



United States Department of the Interior



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In Reply Refer To:
AESO/SE
2023-0069529

May 3, 2023

Memorandum

To: Refuge Manager, Buenos Aires National Wildlife Refuge, Phoenix, Arizona

From: Field Supervisor

Subject: Biological Opinion and Concurrence on Hazardous Fuels Reduction and Vegetation Restoration along the Lower Gila River, Maricopa County Arizona

This document transmits our biological opinion based on our review of the effects of the proposed Hazardous Fuels Reduction and Vegetation Enhancement along the Lower Gila River on the southwestern willow flycatcher (*Empidonax traillii extimus*), and Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), pursuant to section 7(a)(2) of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). Your request for formal consultation was received February 13, 2023, and we subsequently initiated consultation on the same day.

In your letter, you requested our concurrence that the proposed action is not likely to adversely affect the western, yellow-billed cuckoo (*Coccyzus americanus*). We concur with your determination. The basis for our concurrence, including species-specific conservation measures that you already have identified in your proposed action, is in Appendix A.

Finally, for lands not owned by BLM, this project will supersede the 2014 consultation and 2017 reinitiation between the Bureau of Land Management (BLM) and U.S. Fish and Wildlife Service (USFWS) for Hazardous Fuels Reduction and Vegetation Restoration (22410-2009-F-0509-R001) that took place in much of the area of this proposed project. For BLM-owned lands, the 2017 reinitiated consultation still applies.

This biological opinion (BO) is based on information provided in the February 13th biological assessment (BA), and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available on the species of concern, prescribed or wildland fire and their effects, or on other subjects considered in this opinion. A complete record of this

consultation is on file at the Arizona Ecological Services Office (AESO).

CONSULTATION HISTORY

The following consultation history begins with receipt of the February 13, 2023, request for initiation of consultation. For a complete list of events prior to this date, please contact our office.

February 13, 2023 – We received your request for consultation and BA.

April 25, 2023 – We provided your office with this BO.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Regulations implementing the Act (50 CFR 402.02) define “action” as “all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies of the United States or upon the high seas.” The following is a summary of the proposed action. A more detailed description can be found in the BA. Maps of the project area are also included in the BA and are incorporated herein by reference.

The project area, in its entirety, is located within the floodplain of the lower Gila River between the bridge at Highway 85 (Township 1 South, Range 4 West, Section 23) and Gillespie Dam (Township 2 South, Range 5 West, Section 32) Maricopa County, Arizona. The total acreage of the project area is 2,290 acres. Of this area, approximately 65 acres are planned to be managed for hazardous fuels reduction and revegetation by the Arizona Game and Fish Department (AGFD), in coordination and cooperation with the USFWS Refuge-Fire District. These acres have been separated into eight parcels. All these parcels are within USFWS Refuge owned Public Land Order 1015 (PLO-1015) land or state-owned land in the Robbins Butte Wildlife Management Area (WMA). The project would occur over the next five years to account for monitoring and management of treated areas.

The purpose of this project is to reduce the hazardous-fuel accumulations and work towards ameliorating environmental degradation caused by tamarisk (*Tamarix ramosissima* and *Tamarix aphylla*), common reed (*Phragmites communis*), giant reed (*Arundo donax*), and ravenna grass (*Erianthus ravennae*). After these hazardous fuels are reduced, native vegetation will be planted, flood irrigated, and monitored until establishment.

The activities included in the proposed action are general site selection including access, hazardous fuels reduction by mechanical treatment, mulching, and prescribed burning of slash piles. Activities would also include herbicide application and maintenance, as well as revegetation using native plant species. No fire breaks are planned. The following discussion identifies the actions and potential impacts that could occur from these activities. Conservation measures and terms and conditions from the Arizona Statewide Land Use Plan Amendment and Environmental Assessment for Fire, Fuels, and Air Quality Management Biological Opinion (#02-21-03-F-0210) (Fire BO) and other measures developed specifically for this project are

included under each respective activity. Some measures from the Fire BO have been edited specifically for this project as necessary.

Site Selection and Access

Access to each parcel will utilize the existing right-of-way road off Highway 85. There are also multiple “hunter” access trails present that will be scoped as possible places for temporary access roads. The parcels themselves have already been delineated, maps of which can be found in the BA, but treatment of each parcel will be tailored before the proposed action to the site-specific conditions including access for mechanical clearing and maintenance equipment. Because pre-treatment surveys will not be conducted, suitable habitat in and adjacent to the treatment unit will be considered occupied and all applicable conservation measures will be applied. Transporting and disposing of garbage found on the parcels will be done off-site and in accordance with the Solid Waste Disposal Act.

Fuels Reduction

Mechanical

Mechanical removal is the use of heavy equipment to physically remove tamarisk. Root crown removal will be accomplished by either a D-7 or D-8 bulldozer equipped with brush rakes. This will allow for above ground vegetation to be removed with limited movement of soil. Raking is followed by root plows to cut the root system below the crown and then remove the root crown using a root rake. The resulting ground surface is entirely disturbed and stripped of all vegetation. Removed biomass would be stockpiled for later mulching or prescribed pile burns. Root crown removal does not use herbicide during the treatment process. This approach is most suitable for dense, monotypic tamarisk stands and terrain appropriate for bulldozer operations. The second root crown removal method is to use a large excavator or specially designed equipment with mechanical claws to pluck individual trees from the ground. This approach is applicable to both monotypic stands and mixed native vegetation stands.

This mechanical process completely removes the target trees and their root balls from the soil, together with a significant amount of their lateral roots. Tree mortality ranges from 80 to 95 percent. This approach provides treatment for ditches and steep riverbanks inaccessible to other equipment, removes only the target species, and does not use herbicides. For these methods, soil will require stabilization and erosion control features such as silt fences or weed free (or treated) straw bales to prevent flash sedimentation to standing water in the river channel.

Conservation measures under this activity include having all refueling, oil changes, and lubrication of large-wheeled and tracked equipment (e.g., passenger vehicles, bulldozers) completed outside of the riparian area and in such a manner as to prevent spills. Further, any mechanical removal of vegetation within or adjacent to flycatcher, rail, or cuckoo habitat will occur outside the breeding/nesting/fledging season (April 1 to September 30). If, for any reason, heavy equipment activity is expected to occur during this period, protocol surveys of all three species shall be done during the preceding breeding season. Finally, to allow for a better estimate of the number of birds in the affected area, AGFD, USFWS, or a designated representative shall conduct surveys of the site to be treated during the breeding season prior to

the activity. In both cases, if a species is detected, coordination with the AESO would occur prior to any activities being conducted.

Mulching

Tamarisk can be effectively controlled by mulching the above ground plants using specialized equipment followed by application of a triclopyr herbicide formulation to the cut stumps (as described below). The trees are typically mulched in a six-foot wide path through tamarisk thickets at a rate of 0.25 to 1.5 acres per hour depending on density and terrain. The cutting heads are typically a rotary drum with knife blades or carbide teeth. Low volume herbicide application of resprouts using either the foliar or basal bark treatment method is appropriate. The carrier equipment can include tracked or rubber-tired systems typically ranging from 100 to 225 horsepower but can be as large as 500 horsepower equipment for trees greater than 12 inches in diameter. The use of this equipment is principally limited to areas with good to moderate access; thus, its use would not be suitable for steep embankments. Use of mulching precludes the necessity for soil stabilization and erosion control. Like the mechanical removal actions, equipment used for mulching would be maintained outside of riparian areas and in done in a manner to prevent spills. Similarly, mulching of vegetation within or adjacent to flycatcher, rail, or cuckoo habitat would occur outside the breeding/nesting/fledging season (April 1 to September 30). If, for any reason, heavy equipment activity is expected to occur during this period, protocol surveys of all three species shall be done during the preceding breeding season. Finally, to allow for a better estimate of the number of birds in the affected area, AGFD, USFWS, or a designated representative shall conduct protocol surveys of the site to be treated during the breeding season prior to the activity. In both cases, if a species is detected, coordination with the AESO would occur prior to any activities being conducted.

Prescribed Fire

Prescribed fires to treat slash piles will be conducted in accordance with USFWS procedures and with applicable Arizona Department of Environmental Quality burn permits. Fires will generally be used under low humidity and low wind conditions to allow maximum consumption of woody materials. To allow for a better estimate of the number of birds in the affected area, AGFD, USFWS, or a designated representative shall conduct protocol surveys around the area where the burn will occur prior to the activity. There will be no prescribed burns during sensitive species' breeding seasons.

The construction of fuel breaks is not planned under this project; rather, existing access roads and natural fuel breaks will be utilized.

Herbicide

During mechanical removal operations or when density of infestations is light, such as during the post-activities monitoring and maintenance, the use of foliar, stump, or basal bark applications can be effective. Herbicide would be applied using backpack sprayers, horseback sprayers or vehicle mounted equipment dependent on level of access. Foliar applications are defined as herbicide treatments to the plant's needles in either the spring or fall. Stump application treatments are defined as herbicide treatments that occur immediately on the cut surface of the

woody plant being treated. Finally, basal bark applications are defined as herbicide treatments that are applied to the bark surface of woody weeds usually on stem diameters that are three inches in diameter or smaller. Effectiveness of both foliar and basal bark sprays are approximately 85 percent and will require some level of maintenance to kill resprouts.

There are two different types of herbicides that could be used for this project ([Table 1](#)). Both herbicides have been evaluated for their expected levels of toxicity to fish. Toxicity to fish is used because of fish sensitivity to contaminants (EPA 2015). More information can be found in the BA's Appendix 2. Overall, herbicide application would occur annually by approved staff and no area would be treated more than three times during a calendar year.

Conservation measures considered for herbicide applications include that all-terrain vehicles (ATVs) or tractor mounted herbicide applications will be done outside of flycatcher and rail breeding and nesting seasons (April through September). Pedestrian backpack foliar treatments and cut-stump applications may be done throughout the year, but they would be done between 10 and 60 feet from any riparian or marsh habitat. The use of colored dye will be used to mark areas treated with herbicides. Where there is open water, surface water, drainage, or pools, herbicide would not be applied within a buffer of 10 to 100 feet from the surface water. Following herbicide application, sensitive water sources in the vicinity will be tested for active herbicide to determine if drift from project application occurred, as well as to provide information regarding longevity of non-point source herbicide applications in the area. Finally, all personnel working with, or in the vicinity of, the herbicide application will have daily briefings to inform them of federally listed species concerns.

Table 1. Herbicide matrix of selected herbicides.

<i>Chemical</i>	<i>Fish Toxicity (parts per million [ppm])</i>	<i>Equilibrium Equivalent Concentration (ppm)</i>	<i>Risk Category for Fish</i>
<i>Triclopyr salt (Garlon 3A)</i>	500	2.21	Low
<i>Imazapyr salt (Arsenal/Habitat)</i>	>100	0.55	Low

Planting and Maintenance

Native trees, shrubs, and grasses would be used to replant the site. Regionally obtained stock, including but not limited to, cottonwood (*Populus* spp.), willow (*Salix* spp.), mesquite (*Prosopis* spp.), palo verde (*Parkinsonia floridum* and *P. microphyllum*), saltbush (*Atriplex* spp.), inkweed (*Suaeda nigra*), wolfberry (*Lycium* spp.), and seep willow (*Baccharis salicifolia*) would be planted to increase the habitat complexity. Pole plantings of cottonwood and willow trees may also take place during the winter, but these plantings would be determined based on-site suitability post-hazardous fuel removal. The site would be flood-irrigated for a period of two

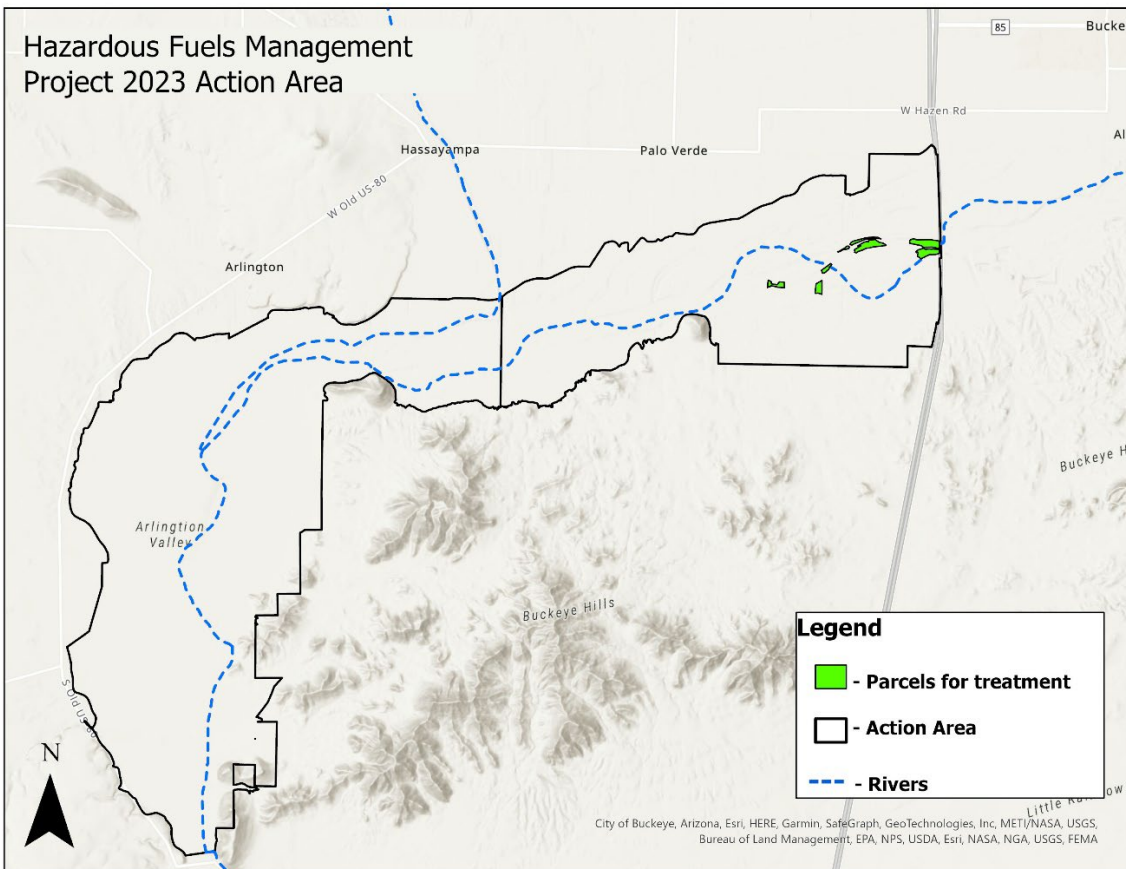
years, a method that has shown success in other Arizona tamarisk habitat enhancement sites. Following planting, plant growth and survival would be carefully monitored. Any plants that die within the first two years of the proposed project would be replaced. Other maintenance including fencing to exclude herbivores and removal of non-native vegetation may occur on the proposed project site.

Action Area

The action area is defined at (50 CFR 402.02) as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action. The USFWS has determined that the action area for this project includes all areas impacted within the 65 acres in the lower Gila River and its floodplain. Specifically, the action area begins at the Highway 85 bridge (Township 1 South, Range 4 West, Section 23) and continues downstream to Gillespie Dam (Township 2 South, Range 5 West, Section 32) ([Figure 1](#)). There is perennial surface water within the area due to the 91st Avenue Wastewater Treatment Plant outflows and return agricultural flows. Because of this, an additional three-mile buffer downstream of the final parcel is also considered for any indirect effects to aquatic wildlife, specifically the Yuma Ridgway’s rail. This buffer is also to consider the smoke created from the burning of slash piles.

Figure 1. Action area from Highway 85 downstream to Gillespie Dam. Green polygons represent the parcels for

management activities.



STATUS OF THE SPECIES AND CRITICAL HABITAT

Southwestern Willow Flycatcher

Legal Status

The USFWS listed the southwestern willow flycatcher as endangered, without critical habitat on February 27, 1995 (USFWS 1995). We later designated critical habitat on July 22, 1997 (USFWS 1997a). A correction notice published in the Federal Register on August 20, 1997, to clarify the lateral extent of the designation (USFWS 1997b). Critical habitat was revised on January 3, 2013, designating approximately 1,227 stream miles (USFWS 2013). Designated areas include stream segments, with the lateral extent including the riparian areas and streams that occur within the 100-year floodplain or flood-prone areas encompassing a total area of approximately 208,973 acres.

Description and Natural History

The southwestern willow flycatcher is a small grayish-green passerine bird (Family Tyrannidae) measuring approximately 5.75 inches. The song is a sneezy “fitz-bew” or a “fit-a-bew”, the call is a repeated “whit.” It is one of four currently recognized willow flycatcher subspecies (Phillips

1948, Unitt 1987, Browning 1993). It is a neotropical migrant that breeds from sea level in California to approximately 8,500 feet in the southwestern U.S. (Sogge *et al.* 2010, USFWS 1995, 2002), and migrates to Mexico, Central America, and possibly northern South America during the non-breeding season (Phillips 1948, Stiles and Skutch 1989, Peterson 1990, Ridgely and Tudor 1994, Howell and Webb 1995).

Throughout its range, the southwestern willow flycatcher arrives on breeding grounds in late April and May (Sogge *et al.* 1997, 2010, USFWS 2002). Nesting begins in early May and June, and young fledge from late June through mid-August (Sogge *et al.* 1997 & 2010, USFWS 2002). Typically, flycatchers raise one brood per year, but birds have been documented raising two broods during one season and renesting after a failure (USFWS 2002). The entire breeding cycle, from egg laying to fledging, is approximately 28 days.

The flycatcher primarily uses tamarisk, Goodding's willow (*Salix gooddingii*), coyote willow (*Salix exigua*), Geyer willow (*Salix geyeriana*), boxelder (*Acer negundo*), Russian olive (*Elaeagnus angustifolia*), and live oak (*Quercus agrifolia*). This habitat is dynamic and can change rapidly because its location along waterways can frequently flood. Because of this, the flycatcher's use of habitat in different successional stages is equally dynamic. For example, over-mature or young habitat not suitable for nest placement can be occupied and used for foraging and shelter by migrating, breeding, dispersing, or non-territorial southwestern willow flycatchers (McLeod *et al.* 2005, Cardinal and Paxton 2005).

The southwestern willow flycatcher is an insectivore, foraging in dense shrub and tree vegetation along rivers, streams, and other wetlands. The bird typically perches on a branch and makes short direct flights, or sallies to capture flying insects. Drost *et al.* (1998) found that the major southwestern willow flycatcher prey items (in Arizona and Colorado) consisted of true flies (Diptera); ants, bees, and wasps (Hymenoptera); and true bugs (Hemiptera). Other insect prey taxa included leafhoppers (Homoptera: Cicadellidae); dragonflies and damselflies (Odonata); and caterpillars (Lepidoptera larvae). Non-insect prey included spiders (Araneae), sowbugs (Isopoda), and fragments of plant material.

Habitat and Range

The historical breeding range of the southwestern willow flycatcher included southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern Utah, extreme southern Nevada, and extreme northwestern Mexico (Sonora and Baja) (Unitt 1987). Historical egg/nest collections and species' descriptions throughout its range describe the southwestern willow flycatcher's widespread use of willow for nesting (Phillips 1948, Phillips *et al.* 1964, Hubbard 1987, Unitt 1987). Currently, southwestern willow flycatchers primarily use tamarisk, Goodding's willow, coyote willow, Geyer willow, boxelder, Russian olive, and live oak for nesting. Other plant species less commonly used for nesting include buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood, white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Based on the diversity of plant species and complexity of habitat structure, four basic southwestern willow flycatcher habitat types are considered: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al.* 1997 & 2010, USFWS 2002).

Current Range and Distribution

There are currently 308 known southwestern willow flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2012 where a territorial flycatcher was detected) holding an estimated 1,629 territories (Durst 2017). Since surveyors do not visit all sites annually, it is difficult to arrive at a grand total of flycatcher territories. There are many territories included in the rangewide estimate where surveyors have not returned for many years, reducing the estimate's accuracy. Territory numbers have increased since listing and some habitat remains unsurveyed. Since Unitt's (1987) estimate of 500 to 1000 rangewide territories and about 25 years of targeted surveys, the most recent estimate is not too far beyond his initial conclusion. About 70 percent of the 1,629 estimated territories (Table 1) throughout the subspecies range are located at five general locations (Cliff/Gila Valley and Middle Rio Grande – New Mexico and Upper Gila River, Roosevelt Lake, San Pedro River/Gila River confluence – Arizona) (Durst 2017).

Within this range, tamarisk has become an important component of the flycatcher's nesting and foraging habitat in Arizona, southern Nevada and Utah, and western New Mexico. In 2001, flycatchers in Arizona built 323 of their 404 (80 percent) known nests in a tamarisk tree (Smith *et al.* 2002). Biologists had once incorrectly concluded that tamarisk because it was an exotic plant, was lesser quality flycatcher habitat (USFWS 2002, 2017). Comparisons of flycatcher reproductive performance (USFWS 2002), prey populations (Durst 2004) and physiological conditions (Owen and Sogge 2002) using native and exotic vegetation revealed no difference (Sogge *et al.* 2005). The tamarisk leaf beetle, which defoliates tamarisk, thus can substantially alter the distribution, abundance, and quality of flycatcher nesting habitat and adversely affect breeding attempts as well as increase the risk of high intensity wildfires killing tamarisk trees that serve as fuels.

Critical Habitat

The primary constituent elements (PCE) of designated critical habitat are riparian plant species, structure and quality of habitat and insects for prey.

1. Primary Constituent Element 1— *Riparian vegetation*. Riparian habitat along a dynamic river or lakeside, in a natural or manmade successional environment (for nesting, foraging, migration, dispersal, and shelter) that is comprised of trees and shrubs (that can include Gooddings willow, coyote willow, Geyer's willow, arroyo willow, red willow, yewleaf willow, pacific willow, boxelder, tamarisk, Russian olive, buttonbush, cottonwood, stinging nettle, alder, velvet ash, poison hemlock, blackberry, seep willow, oak, rose, sycamore, false indigo, Pacific poison ivy, grape, Virginia creeper, Siberian elm, and walnut) and some combination of:
 - a. Dense riparian vegetation with thickets of trees and shrubs that can range in height from about 6 to 98 feet. Lower-stature thickets (6 to 13 feet tall) are found at higher elevation riparian forests and tall-stature thickets are found at middle and lower-elevation riparian forests;
 - b. Areas of dense riparian foliage at least from the ground level up to approximately 13 feet above ground or dense foliage only at the shrub or tree level as a low, dense canopy;

- c. Sites for nesting that contain a dense (about 50 percent to 100 percent) tree or shrub (or both) canopy (the amount of cover provided by tree and shrub branches measured from the ground);
 - d. Dense patches of riparian forests that are interspersed with small openings of open water or marsh or areas with shorter and sparser vegetation that creates a variety of habitat that is not uniformly dense. Patch size may be as small as 0.25 acres or as large as 175 acres.
2. Primary Constituent Element 2—*Insect prey populations*. A variety of insect prey populations found within or adjacent to riparian floodplains or moist environments, which can include flying ants, wasps, and bees; dragonflies; flies; true bugs; beetles; butterflies, moths, and caterpillars; and spittlebugs.

The physical and biological features of flycatcher critical habitat are the principal biological or physical elements essential to flycatcher conservation which may require special management considerations or protection (USFWS 2013). We primarily identified the features and functions of rivers that generate flycatcher habitat and its food such as low gradient/broad floodplains, water, saturated soil, hydrologic regimes, elevated groundwater, and fine sediments, etc. (USFWS 2013). Flycatcher critical habitat is not present within the action area.

Threats

The removal, alteration, degradation, and modification of riparian breeding habitat, along with a host of other factors including effects to wintering habitat and brown-headed cowbird brood parasitism are considered the main stressors to the species (USFWS 1995 & 2002, Sogge *et al.* 1997 & 2010, McCarthy *et al.* 1998). Fire is an increasing threat to willow flycatcher habitat, especially in monotypic tamarisk vegetation and where water diversions and/or groundwater pumping desiccates riparian vegetation (DeLoach 1991, Busch 1995, Paxton *et al.* 1996, Sogge *et al.* 1997, USFWS 2002). These stressors and threats are anticipated to continue.

Recovery

A recovery plan was finalized in March 2003 (USFWS 2002). This recovery plan included the recovery strategy of reaching numerical and habitat related goals for each specific Management Unit established throughout the subspecies range and establishing long-term conservation plans (USFWS 2002).

Conservation Actions

Conservation measures associated with some consultations and Habitat Conservation Plans have helped to acquire lands specifically for flycatchers on the San Pedro, Verde, and Gila rivers in Arizona and the Kern River in California. Additionally, along the lower Colorado River, the U.S. Bureau of Reclamation (Reclamation), as part of a multi-party Habitat Conservation Plan, is currently attempting to establish riparian vegetation to expand and improve the distribution and abundance of nesting flycatchers. Some Native American Tribes in California, Arizona, and New Mexico established Management Plans to guide flycatcher conservation.

Additionally, during the development of the critical habitat rule, some private landowners created management plans along the Owens and Kern rivers in California, Pinal Creek in

Arizona, and the Gila River in New Mexico. These are a small portion of the flycatcher conservation actions that land management agencies and private landowners have established across the subspecies' range.

Previous Consultations

Since listing in 1995, at least 250 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range. Consultations have been completed for many different projects including, but not limited to federal land management planning, grazing allotments, bridge building and repair, habitat improvement and vegetation management, dam building and operations, Habitat Conservation Plans, and Safe Harbor Agreements.

Yuma Ridgway's Rail

Legal Status

The Yuma Ridgway's (clapper) rail was federally listed as a species in danger of extinction in the United States (U.S.) on March 11, 1967, under the Endangered Species Preservation Act (ESPA) of 1966 (32 FR 4001, March 6, 1967). Included under the 1966 ESPA was the population in Mexico; it was listed range-wide under the Endangered Species Act of 1973 (as amended). There is no designated critical habitat.

Description and Natural History

The Yuma Ridgway's rail is a medium-sized subspecies of the Ridgway's rail genus, with adults standing 8 inches tall. Males average around 9.3 ounces in weight (Todd 1986, p. 4) while females are slightly smaller, averaging between 8.0 ounces (Todd 1986, p. 4) and 6.8 ounces (Eddleman 1989, p. 65). Several external measurements can differentiate between the sexes (Eddleman 1989, p. 66).

Adult Yuma Ridgway's rails of both sexes are similar in plumage; they possess a long, slender, slightly de-curved bill, a laterally compressed body, and relatively long legs and toes compared to body size. The upper mandible (bill) is dark grey, fading to orange at the base and the tip. The head and scapular (shoulder) areas are grey, with browns and oranges appearing on the sides of the neck and under the head. The chin and upper throat are white, and there is a light eyebrow stripe extending from above the eye to the upper mandible. The breast is tawny- or burnt-orange in the male, and a brick-orange in breeding females. The upper body is light grey to dark brown, becoming blotchy in color on the rump and distally on the wings. The underside and flanks forward of the legs are dark greys with vertical white stripes. The tail is dark brown above and white below. Legs are unfeathered and flesh is orange in color (Todd 1986, pp. 3-4).

Adult rails have a basic pre-body molt from May through August, with simultaneous molt of rectrices (tail feathers) and remiges (wing feathers), which both allow for flight. Between mid-July and the end of September, these adults are flightless. A second, pre-alternate molt occurs from September to December and does not involve the wing or tail flight feathers (Eddleman 1989, p. 6). Hatchlings are downy black, with many having some white downy feathers on their anterior abdominal region (Meanley 1985, p. 64). This down makes hatchlings susceptible to

drowning before their juvenile molt which occurs one month after hatching.

Yuma Ridgway's rails are secretive, and more often heard than seen, especially in the morning and evening hours (Eddleman 1989, p. 42). They are good swimmers, and with laterally compressed bodies, can maneuver through cattails (*Typha* spp.) relatively quickly. They are capable of long-distance flights but are not adept at short distance flying.

The diet of the Yuma Ridgway's rail is varied. Crayfish (*Procamberus clarki* and *Orconectes virilis*) are believed to dominate the rail's diet, with small fish, tadpoles, clams, and other aquatic invertebrates also being utilized (Ohmart and Tomlinson 1977, entire; Anderson and Ohmart 1985, p. 123; Todd 1986, p. 69; Eddleman 1989, pp. 90-95; Conway 1990, pp. 34, 41). Crayfish were introduced to the Colorado River basin in 1968 for aquatic weed control and to provide forage for sportfish (Inman et al. 1998, p. 3). The spread of crayfish in the lower Colorado River may have assisted the expansion of Yuma Ridgway's rail, as crayfish provided a more abundant and secure food supply during the breeding season (Ohmart and Tomlinson 1977, p. 336).

Habitat and Range

The rail is the only subspecies of Ridgway's rail primarily found in freshwater marshes. Historically, cattail/bulrush marshes in the Colorado River Delta in Sonora, Mexico, were the apparent stronghold for the species. However, the virtual elimination of freshwater flows down the lower Colorado River to the Delta due to upstream diversions from the river for agriculture and municipal uses drastically reduced the habitat in Mexico. Rails responded to decreased flows by dispersing to the freshwater marshes along the lower Colorado River in the U.S. and fringes of the Salton Sea.

The Yuma Ridgway's rail has a relatively broad potential range in which it utilizes habitat ranging from small patches that have formed from agricultural drains to larger patches along river channels. Despite this flexibility, habitat quality drives the number of individuals present in a particular area. The primary components of good quality rail habitat include freshwater marshes dominated by cattail (*Typha* sp.) and bulrush (*Scirpus* ssp.) averaging greater than 6 feet high, shallow (6 inches) water and limited fluctuations during the breeding season (Anderson and Ohmart 1985, p. 121; Eddleman 1989, pp. 79-87). Open water areas that contain dry ground, or mudflats, that are slightly higher than the water level between the water and vegetation are also components of high-quality habitat because these areas provide for foraging (Tomlinson and Todd 1973, p. 179; Gould 1975, p. 8; Smith 1975, p. 20; Eddleman 1989, pp. 87-88; Conway et al. 1993, p. 288). Because best habitats are comprised of a mosaic of different water levels, stages of cattail senescence, and openness, the optimal water level is unknown.

Current Range and Distribution

There are five population centers across the rail's range throughout 14 watersheds within the Colorado River Basin. Of the five, three are considered core population areas. The first is along the lower Colorado River, with the highest densities at the Imperial, Cibola, and Havasu National Wildlife Refuges. The second large population center is at the Salton Sea in California, which includes the Salton Sea National Wildlife Refuge and the Wellton Mohawk Irrigation District. The third major population center is in the Cienega de Santa Clara in Sonora, Mexico, which

supports the largest marsh in the rail's U.S.-Mexico range and >70 percent of the global population (Hinojosa-Huerta et al. 2013). The two peripheral populations, which are smaller and represent the expansion of the species, occur along the lower Gila and Salt Rivers in central Arizona, and along Las Vegas Wash in southern Nevada. All suitable habitat fluctuates in size and quality depending on annual effluent inflows, earthquake-related changes to hydrology, episodic fire, and maintenance dredging (Hinojosa-Huerta et al. 2013). Despite these fluctuations, rail numbers have remained high during the most recent survey period from 2017 to 2019.

Yuma Ridgway's rail population estimates fluctuate annually due to habitat quality, surveyor expertise, the timing of the surveys within the official period, and other factors. Population estimates currently use relative abundance, calculated by taking the sum of the highest counts, to indicate population estimates. This method of population tracking is useful for comparing long-term trends among populations and years (e.g., increasing vs. decreasing population); however, it does not provide an estimate of the total abundance of a given population. The relative abundance of rails has fluctuated range wide ([Table 2](#)). These fluctuations are due to both survey efforts, as well as habitat availability. The focus on rail habitat management and increases in survey effort throughout the rail's range likely caused this increase.

Table 2. *The U.S. totals of rails has fluctuated over the years. Protocol surveys began in 2006 and occur annually.*

Year	U.S. Total
2006	753
2007	823
2008	645
2009	671
2010	570
2011	565
2012	435
2013	431
2014	401
2015	636
2016	555
2017	740
2018	764
2019	841
2020	423
2021	369
2022	356

Threats

The primary limiting factor that threatens recovery of the Yuma Ridgway's rail is the amount, distribution, and persistence of suitable habitat across its range, especially as it relates to cattail marshes. Cattail marshes have a natural succession process that makes them less suitable over time, which then requires active management to maintain or improve their suitability. Without

this management, as well as protection of water sources to support the habitat, the areas the rail occupies could be lost. Other threats for this species include continuing land-use changes in floodplains, human activities, environmental contaminants (primarily increases in selenium levels), climate change, and reductions in connectivity between habitat areas.

Recovery

A recovery plan was finalized in February 1983 (USFWS 1983). Since then, a revision was drafted in 2010 (USFWS 2009). This draft recovery plan included the recovery strategy of reaching numerical and habitat-related goals throughout the subspecies' range and establishing long-term conservation plans (USFWS 2009).

Conservation Actions

Conservation measures associated with some consultations, Habitat Conservation Agreements, and Safe Harbor Agreements have helped to ensure maintenance of lands specifically for rails on the lower Colorado and Gila Rivers in Arizona and along the Salton Sea in California. Additionally, along the lower Colorado River, Reclamation, as part of a multi-party Habitat Conservation Plan, is currently attempting to establish riparian vegetation to expand and improve the distribution and abundance of nesting rails.

Previous Consultations

The range of the Yuma Ridgway's rail is extensive, including several states and the Colorado River Delta in Mexico. Due to this, the number of consultations done, both formal and informal, is significant. Most consultations, especially formal consultations, have occurred for projects within Arizona. In California, informal and formal consultations have been few, and primarily involved Reclamation water delivery and supply projects in the Imperial and Coachella valleys. None of the formal consultations has reduced the habitat base of the species, and none has resulted in jeopardy conclusions. This is in part because those projects, with the most considerable potential of direct or indirect impacts, have committed to avoid and offset adverse effects and conserve habitat for the species.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

Description of the Action Area

The action area for this project includes the lower Gila River and its floodplain, beginning at the Highway 85 bridge (Township 1 South, Range 4 West, Section 23) and continuing downstream to the Gillespie Dam (Township 2 South, Range 5 West, Section 32). Perennial surface water is present through all or most of this reach due to sewage effluent input at the 91st Avenue Wastewater Treatment Plant and return agricultural flows. The surface water normally dries up not far below the dam, and the river essentially becomes a sandy wash for many miles. The Hassayampa River confluence is contained within this reach of the lower Gila River a little more than five miles downstream from the Highway 85 bridge. The Hassayampa River is perennial for about two miles upstream from the confluence with the Gila River due to agricultural return flows. The vegetation within the floodplain sites consists of tamarisk, common reed, Fremont cottonwood, Goodding's willow, seep willow, arrowweed (*Pluchea sericea*), honey mesquite (*Prosopis glandulosa*), screwbean mesquite (*Prosopis pubescens*), coyote willow, quailbush (*Atriplex lentiformis*), and four-wing saltbush (*Atriplex canescens*). Vegetation in desert washes needing treatment includes desert willow (*Chilopsis linearis*), catclaw acacia (*Acacia greggii*), ironwood (*Olneya tesota*), and palo verde. The vegetation in the area is driven by hydrologic factors, including limited flows due to upstream management, as well as periodic flooding that can scour away much of the vegetation. This variation in flows has allowed tamarisk to become so prevalent in the area.

Vegetation in the area is also affected by periodic wildfires. Tamarisk, willow, and cattails tend to rebound rapidly following fires, whereas mesquites, cottonwoods, palo verdes, and ironwoods do not. If timed appropriately in the spring, flooding and scouring can result in the reproduction, germination, and regeneration of native riparian species. The tamarisk leaf beetle is also becoming prevalent in the area. This is despite the leaf beetle not being anticipated to move below the 38th parallel. The tamarisk leaf beetle defoliates tamarisk, which over time, kills the tamarisk. These defoliated trees are increasing the fire risk in the area.

Previous actions in the area include management of the Robbins Butte WMA, and while no activities were conducted, the BLM completed section 7 formal consultation for a fuels reduction project within this same project area. Future actions in the area are anticipated to be similar fuels reduction activities, and trail construction and maintenance.

Status of the Species and Critical Habitat within the Action Area

Southwestern Willow Flycatcher

The proposed action area has habitat that meets the description of flycatcher breeding habitat. Most of these areas are dense tamarisk that is 10 to 15 feet high, with occasional willows. There are some large stands of tamarisk, but most are small patches. Other areas along the river provide foraging and migratory habitat. No assessment to determine condition and acres of flycatcher habitat has been completed.

The AGFD completed protocol surveys within some of the action areas from 2003 to 2010, detecting no territories. One flycatcher was detected in 2008 at the Arlington Wildlife Area. There was an incidental detection in 2002, and two flycatchers were detected in 2010, all of

which were considered migrants. Surveys around Gillespie Dam (Old Highway 80 Bridge) were completed for another project in 2006, 2008, and 2009, with flycatchers detected in 2006 and 2008, but no territories were confirmed. The BLM conducted surveys for flycatchers within the project area in 2012 and 2015 but did not detect any individuals. No surveys specifically for this project have been conducted since then, although a pair of willow flycatchers was observed late June 2017 during protocol surveys approximately 10 miles east of the action area on the Gila River (Herman 2017: survey form).

Based on the available habitat and limited survey information both upstream and downstream of the proposed action area, migrating flycatchers likely use the project area. Breeding flycatcher habitat and occupancy may also occur.

No flycatcher critical habitat occurs in the action area.

Yuma Ridgway's Rail

Habitat for the rail is scattered along the Gila River in the action area. The area includes cattails and other vegetation that is inundated by water. Habitat location and patch sizes have changed through the years based on river flow and flooding (high flows in 2005 eliminated most of the cattail habitat that was present). No assessment to determine condition and acres of rail habitat has been completed.

The action area is occupied by rails, though the number varies annually. The AGFD conduct surveys along the lower Salt and Gila Rivers annually, including routes near the project area. Survey efforts however, including which routes are surveyed, vary by year. Number of rails detected has ranged from 5 to 37, with the highest detections per year before the high flows in 2005. While available habitat has been reduced since the early 2000s, sufficient habitat remains to support rails in the action area. A summary of survey results from these annual surveys near the action area is provided in [Table 3](#). The numbers represented are the highest count of birds of that given year. It is unknown if these rails successfully bred, but they represent potential breeding territories based on the time of year surveys are done.

Table 3. Table with a summary of Yuma Ridgway's rail detections, what route they were detected on, year, and where that route is in relation to the project area.

<i>Relation to Project Area</i>	<i>General Survey Route</i>	<i>Date</i>	<i>Rails Detected</i>
<i>Downstream</i>	Gila River- Gillespie	2019	2
<i>Downstream</i>	Gila River- Arlington	2022	3
<i>Downstream</i>	Gila River- Powers Butte	2022	2
<i>Adjacent (west)</i>	Gila River- Robbins Butte	2022	2
<i>Upstream</i>	Gila River- Highway 85	2020	2
<i>Upstream</i>	Gila River- 115th Ave to 123rd Ave	2022	6

EFFECTS OF THE ACTION

In accordance with 50 CFR 402.02, effects of the action are all consequences to listed species or

critical habitat that are caused by the proposed action, including the consequences of all other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see §402.17).

Southwestern Willow Flycatcher

The proposed action will have non-lethal adverse effects to flycatchers. While no fuel breaks will be constructed, the mechanical removal of hazardous fuels, herbicide spraying, and burning of slash piles could result in noise disturbance, habitat removal, and disturbance from smoke. Disturbance from these actions is expected because studies have shown that most southwestern willow flycatchers return to former breeding areas, although they regularly move among sites within and between years. This could temporarily reduce reproduction immediately following treatment as returning flycatchers search for and establish new territories. Similarly, migrating flycatchers may be disturbed by noise generated from heavy equipment, chainsaws, and/or human presence related to herbicide application. These disturbances are not expected to affect their survival because some activities such as mechanical removal are planned to occur outside the breeding season. If mechanical removals need to occur during the breeding season, surveys will be done the preceding March to May. In addition, flycatchers will move to untreated sites within the action area (continue their migration to or from their breeding areas) in response to noise disturbance. Finally, the burning of slash piles associated with the mechanical removal of vegetation will result in smoke, which could cause any present flycatchers to vacate the action area.

The effects from noise disturbance are expected to have minimal adverse effects on nesting flycatchers because any mechanical removal, or mulching, of vegetation within or adjacent to flycatcher habitat is anticipated to occur outside the breeding/nesting/fledging season (April through September). If, for any reason, heavy equipment activity, or prescribed fire, is expected to occur between April and September 30, surveys shall be done the preceding March to May. If flycatchers are detected during this time, coordination would occur with the AESO. Finally, any ATVs or tractors used for herbicide application, would be used outside of flycatcher nesting season (April through September).

We anticipate that by removing hazardous vegetation and planting and irrigating native vegetation, the occurrence of high-intensity fires will be reduced and habitat for the southwestern willow flycatcher will be improved, which would have a beneficial effect to flycatchers.

Yuma Ridgway's Rail

The proposed action will have non-lethal adverse effects to the Yuma Ridgway's rail. Both mechanically and chemically treated areas may occur near or adjacent to rail habitat (areas inundated with water), or areas that once were inundated with water. The mechanical removal of hazardous fuels and burning of slash piles could result in noise disturbance, and disturbance from smoke. The use of herbicides, and mechanical maintenance chemicals could also affect water quality and cause health impacts to present individuals. Noise disturbance could temporarily reduce reproduction as returning rails search for and establish new territories. Similarly,

migrating rails may be disturbed by noise generated from heavy equipment, chainsaws, and/or human presence related to herbicide application. These disturbances are not expected to affect their survival because some activities such as mechanical removal of vegetation will occur outside the breeding season, and rails will move to untreated sites within the action area (continue their migration to or from their breeding areas). The opening of areas adjacent to rail habitat as a result of removed vegetation may also increase opportunities for predation. Finally, the burning of slash piles associated with the mechanical removal of vegetation will result in smoke, which could cause any present rails to vacate the action area.

The effects from noise disturbance are expected to have minimal adverse effects on nesting rails because any mechanical removal, or mulching, of vegetation within or adjacent to rail habitat are planned to occur outside the breeding/nesting/fledging season (April through September). Further, any ATVs or tractors used for herbicide application would be used outside of rail nesting season (April through September). If, for any reason, heavy equipment activity, or prescribed fire, is expected to occur between April and September 30, surveys shall be done the preceding March to May. If rails are detected during this time, coordination would occur with the AESO. The additional conservation measures of applying a 10 to 60 ft buffer between herbicide use and riparian and marsh habitat, and 10 to 100 feet buffer between herbicide use and surface water, will also decrease possible effects from herbicide drift.

We anticipate that, overall, the removal of hazardous fuels and planting of native vegetation will decrease the spread of fire to areas of rail habitat and reduce the occurrence of catastrophic fire events, may ultimately increase available habitat for rails in the long-term, which would have a beneficial effect to rails.

CUMULATIVE EFFECTS

Cumulative effects are those “effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area” considered in this Opinion (50 CFR 402.02). Reasonably foreseeable state actions are anticipated in and around the project. The project area occurs within both the Robbins Butte Wildlife Management Area (owned and managed by the AGFD), and PLO-1015 Lands (owned by USFWS and co-managed with AGFD). The area, as a whole, is managed to conserve and enhance sensitive species and habitats, while providing compatible natural resource recreational opportunities for the public. Ongoing management and recreation within this area may result in noise and temporary disturbance within the project/action area.

CONCLUSION

After reviewing the status of the species, the environmental baseline for the action area, the effects of the action, as proposed, and the cumulative effects, it is our biological opinion that the Hazardous Fuels Management Project, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher and Yuma Ridgway’s rail. We base these conclusions on the following:

Southwestern Willow Flycatcher

- Although the project may result in limited non-lethal take to the southwestern willow flycatcher, over the long term the proposed action will improve flycatcher habitat and reduce the likelihood of high-intensity wildfires. This improvement in the quality and quantity of flycatcher habitat would be a benefit to the species. This benefit would not impede the species recovery and may result in increased abundance and distribution. Therefore, we do not believe the proposed action will cause the species to reach the tipping point beyond which they would recover.
- Conservation measures are in place and are expected to significantly reduce the likelihood of disturbance from noise during the breeding season.
- Designated critical habitat for the southwestern willow flycatcher does not occur within the action area.

Yuma Ridgway's Rail

- Although the project may result in limited non-lethal take to the Yuma Ridgway's rail, over the long term the proposed action will improve rail habitat and reduce the likelihood of high-intensity wildfires. This improvement in the quality and quantity of Yuma Ridgway's rail habitat would be a benefit to the species. This benefit would not impede the species recovery and may result in increased abundance and distribution. Therefore, we do not believe the proposed action will cause the species to reach the tipping point beyond which they would recover.
- Conservation measures are in place and are expected to significantly reduce the likelihood of disturbance from noise during the breeding season.
- Additional conservation measures are in place and are expected to significantly reduce the likelihood of water contamination from herbicide, or vehicle maintenance chemicals.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR § 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. "Harass" is defined (50 CFR § 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking follows the terms and conditions of this Incidental Take Statement.

Southwestern Willow Flycatcher

To evaluate incidental take of the southwestern willow flycatcher from the action under consultation, incidental take is anticipated to be either harm (*e.g.*, direct injury or fatality) or temporary harassment (*e.g.*, noise or ground disturbance) to individual birds either during the nesting or migratory period, to the degree that they are considered lost as viable members of the population and thus “taken.” The amount or potential for incidental take is related to the disturbance footprint associated with mechanical or chemical treatment of hazardous vegetation, and native planting within the 65 acres project area boundary.

However, because of the effects of the tamarisk leaf beetle minimizing living tamarisk, and because no surveys have been done in the project area, we cannot evaluate the abundance and distribution of this species or its available habitat within the action area. Should a flycatcher be detected during the surveys completed as a part of the proposed action, work must pause until coordination with the AESO can occur.

Yuma Ridgway’s Rail

To evaluate incidental take of the Yuma Ridgway’s rail from the action under consultation, incidental take is anticipated to be either harm (*e.g.*, direct injury or fatality or temporary harassment (*e.g.*, noise or ground disturbance) to individual birds either during the nesting or migratory period, to the degree that a rail is considered lost as a viable member of the population and thus “taken.” The amount or potential for incidental take is related to the disturbance footprint associated with mechanical or chemical treatment of hazardous vegetation, and native planting within the 65 acres project area boundary.

While we anticipate that while noise disturbance has been minimized to the greatest extent practicable, the effects to the removal of hazardous vegetation (giant reed) is reasonably certain to result in incidental take. Based on the information we have regarding where treatment parcels are located and the results from marsh bird surveys in and around the area, we anticipate two rails will be taken in the form of taken in the form of harassment over the course of the five-year project. This number was deduced by considering that two rails were detected at the Robbins Butte route, and the two rails were detected at Highway 85 route. This incidental take will be considered exceeded if, over the course of the project, three rails are harassed, or one rail is harmed. It is expected that this information can be deduced from the surveys by AGFD, USFWS, or a designated representative shall conduct of the sites to be treated during the breeding season prior to activity.

EFFECT OF THE TAKE

In the accompanying biological opinion, we have determined that the level of anticipated take is not likely to result in jeopardy to the either the southwestern willow flycatcher or the Yuma Ridgway’s rail due to the reasons described above in the Conclusions section. Although we anticipate some incidental take to occur, the implementation of the conservation measures should ultimately result in avoidance and minimization of adverse effects.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

This Biological Opinion requires that the USFWS and AGFD's cooperative project plan be fully implemented as described in the BA. The BA contains all measures necessary to avoid, minimize, and mitigate take of the species addressed in this Opinion to the maximum extent practicable. Therefore, we are including only one reasonable and prudent measure and accompanying terms and conditions, as follows:

Reasonable and Prudent Measure 1: Refuge staff shall coordinate with the AESO throughout the proposed action.

Term and Condition 1: Refuge staff will coordinate with AGFD as needed and conduct annual southwestern willow flycatcher surveys in the area to better inform future take statements over the life of the action (five years). The results of each annual survey will be provided to AESO on as soon as practicable after completing the survey. Refuge will prepare a brief report summarizing the protocols utilized and any results that can be discussed. Reports should include all field notes and any raw data will be presented in both spreadsheets and summarized tables in the report.

Term and Condition 2: Refuge staff will coordinate with AESO at least once per year and include information on activities to date, as well as data and information gained during project implementation on the Yuma Ridgway's Rail and Southwestern Willow Flycatcher.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the USFWS's Law Enforcement Office, 4901 Paseo del Norte NE, Suite D, Albuquerque, NM 87113; 505-248-7889) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve the biological material in the best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that your agency participate in the implementation of the recovery plan for the southwestern willow flycatcher and in the development of the new recovery plan for the rail.
2. We recommend that you coordinate with other landowners in the action area in fire and fuel management in order to benefit flycatchers, rails, and other resources in the area.

3. We recommend that you conduct protocol surveys for all three species in and adjacent to the action area.
4. We recommend that you quantify habitats for all three species in the action area.

In order for the USFWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the USFWS requests notification of the implementation of any conservation recommendations. Follow-up monitoring and reporting will be crucial in assessing a) the success and cost/effectiveness of this project in producing habitat superior to that which currently exists and b) whether or not these methods should be considered for future vegetation management and fire-related projects.

REINITIATION NOTICE

This concludes both the formal and conference opinion for the Hazardous Fuels Reduction and Vegetation Restoration along the Lower Gila River as outlined by the BLM. You may ask the USFWS to confirm the conference opinion (yellow-billed cuckoo proposed critical habitat) as a biological opinion issued through formal consultation if the proposed critical habitat is designated. The request must be in writing. If the USFWS reviews the proposed action and finds there have been no significant changes in the action as planned or in the information used during the conference, the USFWS will confirm the conference opinion as the biological opinion for the project and no further section 7 consultation will be necessary.

As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

In keeping with our trust responsibilities to American Indian Tribes, we encourage you to coordinate with the Bureau of Indian Affairs in the implementation of this consultation and, by copy of this BO, are notifying affected Tribes of its completion (Ak-Chin Indian Community, Colorado River Indian Tribes, Fort Mohave Indian Tribe, Hopi Tribe, Pascua Yaqui Tribe, Quechan Tribe, Salt River Pima-Maricopa Indian Community, Tohono O'odham Nation, Yavapai-Apache Nation, and Yavapai-Prescott Indian Tribe).

We appreciate the coordinated efforts between the USFWS-Refuges Branch and AGFD to identify and minimize effects to listed species from this project. Please refer to the consultation number, ##, in future correspondence concerning this project. Should you require further assistance or if you have any questions, please contact Nichole Engelmann at 602-889-5943 or Mary Fugate at 602-889-5965.

Approved:

Heather Whitlaw, Field Supervisor

Date

cc (electronic):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ
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Manager, Cultural Resources, Ak Chin Indian Community, Maricopa, AZ
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 Director, Aha Makav Cultural Society Fort Mojave Indian Tribe, Mohave Valley, AZ
 Director, Cultural Preservation Office, Hopi Tribe, Kykotsmovi, AZ
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APPENDIX A: CONCURRENCE

Western Yellow-billed Cuckoo

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the western yellow-billed cuckoo for the following reasons:

1. The cuckoo is not known to occur within the action area. The nearest formal detection of yellow-billed cuckoo occurred in 2021 approximately 6 miles east of the action area within the City of Phoenix's Rio Salado Safe Harbor Agreement area (2021 Annual Report). Therefore, noise generated from this project for nesting, or migrating, cuckoos is no effect.
2. While habitat within the action area does not have the appropriate canopy structure to support nesting, it could be used for migration. However, if this occurs, the acreage of the action in comparison to adjacent areas would make any effects to migratory cuckoos insignificant.
3. No critical habitat occurs within the action area for the cuckoo.