

3 ENVIRONMENTAL OVERVIEW (CORRIDOR LEVEL)

The following Environmental Overview (EO) documents environmental conditions within the SR 87 corridor study area to identify environmental opportunities and constraints that will be considered in developing and evaluating potential roadway improvements.

3.1 Affected Environment

3.1.1 Physical and Natural Environment

3.1.1.1 Topography/Physiology

The EO study area consists of the existing ADOT right-of-way (ROW) along the study corridor. The SR 87 study area extends through multiple jurisdictions and land owned or managed by various entities in Maricopa and Gila counties. The southern portion of the corridor from MP 191 to MP 193, crosses the Fort McDowell-Yavapai Nation (FMYN) Reservation. From MP 193 to MP 250, SR 87 travels through the Tonto National Forest (TNF), though there is a mix of private lands at various locations along the corridor; most notably near Sunflower, Deer Creek, and Rye. The study area passes through the southern end of the McDowell Mountains, traverses the Mazatzal Mountains, crosses Sycamore Valley and Tonto Basin, increasing in elevation from approximately 1,365 feet above mean sea level (MSL) at MP 191 to 4,990 feet above MSL at MP 250.

3.1.1.2 Vegetation

According to Biotic Communities, Southwestern United States and Northwestern Mexico, the study area passes through the Arizona Upland Subdivision-Sonoran Desertscrub, Semi-Desert Grassland, Interior Chaparral, and Great Basin Conifer Woodland biotic communities. The majority of the study area is disturbed as it consists of SR 87 and associated roadway improvements (shoulders, entrance and exit ramps, turning lanes, bridges, emergency vehicle turnarounds, and bypasses). Areas adjacent to SR 87 primarily consist of undeveloped native lands. Vegetation within the study area consists of agave (*Agave sp.*), Arizona cypress (*Cupressus arizonica*), barrel cactus (*Ferocactus wislizenii*), blue paloverde (*Cercidium floridum*), buckhorn cholla (*Opuntia acanthocarpa*), catclaw acacia (*Acacia greggii*), creosote (*Larrea tridentata*), Engelmann's prickly pear (*Opuntia engelmannii*), foothill paloverde (*Parkinsonia microphylla*), Fremont cottonwood (*Populus fremontii*), Gambel oak (*Quercus gambelii*), Goodding's willow (*Salix gooddingii*), hedgehog cactus (*Echinocereus sp.*), Mormon tea (*Ephedra sp.*), ocotillo (*Fouquieria splendens*), one-seed juniper (*Juniperus monosperma*), saguaro (*Carnegiea gigantea*), and velvet mesquite (*Prosopis velutina*).

3.1.1.3 Biology

Threatened and Endangered Species
The official species list for the study area was obtained from the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system on December 19, 2018. The list included 14 threatened or endangered species and designated critical habitat for the Mexican spotted owl that should be evaluated during future projects. Species included in the USFWS list, are included in **Table 15**.
During future studies and projects conducted for the roadway improvements, the USFWS list of threatened, endangered, proposed, and candidate species and Arizona Game and Fish Department (AGFD) On-Line

Environmental Review Tool (OERT) should be reviewed to determine if new species have been identified or any changes in listing status have occurred.

Table 15: Species Included in USFWS Species List

Species	Status	Habitat Requirements (USFWS 2016)
<i>Amphibians</i>		
Chiricahua leopard frog (<i>Rana chiricahuensis</i>)	ESA LT	Cienegas, pools, livestock tanks, lakes, reservoirs, streams and rivers between 3,281 and 8,890 feet elevation. Often restricted to the upper portion of watersheds that are free from non-native predators.
<i>Birds</i>		
California least tern (<i>Sterna anitllarum browni</i>)	ESA LE	Open, bare or sparsely vegetated sand, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, or drainage systems below 2,000 feet.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	ESA LT	Mature montane forest and woodland, shady wooded canyons, and steep canyons at elevations between 4,100 to 9,000 feet. Key habitat components include uneven-aged stands with high canopy closure, high tree density, and a sloped terrain.
Designated Critical Habitat for Mexican spotted owl	CH	Critical habitat is located within the study area.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	ESA LE	Dense riparian woodland communities along rivers, streams, lakesides, and wetlands below 8,500 feet elevation. Prefers dense canopy cover, large volume of understory foliage, and surface water during mid-summer.
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>)	ESA LT	Uses large contiguous patches of multi-layered riparian habitat, such as cottonwood-willow gallery forests along rivers and streams below 6,600 feet in elevation.
Yuma clapper rail (<i>Rallus longirostris yumanensis</i>)	ESA LE	Requires wet substrate (mudflat, sandbar) with dense herbaceous or woody vegetation for nesting and foraging. Fresh-water marshes dominated by cattail or bulrush are preferred habitat. Typically found below 4,500 feet of elevation.
<i>Fishes</i>		
Desert pupfish (<i>Cyprinodon macularius</i>)	ESA LE	Habitats include clear, shallow waters with soft substrates associated with cienegas, springs, streams, margins of larger lakes and rivers, shoreline pools, and irrigation drains and ditches below 5,200 feet in elevation.
Gila chub (<i>Gila intermedia</i>)	ESA LE	Found in pools in smaller streams, cienegas, and artificial ponds ranging in elevation from 609-1,676 meters.
Gila Topminnow (incl. Yaqui) (<i>Poeciliopsis occidentalis</i>)	ESA LE	Topminnow prefer shallow, warm, fairly quiet waters in ponds, cienegas, tanks, pools, springs, small streams and the margins of larger streams. Found below 4,500 feet of elevation.
Razorback Sucker (<i>Xyrauchen texanus</i>)	ESA LE	Mainstem channels to slow backwaters and lakes along the Colorado River. In impoundments, water depths of a meter or more over sand, mud or gravel substrate is preferred.

3.2 Environmental Overview Findings Summary

- Biological resources:
 - There are 14 threatened or endangered species likely present along the SR 87 corridor;
 - There are 35 Arizona special status species and areas within two miles of the corridor;
 - The corridor passes through PLZ 53 (North-South Mazatzal Mountains), where improvements should maintain uninhibited wildlife movement;
 - There are four noxious/invasive species identified along the corridor; and
 - There are nine protected plant species identified along the corridor.
- Cultural resources: sites not yet subject to data recovery, but eligible for NRHP or the status is unknown, should be avoided by ground-disturbing activities.
 - There are 199 cultural sites previously documented within the APE:
 - 120 sites determined or recommended eligible for the NRHP;
 - 35 sites not recommended for the NRHP;
 - 43 sites unevaluated or the NRHP status is unknown; and
 - Two sites have been destroyed.
- Clean Water Act: several rivers, creeks, and washes could be determined to be WOUS and an evaluation of boundaries should be conducted during design of future projects.
- Arizona Pollutant Discharge Elimination System: roadway improvements that impact more than one acre of land and/or WOUS would require Section 401 certification and a SWPPP.
- 100-year floodplains: the only FEMA-mapped floodplain in the study area is the Verde River.
- Noise: noise analyses will be necessary to assess potential impacts near the North Blue Coyote Trail, Sunflower, Bear Creek, Rye, and Oxbow Estates.
- Air quality: MP 191-197 is in nonattainment for PM₁₀ and MP 191-193 is in nonattainment for CO.
- Section 4(f) resources: five recreation sites and 10 archaeological sites are considered 4(f) resources.