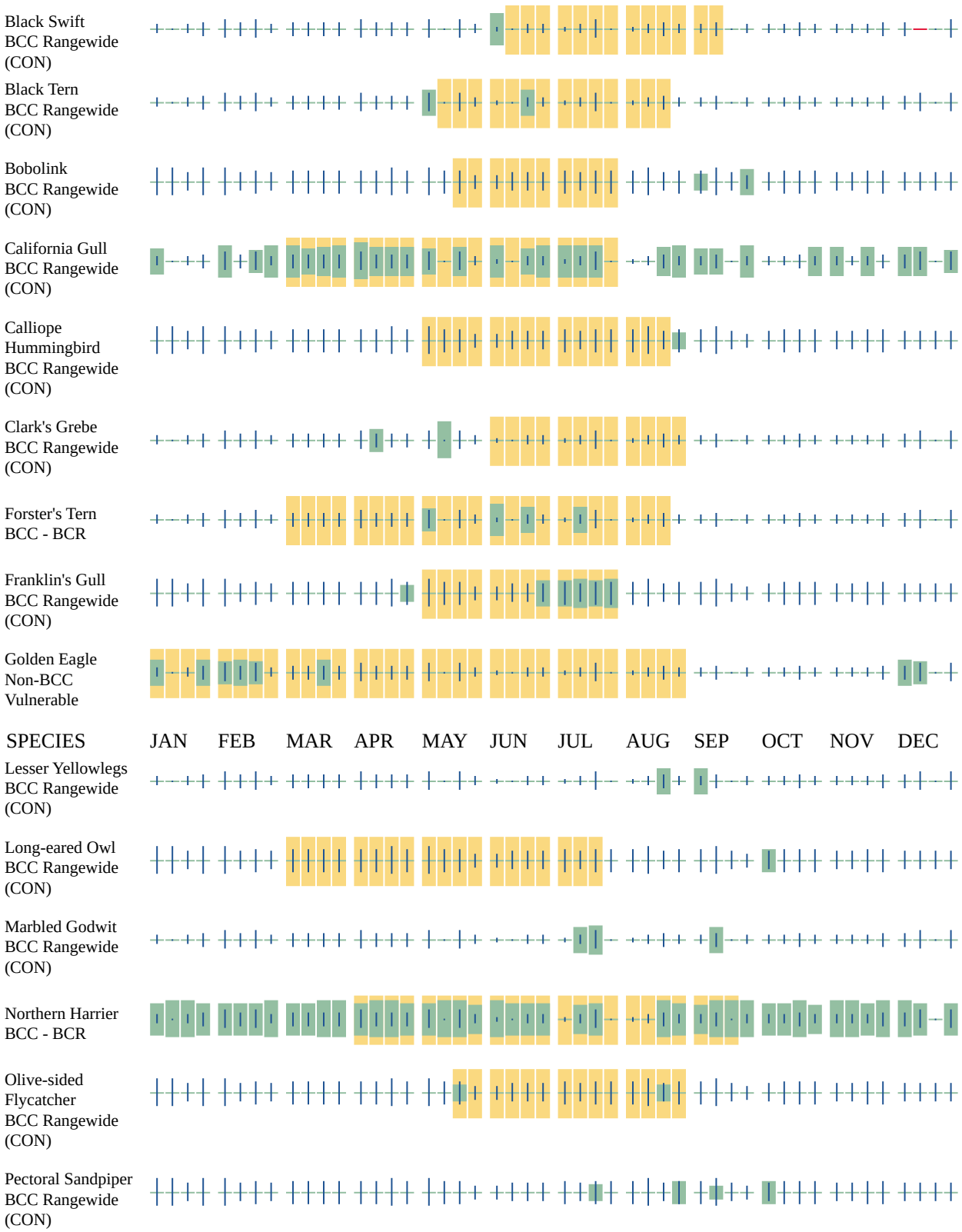
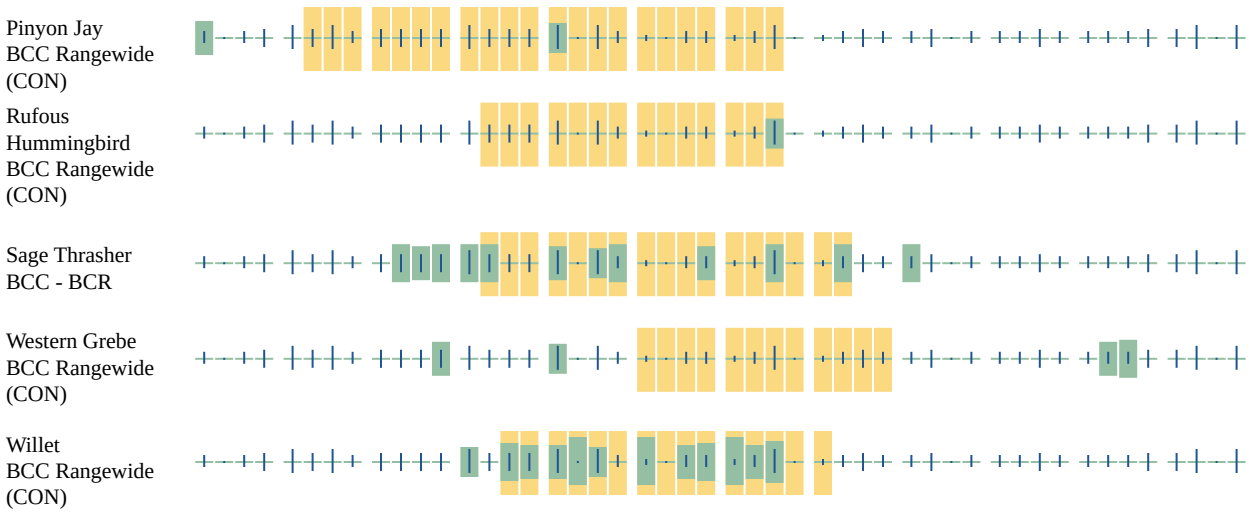



Black Swift BCC Rangewide (CON)
Black Tern BCC Rangewide (CON)
Bobolink BCC Rangewide (CON)
California Gull BCC Rangewide (CON)
Calliope Hummingbird BCC Rangewide (CON)
Clark's Grebe BCC Rangewide (CON)
Forster's Tern BCC - BCR
Franklin's Gull BCC Rangewide (CON)
Golden Eagle Non-BCC Vulnerable
SPECIES
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Lesser Yellowlegs BCC Rangewide (CON)
Long-eared Owl BCC Rangewide (CON)
Marbled Godwit BCC Rangewide (CON)
Northern Harrier BCC - BCR
Olive-sided Flycatcher BCC Rangewide (CON)
Pectoral Sandpiper BCC Rangewide (CON)



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WETLANDS

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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1F
- PEM1C
- PEM1A
- PEM1Cx

LAKE

- L2AB3F

- L2UBF
- L2USC

FRESHWATER POND

- PAB3F
- PUBF
- PUSC

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1Ax
- PSS1A

IPAC USER CONTACT INFORMATION

Agency: AtkinsRealis
Name: Hayden Ripple
Address: 4600 South Ulster Street, Suite 1100
City: Denver
State: CO
Zip: 80237
Email hayden.ripple@atkinsglobal.com
Phone: 3033577454

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Nevada Department of Transportation
Email: sgilbert-young@dot.nv.gov

United States Department of the Interior

Pacific Southwest Region
FISH AND WILDLIFE SERVICE
Reno Fish and Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, Nevada 89502

Date: September 17, 2025
File No. 2024-0138889
Sent by e-mail only

Christopher Young, Chief
Environmental Services Program
Nevada Department of Transportation
1263 South Stewart Street
Carson City, Nevada 89712

Subject: Informal Conference for the Washoe RTC Lemmon Drive Segment 2 Traffic Improvements and Resiliency Project, from Fleetwood Drive to Ramsey Way, Washoe County, Nevada. NDOT EA #:74518; FHWA#: DE-0031-(352)

Dear Christopher Young:

This correspondence is in response to your July 23, 2025, request for conference under the Endangered Species Act of 1973, as amended (ESA; 16 U.S.C. 1531 *et seq*.) for the proposed Washoe Regional Transportation Commission's (RTC) Lemmon Drive Segment 2 Traffic Improvements and Resiliency Project (proposed action) in Washoe County, Nevada. For the proposed action, the RTC in cooperation with the Nevada Department of Transportation (NDOT) and the Federal Highway Administration (FHWA) are proposing the realignment and construction of a new portion of Lemmon Drive between Fleetwood Drive and Ramsey Way. The proposed action would improve traffic operations and add resiliency through stormwater and other improvements, to provide at least one dry lane in each direction of travel during a 100-year flood event, and to provide safe access for all multimodal users. The proposed action would be implemented by RTC Washoe through NDOT's Local Public Agency program on behalf of FHWA.

Your request was accompanied by a Biological Assessment (BA; RTC and NDOT 2025) for our review. In accordance with section 7 of the ESA, you requested concurrence from the U.S. Fish and Wildlife Service (Service) on the BA's findings on the proposed action's effects on the proposed for listing as threatened monarch butterfly (*Danaus plexippus;* Service 2024a). The findings presented in the BA conclude that the proposed action *may affect, but is not likely to adversely affect* the monarch butterfly. Following email correspondence, your staff submitted a revised BA on September 15, 2025, providing minor clarification on the proposed action. The NDOT is enrolled in the Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands (Monarch CCAA, Service 2020); however, this proposed

action is not a covered activity under that agreement. Therefore, conferencing may be requested. Critical habitat has been proposed for the monarch butterfly but does not occur near the proposed action area; therefore, there will be no further discussion of critical habitat in this letter.

Description of the Action Area

The action area of the proposed action includes 380.4 acres (Table 1) in Washoe County, Nevada, encompassing the area around Lemmon Drive from west of Ramsey Way at the northern boundary to south of Fleetwood Drive at the southern boundary, and to the eastern edge of Swan Lake (Figure 1 [Exhibit 2 of Appendix D of RTC and NDOT 2025, incorporated below]).

Table 1. Acreage and landcover types within the action area

Landcover Type	Landcover Description	Monarch Habitat Type	Acres
Developed	Areas that are part of the built environment. Includes roadways, trails, sidewalks, ornamental landscaping, and other non-vegetated areas.	Not habitat	42.5
Vegetation community	Areas that are part of the undeveloped environment including the following vegetation communities: Greasewood Shrubland, Big Sagebrush Shrubland, Woody Riparian, Emergent Wetland, Open Water, Weedy Forbland, Invasive Riparian	Foraging habitat	337.9
Total Action Area (Acres)			380.4

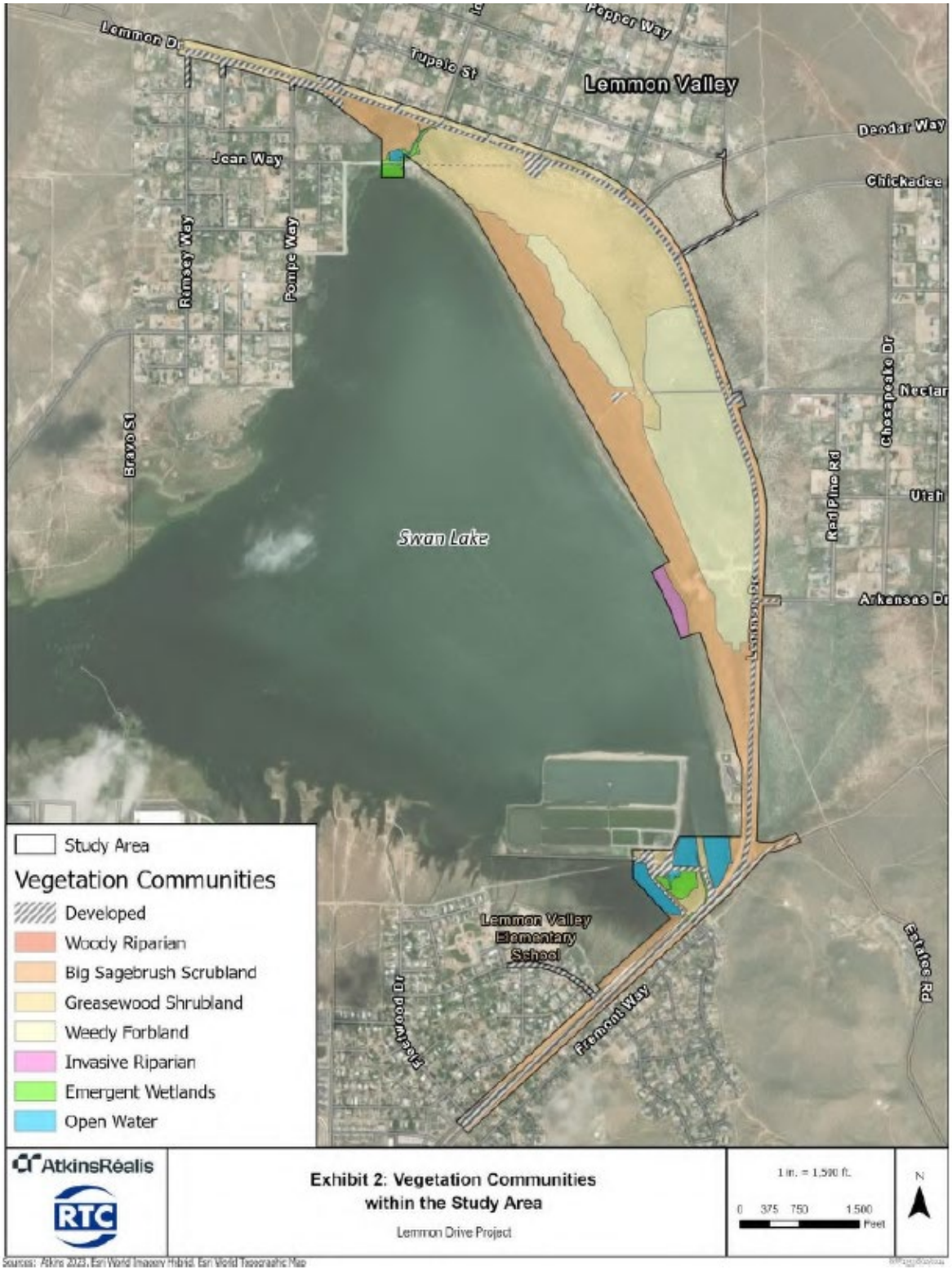

Figure 1. Map of Action Area (indicated as Study Area) and Landcover Types (From Exhibit 2 of Appendix D of RTC and NDOT 2025).

Description of the Proposed Action

The proposed action is to reconstruct and realign approximately 2.0 miles of Lemmon Drive between Fleetwood Drive and Ramsey Way. This includes realigning Lemmon Drive to an existing berm located to the west along Swan Lake, raising the elevation of the road, to mitigate flooding impacts from Swan Lake. The proposed action also involves constructing substantial drainage improvements including development of mitigation basins between the original and new alignment of Lemmon Drive, modifying local street access, adding multimodal facilities (a shared-use path), and implementing required site restoration and conservation measures. The original alignment of Lemmon Drive will remain as a frontage road from Chickadee Drive north, and remain as a utility/emergency services corridor south of Chickadee Drive. See Figure 2 (Exhibit 2 of RTC and NDOT 2025, incorporated below).

Construction will involve typical road-building activities: excavation and earthwork, potential use of on-site fill for berm construction, establishment of temporary construction staging and storage areas, and movement of heavy equipment (bulldozers, excavators, trucks, *etc*.).

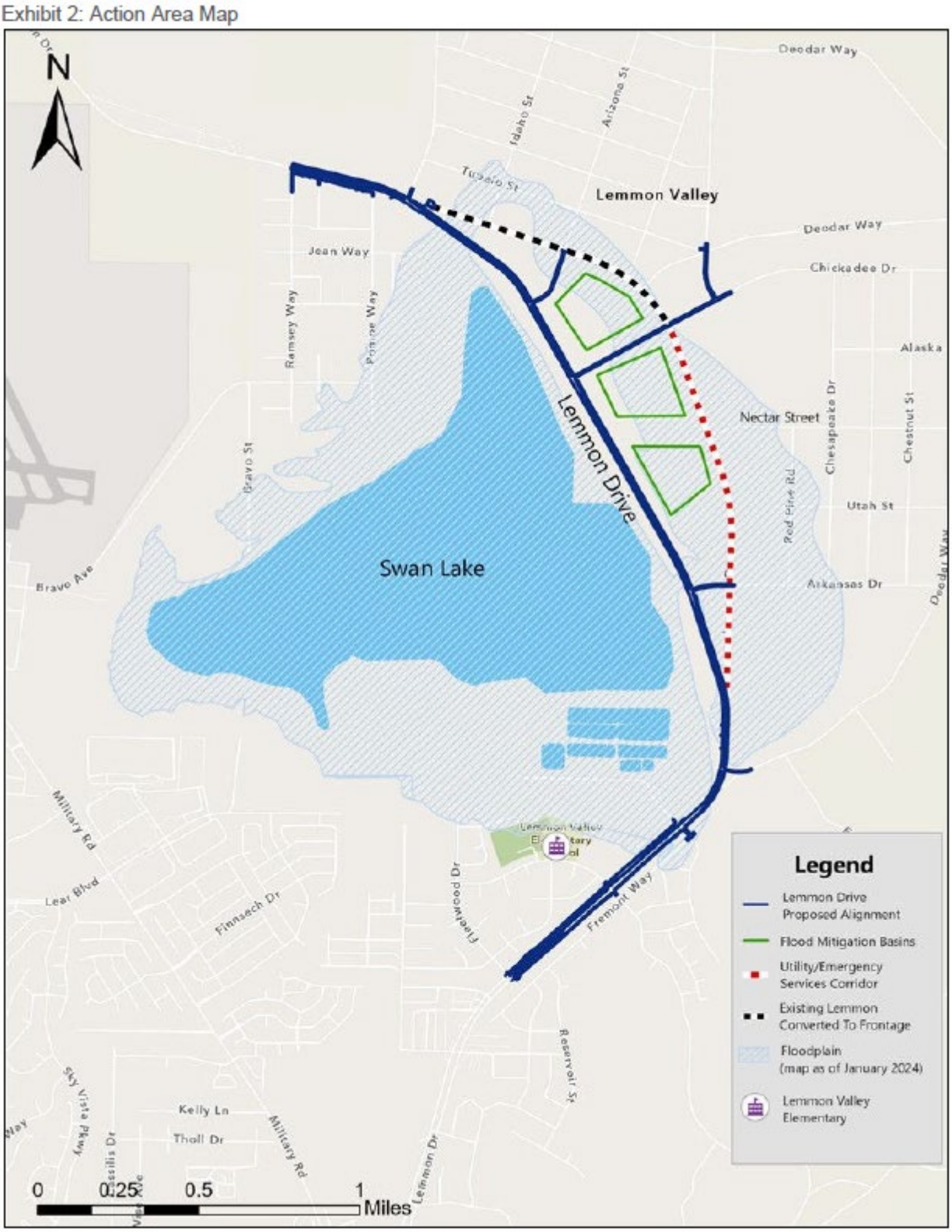

Figure 2. Map of the Proposed Action (From Exhibit 2 of RTC and NDOT 2025).

Under the proposed action, areas subject to temporary disturbance will be restored following construction completion. Restoration strategies are designed to be consistent with Monarch CCAA conservation principles (Service 2020) and project safety objectives, even though this proposed action is not eligible under NDOT's enrollment in the CCAA; see Conservation Measures below.

Construction for the proposed action is anticipated to begin in late 2026/early 2027. Construction will be completed Fall 2028 (S. Gilbert-Young, Nevada Department of Transportation, *in litt.* 2025). The proposed action will have 115.1 acres of temporary and 91.0 acres of permanent impacts to existing monarch habitat (RTC and NDOT 2025; Table 2).

Table 2. Acreage of temporary and permanent impacts to monarch habitat

Foraging Monarch Habitat by Landcover Type	**Temporary Impacts to Monarch Habitat**	**Permanent Impacts to Monarch Habitat**
Greasewood Shrubland	30.5	34.8
Big Sagebrush Shrubland	29.7	18.6
Woody Riparian	0.0	0.0
Emergent Wetlands	0.0	0.2
Open Water	0.0	0.0
Weedy Forbland	54.9	37.3
Invasive Riparian	0.0	0.0
Subtotal	115.1	91.0
Total	206.0	

The proposed action includes measures that will be implemented to avoid and minimize impacts to the monarch butterfly. The full text of these Conservation Measures can be found in RTC and NDOT (2025). These Conservation Measures include:

- Mitigation Basins: The three designated volumetric mitigation basins will be seeded with a diverse, native seed mix emphasizing regionally appropriate flowering plants known to provide nectar for monarchs and other pollinators throughout the migration season (May-October). The seed mix will be developed using the seed mix provided in Appendix D as the starting point. A subset of species will be selected, based on which are locally appropriate, available through vendors, and will consider bloom timing diversity. Consistent with CCAA-like goals, the potential post-construction inclusion of native milkweed species (*Asclepias fascicularis, A. speciosa*) within these basin areas, located away from immediate traffic hazards, will be evaluated during final design and implementation. Seed mixes will use insecticide-free seeds/plants where feasible.
- General Roadside Areas: Other temporarily disturbed areas, such as roadside slopes, staging areas, and access routes, will be revegetated primarily for erosion control and site stabilization using a standard native seed mix appropriate for NDOT roadsides (*e.g.*, focusing on native grasses and suitable low-growing, drought-tolerant forbs). Consistent with CCAA principles and project safety objectives, this general roadside seed mix will not include milkweed species to avoid attracting monarchs (larvae and egg-laying females) to the immediate high-traffic environment.

- Dust Control: Standard dust abatement measures (*e.g.*, application of water to disturbed soil surfaces) will be implemented during construction activities to minimize dust deposition on adjacent vegetation potentially used by monarchs.
- Weed Control: Management of state-listed noxious weeds within the project limits will follow integrated pest management principles. Methods will prioritize non-chemical controls where feasible. If herbicides are necessary, application will be targeted to minimize drift and impacts on desirable non-target vegetation, including native nectar plants, adhering to label requirements and CCAA-like guidance (*e.g.*, avoid application to blooming plants when monarchs may be present, use targeted methods, avoid systemic insecticides.
- Mowing: Mowing practices, where required for safety or vegetation control, will consider timing to minimize impacts on blooming nectar resources during peak monarch migration periods, where feasible and consistent with safety requirements.

Status of the Species in the Action Area

The action area occurs within the range of the monarch butterfly in Nevada and is 380.4 acres. According to Dilts *et al.* (2019) the action area is found within a larger area that is moderately to highly suitable for both adult and breeding habitat, at the landscape scale. More broadly, monarch butterflies are found across much of North America.

Monarch butterfly foraging habitat is defined by presence of potential flowering nectar plants (Service 2024b). Monarch butterfly breeding habitat is defined by *Asclepias* spp. (milkweed) presence along with potential flowering nectar plants (Service 2024b).

Field surveys were conducted during September 2023 within the action area in support of this project (Appendix E of RTC and NDOT 2025). Adult monarchs were not observed. However, flowering nectar plants were observed within the action area, including native species like *Grindelia squarrosa* (curlycup gumweed), *Heliotropium curassavicum* (seaside heliotrope), *Sesuvium verrucosum* (western sea-purslane), and *Symphyotrichum frondosum* (short-rayed alkali aster), along with non-native/weedy species like *Lactuca serriola* (prickly lettuce) and *Lepidium latifolium* (perennial pepperweed), and *Cirsium and Onopordum* spp. (various thistles) (Appendix E of RTC and NDOT 2025). Therefore, monarch foraging habitat is present within the action area.

Given the broad distribution of flowering nectar plants across the action area, all acreage that is currently vegetated is considered to be foraging habitat. There are 337.9 acres of foraging habitat in the action area (See Table 1).

No *Asclepias* spp. (milkweed) were identified within the action area during surveys for the proposed action (Appendix E of RTC and NDOT 2025). Therefore, monarch breeding habitat is considered absent within the action area.

Effects of the Proposed Action

The proposed action will have temporary and permanent impacts to 206.0 acres of monarch foraging habitat, which are a mixture of greasewood shrublands (65.3 acres), big sagebrush

shrublands, (48.2 acres), emergent wetlands (0.2 acre), and weedy forb lands (92.3 acres) (RTC and NDOT 2025).

The proposed action is expected to result in the following effects on the monarch butterfly:

- Removal of existing potential non-breeding foraging habitat (nectar sources) due to temporary (115.1 acres) and permanent (91.0 acres) vegetation disturbance during construction.
- A low potential for direct mortality of migrating adult monarchs from construction equipment or future traffic collisions.
- Potential minor indirect effects from dust deposition on remaining nectar plants during construction.
- Creation of enhanced, higher-quality foraging habitat through targeted restoration with diverse native nectar plants in mitigation basins.
- Absence of impacts to breeding habitat, as milkweed is not present in the action area.

Considering that: 1) breeding habitat (milkweed) is absent, precluding effects on monarch butterfly reproduction within the action area; 2) monarch butterflies are expected to use the area only as transient migrants foraging on nectar resources opportunistically and areas that are to be temporarily impacted will be re-seeded in a manner beneficial to monarchs, within a larger landscape of suitability; and 3) the potential for direct mortality is low, the adverse effects of the proposed action on the monarch butterfly are anticipated to be insignificant and discountable.

Conclusion

The Service reviewed the proposed action description and evaluation of effects as detailed in the BA (RTC and NDOT 2025) and Gilbert-Young, *in litt*. 2025. Based on the proposed action's description, included Conservation Measures, and the availability of suitable habitat outside the action area, we concur with your determination that the proposed action *may affect, but is not likely to adversely affect* the monarch butterfly.

This concludes informal conference for the monarch butterfly. If the monarch butterfly becomes listed under the ESA, you may ask the Service to confirm this conference report as a letter of concurrence issued through informal consultation. If the Service reviews the proposed action and finds that there have been no significant changes in the action as planned or the information used during this conference, the Service will confirm this conference concurrence as the informal consultation on the proposed action and no further section 7 consultation will be necessary.

If the monarch butterfly is listed and there is subsequent adoption of this conference concurrence, you should evaluate the need for further section 7 consultation if: (1) new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not previously considered; (2) the proposed action is subsequently modified in a manner that causes an effect to listed species that was not considered in the conference and informal consultation; or (3) a new species is listed or critical habitat designated that may be affected by the proposed action.

Please reference File No. 2024-0138889 in any future correspondence concerning this consultation. If you have any questions or require additional information, please contact me at (775) 861-6300. Official correspondence can also be submitted to RFWOmail@fws.gov.

Sincerely,

Rachael Youmans
Assistant Field Supervisor

Literature Cited

Dilts, T., Steele, M., Engler, J., Pelton, E., Jepsen, S., McKnight, S., Taylor, A., Fallon, C., Black, S., Cruz, E., Craver, D., & Forister, M. 2019. Host Plants and Climate Structure Habitat Associations of the Western Monarch Butterfly. *Frontiers in Ecology and Evolution*, 7:188. https://doi.org/10.3389/fevo.2019.00188

RTC and NDOT (Regional Transportation Commission of Washoe County and Nevada Department of Transportation). 2025. Lemmon Drive Traffic Improvements and Resiliency Project Biological Assessment. September 2025.

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Service. 2024a. Endangered and Threatened Species: Species Status with Section 4(d) Rule for Monarch Butterfly and Designation of Critical Habitat. Federal Register 89(239): 100662 - 100716. December 12, 2024.

Service. 2024b. Monarch Butterfly (*Danaus plexippus*) Species Status Assessment Report, version 2.3. December 2024. 100pp.+

In Litteris

Gilbert-Young, Sabra. 2025. Nevada Department of Transportation, Carson City, Nevada. Email addressed to Lara Enders, Wildlife Biologist, Reno Fish and Wildlife Office, U.S. Fish and Wildlife Service, Reno, Nevada. Subject: Lemmon Drive Realignment - NDOT LPA Program. August 27, 2025.