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In Reply Refer To:
AESO/SE
22410-2009-F-0509

December 14, 2010

Memorandum

To: Emily Garber, Field Manager, Phoenix District, Bureau of Land Management,
Phoenix, Arizona

From: Field Supervisor

Subject: Biological Opinion on Hazardous Fuels Reduction and Vegetation Restoration in
the Lower Gila River

Thank you for your request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request was dated March 18, 2010, and received by us on March 22, 2010. At issue are impacts that may result from the proposed Hazardous Fuels Reduction and Vegetation Restoration Project in the Lower Gila River located in Maricopa County, Arizona. The proposed action may affect the southwestern willow flycatcher (flycatcher) (*Empidonax traillii extimus*) and its critical habitat, and the Yuma clapper rail (rail) (*Rallus longirostris yumanensis*).

In your memorandum, you requested consultation on the yellow-billed cuckoo (*Coccyzus americanus*), a candidate for Federal listing. We do not consult or conference on actions that may affect species that are not proposed or listed under the Act. We will, however, provide technical assistance on this species at your request.

This biological opinion is based on information provided in the April 2009, biological evaluation, telephone conversations, a meeting with your staff, field investigations, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, fuels reduction and restoration projects and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

CONSULTATION HISTORY

- June 12, 2009. We received your request for concurrence that the project may affect, but would not likely adversely affect the flycatcher and its critical habitat, or the rail.

- March 22, 2010. We received your memorandum to change your request for concurrence to a request for formal consultation for the flycatcher and the rail.
- October 12, 2010. We met with your wildlife and fire staff to discuss outstanding issues related to the project description and conservation measures.
- October 21, 2010. We sent you a request for a 90-day extension to the deadline for completing the BO for this project. The request was due to workload issues.
- October 28, 2020. We received additional information from you clarifying the proposed action for this project.
- November 23, 2010. We sent you the draft BO for your review and comment.
- December 7, 2010. We received your comments on the draft BO

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Bureau of Land Management (BLM), Lower Sonoran Field Office, proposes to reduce hazardous-fuel accumulations and reverse environmental degradation caused by tamarisk (*Tamarix ramosissima* and *Tamarix aphylla*), cane (*Phragmites communis*), giant reed (*Arrundo donax*), and ravenna grass (*Erianthus ravennae*) within wildland-urban interface (WUI) hazardous fuels reduction (HFR) areas, and implement riparian revegetation projects along the lower Gila River.

The project is located within the floodplain of the lower Gila River between the bridge at Highway 85 (T. 1 S., R. 4W Sec. 23) and Gillespie Dam (T. 2 S., R. 5 W., Sec.32), Maricopa County, Arizona (Figures 1 and 2). The total acreage of lands either managed by BLM or lands where BLM has fire-management responsibilities is 3,291 acres.

The proposed action is to construct and maintain fuel breaks and WUI buffers, and restore treated areas using passive or active restoration methods. WUI buffers are essentially the same as fuel breaks and will employ the same techniques, but are defined by their proximity to urban development. Fuel breaks and WUI buffers will be created and maintained in the Gila River at the Highway 85 Bridge downstream to Gillespie Dam, using combinations of mechanical and herbicide treatments. Fuel breaks and WUI buffers will be shaded fuel breaks where selective removal of vegetation is used to reduce fuels appropriately, but vegetation cover is maintained. The objective for these types of fuel breaks and buffers is to slow fire movement, not stop it by completely removing all vegetation to bare ground. Project actions will primarily target tamarisk (salt cedar), and native vegetation will be identified to remain in place. Fire or chipping may be used to eliminate slash piles. Restoration actions will primarily occur in conjunction with the restoration of areas burned by wildfires, but limited efforts may also occur in treated fuel breaks or WUI buffers if natural revegetation does not meet the outlined objectives. Restoration efforts

will include revegetation with native plant species and use follow-up treatments with herbicides to reduce resprouting of invasive species. The proposed action will be implemented as needed, with no end date.

Five to ten fuel breaks or WUI buffers will be constructed across the area, enclosing approximately 50-150 acres in each block, for a maximum total treated area of 1,500 acres. The exact location of each fuel break or buffer has not been determined, but the general areas for these treatments has been identified (maps included in the BE are incorporated herein by reference). Each fuel break or buffer will be tailored to site-specific conditions that include the ability to use existing elements such as old roads or power lines, areas previously burned by wildfire, extent and threat to urban development, access for mechanical clearing and maintenance equipment, occurrence of federally listed species and wildlife habitat, recreational activities, and cultural protection. The total number of treatment sites will not exceed ten, and total area treated with new fuels reduction treatments will not exceed 1,500 acres. Restoration of areas burned by wildfire will not count towards the 1,500-acre cap, but may be maintained as fuel breaks, reducing the actual number and acres of new fuel breaks and WUI buffers developed under this project. With regard to the location of the treatments, areas will be selected to avoid sites occupied by federally listed species as identified by existing and future survey efforts.

Fuel breaks and WUI buffers will be linear in nature, generally running perpendicular to the Gila River channel and parallel to the channel on each end. They will be built between 50 and 300 feet wide, depending on the fuels adjacent to them. Heavy fuels will require the wider fuel breaks. Lighter, discontinuous fuels may only require the minimum width or, depending on the fuel loading, a fuel break may not be necessary. Fuel breaks may be constructed using heavy equipment or by hand with the use of chainsaws or other hand equipment. Some small areas around native riparian vegetation would be removed by hand clearing. Vegetation will not be cleared to mineral soil. Vegetation cleared will be piled and burned or chipped and scattered to provide mulch. Cottonwoods, willows, or mesquites encountered in fuel-break construction will be avoided if possible. These fuel breaks will be maintained using either mechanical equipment or herbicides, or both. Fuel breaks will have native vegetation retained on site or planted in a manner that does not create continuous surface or ladder fuels. Choice of maintenance tools will be dependent upon environmental effects, efficiency, and costs. In the event of a wildfire in one of the cleared blocks, this block will receive priority for further maintenance and restoration by planting and herbicide treatments.

All project activities will occur outside the breeding and nesting season for threatened and endangered species to the maximum extent practicable. Some maintenance activities may have to occur within the breeding season, but impacts to federally listed species will be avoided or minimized through the application of conservation measures discussed below.

Herbicide Use and Application

Based on risk categories to fish, wildlife, and invertebrates, and environmental fate and transport information, only Triclopyr salt or ester, Imazapyr salt, or glyphosate formulations are to be used on this project. In general, the total characteristics of the four active ingredients in these formulations render these herbicides the preferred choice for stump applications during

mechanical treatment. A review of the four active ingredients in these herbicides is available in Appendix 2 of the environmental assessment for this project and is incorporated herein by reference. Stump application is the preferred method of treatment. Foliar application will occur in limited circumstances and BLM will implement conservation measures to reduce impacts to federally listed species and their habitats.

Herbicide Maintenance

Weeds would be chemically treated using approved herbicides to prevent reestablishment. Treatments could occur annually at any time of the year, but the objective is to conduct maintenance activities outside the breeding/nesting season of federally listed species. No one project area would be treated more than three times during the calendar year. These treatments would help achieve the desired native-vegetation mix for the area and fulfill fire-management objectives.

Hazardous Fuels Reduction

Mechanical Treatment

The primary method for fuels reduction in fuel breaks and WUI buffers will be the removal of vegetation by hand using loppers or chainsaws, followed by stump treatment with herbicides. The use of heavy equipment will primarily be used for the preparation and restoration of areas burned by wildfire where federally listed species habitat no longer exists as a result of the wildfire. Mechanical removal may involve the use of heavy equipment to physically remove tamarisk. This is accomplished in one of two ways – root crown removal or mulching.

Root crown removal will be accomplished by either of two methods:

1) D-7 or D-8 bulldozers equipped with brush rakes are used to remove the above-ground vegetation with limited movement of soil. This is followed by root plows for cutting the root system below the crown and then removing the root crown using a root rake. The resulting ground surface is entirely disturbed and stripped of all vegetation. Removed biomass is 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 saltcedar stands and terrain appropriate for bulldozer operations.

2) A 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 river banks 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.

Mulching

Tamarisk can be effectively controlled by mulching the above-ground tamarisk plants using specialized equipment followed by herbicide application (triclopyr salt or ester, Imazapyr salt, and Glyphosate formulation) to the cut stumps. The trees are typically mulched in a six-foot wide path through tamarisk thickets at a rate of .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 be any of a number of 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 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, canyons, or other remote locations. The mulching-in-place option precludes the necessity for soil stabilization/erosion control.

Prescribed Burning

Fires will only be used to treat slash piles, will be conducted in accordance with BLM procedures, and will have 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. Burning under low wind conditions will also reduce the probability of escape. Slash will be piled and burned in areas where burning and smoke will not affect habitat of federally listed species.

Restoration Engineering and Design

Restoration and revegetation will primarily occur in areas burned by previous and future wildfires (see Table 2 of the BE). While the objective is to restore burned and degraded areas, these sites may be restored and maintained in a manner that they can also function as fuel breaks or WUI buffers. These wildfire-restoration areas will not count towards the total for new treatment areas (1,500 acres), but they may reduce the number and acres of new treatments needed under this project.

Primarily a function of active restoration for areas burned by wildfire, supplemental irrigation and planting matrices will be engineered and designed for site-specific conditions and water availability.

Surface Treatments

Surface treatments are often required in active restoration sites to:

- Enhance precipitation capture and infiltration
- Reduce, redistribute, and/or dilute salts and Tamarix leaf litter
- Create more spatially uniform soil texture

- Assure proper depth placement and incorporation of broadcast seed and/or mycorrhizal inoculum.
- Utilize water harvesting or create sinkholes or ponds to enhance aquatic and riparian habitats.

Surface treatments can involve mechanized equipment (disking, plowing, aeration, etc.) or leaching (irrigation prior to planting).

Planting and Maintenance

Native trees, shrubs and grasses would be used to plant the site. Regionally obtained stock, including but not limited to, cottonwood, willow, mesquite, palo verde (*Parkinsonia floridum* and *P. microphyllum*), saltbush (*Atriplex* spp.), inkweed (*Suaeda Torreyana*), wolfberry (*Lycium* spp.), and seep willow would be planted to increase the habitat complexity. BLM may use flood-irrigation, drip irrigation, or subsurface irrigation to water sites, for a period of 2 years; a method that has shown success in other Arizona saltcedar restoration sites. Flood irrigation emulates historical hydrologic events. Plant growth and survival would be carefully monitored. Any plants that die within the first 2 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. Some pole planting of cottonwood and willow trees may also take place during the winter.

In an effort to enhance the occurrence of native vegetation along the lower Gila River, some limited restoration and revegetation efforts may also occur within the fuel breaks and WUI buffers. This would only occur if natural revegetation does not meet the objectives for enhancing native vegetation after five years. Any restoration that occurs in fuel breaks or WUI buffers will be conducted without the use of heavy equipment or irrigation systems. They would likely be conducted by hand to reduce disturbance and impacts to the recovering habitat.

Conservation Measures

This list includes 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. Some measures from the Fire BO have been edited specifically for this project as necessary.

- Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats listed in the Fire BO, as appropriate (see species-specific conservation measures below).
- Implement the Conservation Measures for Fire Management Activities listed in the Fire BO, as appropriate (see species-specific conservation measures below).
- Pre-project surveys for threatened and endangered species will be required in and adjacent to each treatment unit with suitable habitat in the year before implementation in that unit.

Surveys during the year of treatment will also occur, as well as post-treatment monitoring for species occurrence for two years following treatment. Suitable habitat in and adjacent to the treatment unit will be considered occupied if pre-treatment surveys are not able to be conducted and all applicable conservation measures will be applied.

- Any vegetation removal projects within or adjacent to flycatcher or rail habitat will occur outside the breeding/nesting/fledging season (April-September), except if site-specific surveys have been implemented that determine flycatchers or rails are not present in or adjacent to the treatment area. If surveys determine areas are occupied, treatment actions will avoid occupied areas or appropriate conservation measures will be applied (see species-specific conservation measures below).
- Transporting and disposing of garbage will be done off-site and in accordance with the Solid Waste Disposal Act.
- All refueling, oil changes, and lubrication of large-wheeled and tracked equipment (e.g., passenger vehicles, bulldozers) will be done outside of the riparian area, and be done in a manner to prevent spills.
- All terrain vehicle (ATV) or tractor-mounted herbicide applications will be timed to occur outside the flycatcher and rail breeding/nesting season (April through September).
 - Pedestrian backpack foliar treatments and cut-stump applications will be permissible throughout the year with the implementation of species-specific conservation measures below.
 - Pedestrian backpack foliar treatments and cut-stump applications during the April to September breeding/nesting season will be implemented greater than 10 or 60 feet from marsh areas in accordance with the species-specific conservation measures below.
- Herbicide will be marked with colored dye to identify areas treated.
- A buffer of 10 to 100 feet (see YCR conservation measures below) will be used any time herbicide is applied near a sensitive water source (pool, open water, surface water, and drainage) to reduce potential impacts to YCR, unless the herbicide is approved for aquatic application as stated by the manufacturer and application follows the label guidelines. This measure meets or exceeds the FWS pesticide guidelines (White 2004).
- Sensitive water sources in the vicinity will be tested for active herbicide to determine environmental fates of herbicides.
- All personnel working with or in the vicinity of the herbicide application will have daily briefings that would inform them of federally listed species concerns.

Southwestern willow flycatcher

- Surveys for the flycatcher will occur the year prior to treatment, the year of the treatment, and two years post-treatment. Due to timing of the project, surveys the year prior to treatment will not occur for 2011, but surveys will occur the year of treatment in 2011. If breeding or nesting activity is observed or territory establishment is documented, these sites will be monitored and the location of the fuels treatment may be changed to avoid impacts to flycatchers during the breeding/nesting/fledging season.
- Fuel breaks and WUI buffers will be established to the extent possible in areas not occupied by flycatchers as determined by existing and future surveys.
- The use of chainsaws or bulldozers to construct fuel breaks through occupied or suitable habitat will be minimized except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that would otherwise be burned if not treated. Use of motorized equipment will occur outside of the flycatcher breeding/nesting/fledging season.
- Activities to reduce hazardous fuels or improve riparian habitats (mechanical, herbicide, or burning treatments) within occupied or unsurveyed suitable habitat for flycatchers will only be implemented during the non-breeding season (October 1 to March 31).
- Developing access roads that would result in fragmentation or a reduction in habitat quality will be avoided. All roads that were necessary for project implementation will be closed and rehabilitated.
- Burning will only occur to treat slash piles, not to create fuel breaks or buffers. Slash will be piled and burned in areas where flycatchers will not be affected by the activity or dispersing smoke.
- Vegetation treatment projects adjacent to occupied or unsurveyed suitable habitat will only be conducted when flycatchers are not present (October 1 – March 31).
- If survey results or other project activities indicate potential effects beyond those addressed by these conservation measures, the BLM PDO will contact the USFWS Arizona Ecological Services Office for guidance on how to proceed with the project.

Yuma clapper rail

- Surveys for the rail will occur the year prior to treatment, the year of the treatment, and two years post-treatment. Due to timing of the project, surveys the year prior to treatment will not occur for 2011, but surveys will occur the year of treatment in 2011. If breeding or nesting activity is observed, these sites will be monitored and the location of the fuels treatment may be changed to avoid impacts to rails during the breeding/nesting/fledging season.

- Fuel breaks and WUI buffers will be established to the extent possible in areas not occupied by rails as determined by existing and future surveys.
- Fuel breaks and WUI buffers will typically not be established in areas with open water or marsh habitat suitable for rails. These areas naturally provide fuel breaks. Therefore, most activities under this project will occur outside areas of suitable rail habitat. However, suitable rail habitat is ephemeral and can occur in changing locations within the river based on floods, vegetation conditions, and precipitation patterns. Therefore, the following conservation measures are applicable.
- Any fuels reduction or buffer treatments implemented in occupied or suitable marsh habitat will only occur between September 1 and March 15 to avoid the rail breeding and molting seasons. The rail is resident in the area year round. Treatment activities will avoid occupied habitat during the post-breeding season or the appropriate conservation measures will be applied as outlined below.
- Mechanical removal of overstory habitat (*Tamarix*) may occur as early as August 15, after the breeding season for rails, but will not occur in open water or marsh habitats. Mechanical treatments may occur outside the breeding season, but must be at least 100 feet from suitable open water/marsh habitat.
- Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use based on risk assessment guidance, with minimum widths of 100 feet for aerial, 25 feet for vehicle, and 10 feet for hand applications. Drift-inhibiting agents should be used to assure that the herbicide does not enter adjacent marsh areas. Spot treatment by hand can occur at any time of the year due to the low disturbance and buffers associated with this type of treatment. This measure meets or exceeds the FWS pesticide guidelines (White 2004).
- Minimize disturbance to rails during burning activities. Fire will only be used to burn slash piles. Slash will be piled and burned in areas where the activity and smoke associated with the burning will not affect areas occupied by rails.

STATUS OF THE SPECIES AND CRITICAL HABITAT

Southwestern willow flycatcher

The flycatcher was listed as endangered, without critical habitat on February 27, 1995 (60 FR 10694). Critical habitat was designated on October 19, 2005 (70 FR 6088).

The southwestern willow flycatcher recovery plan (U.S Fish and Wildlife Service 2002) (RP) describes reasons for endangerment, flycatcher status, addresses recovery actions, includes detailed issue papers, and provides recovery goals. Recovery is based on reaching numerical and habitat related goals for each specific Management Unit (MU) established throughout the subspecies' range and establishing long-term conservation plans.

The 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 “whitt”. It is one of four currently recognized willow flycatcher subspecies (Phillips 1948, Unitt 1987, Browning 1993). It is a neotropical migrant that breeds in the southwestern U.S. 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). The historical breeding range of the 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).

The flycatcher breeds in dense riparian habitats from sea level in California to approximately 8,500 feet in Arizona and southwestern Colorado. Historical egg/nest collections and species' descriptions throughout its range describe the southwestern willow flycatcher's widespread use of willow (*Salix* spp.) for nesting (Phillips 1948, Phillips *et al.* 1964, Hubbard 1987, Unitt 1987, San Diego Natural History Museum 1995). Currently, flycatchers primarily use Geyer willow (*Salix geyeriana*), coyote willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), boxelder (*Acer negundo*), saltcedar (*Tamarix* sp.), Russian olive (*Elaeagnus angustifolius*), and live oak (*Quercus agrifolia*) for nesting. Other plant species less commonly used for nesting include: buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood (*Populus* spp.), white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Based on the diversity of plant species composition and complexity of habitat structure, four basic habitat types can be described for the flycatcher: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al.* 1997).

The flycatcher's habitat is dynamic and can change rapidly: nesting habitat can grow out of suitability; saltcedar habitat can develop from seeds to suitability in five years; heavy runoff can remove/reduce habitat suitability in a day; or river channels, floodplain width, location, and vegetation density may change over time. The flycatcher's use of habitat in different successional stages may also be 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 flycatchers (McLeod *et al.* 2005, Cardinal and Paxton 2005). That same habitat may subsequently grow or cycle into habitat used for nest placement. Flycatcher habitat can quickly change and vary in suitability, location, use, and occupancy over time (Finch and Stoleson 2000).

There are currently over 288 known flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2008 where a territorial flycatcher has been detected) holding over an estimated 1,299 territories (see the latest rangewide status summary in the project file). It is difficult to arrive at a grand total of flycatcher territories as not all sites are surveyed annually. Numbers have increased since the bird was listed and some habitat remains unsurveyed; however, after nearly a decade of intense surveys, the existing numbers are just past the upper end of Unit's (1987) estimate of 20 years ago (500-1000 pairs). About 50 percent of the 1,299 territories currently estimated throughout the subspecies' range are located at four general locations (Cliff/Gila Valley – New Mexico, Roosevelt Lake - Arizona, San Pedro River/Gila River confluence – Arizona, Middle Rio Grande, New Mexico).

While numbers have significantly increased in Arizona (145 to 459 territories from 1996 to 2007) (English *et al.* 2006, Durst *et al.* 2008), overall distribution of flycatchers throughout the state has not changed substantially. Currently, population stability in Arizona is believed to be largely dependent on the presence of two large populations (Roosevelt Lake and San Pedro/Gila River confluence). Therefore, the result of catastrophic events or losses of significant populations either in size or location could greatly change the status and survival of the bird. Conversely, expansion into new habitats or discovery of other populations would improve the known stability and status of the flycatcher.

Critical habitat

The primary constituent elements of critical habitat are based on riparian plant species, structure and quality of habitat and insects for prey. A variety of river features such as broad floodplains, water, saturated soil, hydrologic regimes, elevated groundwater, fine sediments, etc. help develop and maintain these constituent elements. The primary constituent elements are:

1. Riparian habitat in a dynamic successional riverine environment (for nesting, foraging, migration, dispersal, and shelter) that comprises:
 - a. Trees and shrubs that include, but are not limited to, willow species, box elder, tamarisk, Russian olive, cottonwood, stinging nettle, alder, ash, poison hemlock, blackberry, oak, rose, false indigo, Pacific poison ivy, grape, Virginia creeper, Siberian elm, and walnut.
 - b. Dense riparian vegetation with thickets of trees and shrubs ranging in height from 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;
 - c. 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 level, or as a low, dense tree canopy;
 - d. Sites for nesting that contain a dense tree and/or shrub canopy (the amount of cover provided by tree and shrub branches measured from the ground) (i.e., a tree or shrub canopy with densities ranging from 50 percent to 100 percent); or
 - e. Dense patches of riparian forests that are interspersed with small openings of open water or marsh, or shorter/sparser vegetation that create a mosaic that is not uniformly dense. Patch size may be as small as 0.25 acre or as large as 175 acres.
2. A variety of insect prey populations found within or adjacent to riparian floodplains or moist environments, including: flying ants, wasps, and bees; dragonflies; flies; true bugs; beetles; butterflies/moths and caterpillars; and spittlebugs.

A variety of river features such as broad floodplains, water, saturated soil, hydrologic regimes, elevated groundwater, fine sediments, etc. help develop and maintain these constituent elements.

Past consultations

Since listing in 1995, at least 182 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range. A list of these activities can be found in the administrative record for this consultation. Many activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (e.g. development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.).

Yuma clapper rail

The rail was listed as an endangered species on March 11, 1967 under endangered species legislation enacted in 1966 (Public Law 89-669). Only populations found in the United States were listed as endangered; those in Mexico were not listed under the 1966 law or the subsequent Endangered Species Act of 1973 (as amended). Critical habitat has not been designated for the rail. The Yuma Clapper Rail Recovery Plan was issued in 1983 (U.S. Fish and Wildlife Service 1983).

The rail is a 14-16 inch long marsh bird with a long, down-curved beak. Both sexes are slate brown above, with light cinnamon underparts and barred flanks. The rail is distinguished from other clapper rail subspecies using distributional data, plumage color, and wing configurations (Banks and Tomlinson 1974). The rail is a secretive species and is not often seen in the wild. It gives a series of distinctive calls that are used to identify birds in the field. Frequency of calls or responsiveness to taped calls varies seasonally.

Habitat for the rail is freshwater and brackish marshes with dense vegetation, dominated by cattails (*Typha spp.*) that includes both mats of old material and more open stands. The most productive areas for the rail consist of uneven-aged stands of cattails interspersed with open water of variable depths (Conway *et al.* 1993). Other important factors in the suitability of habitat include the presence of vegetated edges between marshes and shrubby riparian vegetation (saltcedar or willow thickets) (Eddleman 1989), and the amount and rate of water level fluctuations within the habitat. Water flow in the open channels within the marsh is desirable (Todd 1971; Tomlinson and Todd 1973). Rails will use quiet backwater ponds, flowing stream or riverside areas, irrigation canals and drainage ditches, reservoirs and small lakes or other small marshlands where cattail habitat is available. Natural and artificially constructed marshes can provide suitable habitat.

The breeding season for the rail runs from February through early July (Eddleman 1989). Nests are constructed in marsh vegetation or low growing riparian plants at the edge of the water. Non-native (introduced) crayfish (*Procamberus clarki*) form the primary prey base for rails today (Todd 1986). Prior to the introduction of crayfish, isopods, aquatic and terrestrial insects, clams, plant seeds, and small fish dominated the diet. Once believed to be highly migratory (with most birds thought to spend the winter in Mexico), telemetry data showed most rails do not migrate (Eddleman 1989). Very little is known about the dispersal of adult or juvenile birds, but evidence of populations expanding northward along the lower Colorado River, the Salton Sea, and central Arizona over the last 80 years indicates that rails can effectively disperse to new

habitats provided that habitat corridors exist between the old and new sites (Rosenberg *et al.* 1991).

Additional life history information is found in the Recovery Plan (U.S. Fish and Wildlife Service 1983), Todd (1986), Eddleman (1989), and Rosenberg *et al.* (1991).

The rail has two major population centers in the United States; the Salton Sea and surrounding wetlands in California, and the lower Colorado River marshes from the border with Mexico to Havasu National Wildlife Refuge. Smaller numbers of rails are found along the lower Gila River in Yuma County, the Phoenix metropolitan area (including portions of the Gila, Salt and Verde rivers) in Maricopa County, Roosevelt Lake in Gila County, Picacho Reservoir in Pinal County, and the Bill Williams River in La Paz County, Arizona (U.S. Fish and Wildlife Service annual survey data). Rails have also recently been documented from southern Nevada in Clark County (McKernan and Braden 2000; Tomlinson and Micone 2000) and the Virgin River in Washington County, Utah and Mohave County, Arizona (McKernan and Braden 2000).

Annual survey data compiled by the Fish and Wildlife Service for the period 1990 through 2009 documented between 464 and 1076 rails (via calls or visual observation) at survey sites in the U.S. These figures are of actual birds and are not extrapolated to provide a population estimate. The unlisted rail population in Mexico was estimated to contain 6300 birds (Hinojosa-Huerta *et al.* 2000), and the amount of movement between the two populations is unknown.

Declines in actual numbers heard or seen on survey transects since the early 1990's have not been positively connected to any event on the lower Colorado River or Salton Sea; however, changes in habitat quality caused by overgrown marsh vegetation is suspected of influencing rail numbers in those areas. Habitat restoration through mowing or burning over-age cattail stands is under evaluation in several locations to determine future management needs.

Recently developed information that may affect the life history of the rail involves selenium levels in the crayfish, the primary prey species. Levels of selenium in crayfish from rail habitats were high enough to cause concern for potential reproductive effects (Roberts 1996, King *et al.* 2000). No adverse effects from selenium have been observed; however, due to the rail's secretive nature, nests are very difficult to find and young birds hard to observe. Additional monitoring is under consideration at this time.

Federal actions that may have adverse effects to the rail undergo section 7 consultation. These actions include issuance of Clean Water Act section 404 permits for dredging or filling in wetlands, and placement of seawalls or other shoreline modifications on all rivers and streams within the U.S. range of the species. The number of such actions varies between river systems.

Actions by the Bureau of Reclamation in managing the lower Colorado River have the greatest potential to destroy large marsh habitats or disturb individual birds during dredging, bank stabilization, and other channel maintenance activities. Past Federal actions to construct dams, diversion structures, and other management actions have increased the amount and longevity of marsh habitats in several locations on the lower Colorado River. These same actions eliminate the variable physical conditions that provide for marsh regeneration, and habitat quality is

reduced over time. Measures are in place under biological opinions issued for Reclamation's maintenance activities to reduce or eliminate adverse effects of current management on remaining marshes. Changes to water releases in the lower Colorado River are in part subject to Reclamation oversight and are also addressed for reduction of effects and replacement of lost habitat. Effects to the Salton Sea rail habitats from changes in water flow to the Sea that have a Federal nexus are being addressed under section 7.

Habitat conservation planning requires the Fish and Wildlife Service to consult under section 7 prior to issuing a section 10 permit allowing take of species by non-Federal parties. Conservation for rails at Roosevelt Lake, Salton Sea, and on the lower Colorado River are part of ongoing HCP efforts in those areas.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

Description of the Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR §402.02). The Action Area for this project includes the lower Gila River and its floodplain, beginning at the Highway 85 Bridge downstream to approximately 1 mile below Gillespie Dam. Perennial surface water is present through all or most of this reach due to sewage effluent input at the 91st Avenue Waste Water 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 more or less 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 (salt cedar) (*Tamarix* spp.), phragmites, Fremont cottonwood, Goodding's willow, seep willow, arrowweed, honey mesquite, screwbean mesquite, coyote willow, quailbush, and four-wing saltbush (*Atriplex canescens*). Vegetation of desert washes needing treatment include: desert willow (*Chilopsis linearis*), catclaw acacia (*Acacia greggii*), ironwood (*Olneya tesota*), and palo verde (See Fig. 2). The vegetation of the floodplain is dynamic due to periodic flooding that can scour away much of the vegetation. The vegetation is also affected by periodic wildfires. Saltcedar, 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.

A. Status of the species and critical habitat within the action area

Southwestern willow flycatcher

Areas that meet the description of flycatcher breeding habitat occur in the action area. Most of these areas are dense salt cedar that is ten to fifteen feet high, with occasional willows. There are some fairly large stands of salt cedar, 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.

Protocol surveys within some of the action area were completed by the Arizona Game and Fish Department (AGFD) from 2003 to 2008, with no territories being confirmed. One flycatcher was detected in 2008 at the Arlington Wildlife Area. The only other detection was an incidental detection in 2002. Surveys in the action area downstream of Gillespie Dam (Old Hwy. 80 Bridge) were completed for another project in 2006, 2008, and 2009. Flycatchers were detected in 2006 and 2008, but no territories were confirmed. No surveys specifically for this project were implemented. Based on the available survey information, we believe that the project area is occasionally used by migrating flycatchers, but it is currently not a breeding or nesting area.

No critical habitat for the flycatcher has been designated in the action area.

Yuma clapper 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 conducted surveys from Highway 85 downstream to Gillespie Dam from 2001 to 2009, but effort and specific areas surveyed varied by year. Number of rails detected has ranged from five to thirty seven, with the highest detections per year before the high flows in 2005. Surveys in the action area downstream of Gillespie Dam (Old Hwy. 80 Bridge) were completed for another project in 2006, 2008, and 2009, but no rails were detected. While available habitat has been reduced since the early 2000's, sufficient habitat remains to support rails in the action area.

B. Factors affecting the species' environment within the action area

Southwestern willow flycatcher and Yuma clapper rail

The lower Gila River has a mix of ownership patterns, from active and fallow farm use on private lands to wildlife habitat areas, managed by the Arizona Game and Fish Department (AGFD). The wildlife management areas have management (farming and structure maintenance) and recreation (hiking, wildlife watching, and hunting) actions that may occasionally disturb flycatchers or rails. BLM manages four ephemeral grazing allotments along the Gila River, but livestock access to the river is restricted by fencing; therefore no effects to flycatchers or rails are expected. Recreation

use in the river consists of fishing, and kayaking, which may occasionally disturb flycatcher or rails. Off highway vehicle (OHV) use is common in the uplands but river access is limited by private and state landowners.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action, which will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Herbicide Effects

The formulations of Triclopyr salt and Glyphosate herbicides are listed as slightly to moderately toxic to terrestrial and aquatic arthropods, as well as small avian species and are in Class 1 with regard to ecotoxicity. Imazapyr and Triclopyr ester are listed as virtually nontoxic and are Class 0 with regard to ecotoxicity. These herbicide formulations will not be used within ten feet of any standing water, which is required by BLM policy (USDI-BLM 2007) Vegetation Management EIS. Also, herbicides will not be applied within ten feet of rail habitat, and drift-inhibiting agents will be used to assure that the herbicide does not enter adjacent marsh areas. Persistence in the environment for these herbicides is short lived. Glyphosate, Triclopyr salt and ester, and Imazapyr all photo degrade. Based on the toxicity and persistence of the active ingredients of the pesticides proposed for use, there is little likelihood for direct effects to flycatchers or rails. In addition, the amounts of herbicide to be used and the locations of the use would not be enough to cause toxic concentrations within prey species of the flycatcher or rail. The proposed application of these herbicides meets or exceeds the FWS pesticide guidelines (White 2004).

Fuel Breaks and WUI Buffers

Tamarisk eradication can be detrimental to flycatchers in mixed and exotic habitats, especially in or near occupied habitat or where restoration is unlikely to be successful. Risks to flycatchers increase if the tamarisk control projects are implemented in absence of a plan to restore suitable native riparian plant species or if site conditions preclude the re-establishment of native plant species of equal or higher functional value. Threats also increase if the eradication projects are large scale in nature (USFWS 2002).

The above effects are unlikely as a result of the proposed action. Restoration and management for native species establishment is a part of the proposed action. In addition, fuel and WUI buffer development will occur on a relatively small scale. However, the creation and maintenance of five to ten fuel breaks of 50 to 300 feet in width in monotypic salt cedar stands will contribute to fragmentation of habitat and may result in a reduced potential for the establishment of flycatcher nest sites and would result in smaller blocks of potential breeding

habitat. This would also increase edge, which may result in increased opportunities for flycatcher nest predation and nest parasitism should flycatchers nest near or adjacent to the treatment areas. Edge effects and habitat fragmentation may reduce the suitability of flycatcher migration habitat, but these effects are not expected to reduce the occasional use of the project area by migrating flycatchers that currently occurs. These effects would occur on a very small portion of the overall project area, and some of the treated areas would still maintain foraging or migration habitat values because not all vegetation will be removed and management will favor the establishment of native species in treated areas. Creating and maintaining fuel breaks is anticipated to decrease the likelihood that fire would spread within habitat areas (both native and non-native) and reduce the occurrence of catastrophic fire events, which will protect existing migration habitat and may increase the potential for the development of breeding habitat for flycatchers in the long-term.

No flycatcher territories are known in the action area, but surveys will be completed before actions are implemented in or adjacent to potential breeding habitat, as necessary. If territories are documented, conservation measures, such as no vegetation management in habitat during the breeding season, will be implemented to minimize or eliminate adverse effects. Regardless, the proposed action should have very little effect on breeding flycatchers because actions are proposed to occur outside the breeding season. Breeding flycatchers, if present, could be disturbed from the increased human disturbance associated with the use of pedestrian backpack sprayers, which may occur during the breeding season. This action may disturb breeding flycatchers if they are nesting or foraging next to or in the treatment areas. This may result in flycatchers temporarily leaving the nest or leaving the general area while foraging, but they will return when the sprayers have left the area. We do not expect that this would result in nest abandonment or failure, and would not result in a decrease in reproduction.

Migrating flycatchers may be disturbed by some of the actions, but this is not expected to affect their survival because they will move to untreated sites within the action area (continue their migration to or from their breeding areas).

Critical habitat will not be affected because none is designated in the action area.

Project actions are unlikely to occur within rail habitat because fuel breaks are less necessary in areas characterized by open water and marshes. Treated areas may occur near or adjacent to rail habitat (areas inundated with water), or areas that once were inundated with water. This may reduce foraging habitat adjacent to rail habitat, but some of the treated areas could still be foraging habitat in the future because all vegetation will not be removed and management will favor the re-establishment of native vegetation species. Opening up areas as a result of creating fuel breaks and WUI buffers in proximity to rail habitat areas may also increase opportunities for predation. Creating and maintaining fuel breaks and WUI buffers is anticipated to decrease the spread of fire to areas of rail habitat and reduce the occurrence of catastrophic fire events, which may maintain more habitat for rails in the long-term.

Rails are resident in portions of the action area (surveys have documented five to thirty seven rails, varying by year), but specific locations in relation to possible treatment areas were not documented for this project. Rail habitat is continually changing in both extent and location

based on climate, land use, and vegetation conditions. However, surveys in or adjacent to habitat will be completed before actions are implemented, as necessary. The proposed action is likely to have very little effect on nesting rails because most actions will occur outside the breeding season. Nesting rails, if near or adjacent to where actions occur, could be disturbed from the increased human disturbance associated with the use of pedestrian backpack sprayers, but considering that applications during the breeding season will be subject to appropriate buffers in relation to nesting habitat, this disturbance is expected to be minimal. Nesting rails are not expected to leave a nest, but foraging rails may leave the general area. We do not expect that this would result in nest failure, and would not result in a decrease in reproduction. In other times of the year, foraging rails may be disturbed by the use of heavy machinery, chainsaws, and other equipment. Again, appropriate buffers around rail habitat will be established, but rails may move to other foraging areas in response to this disturbance. However, this is not anticipated to result in them leaving the general area or result in mortality.

Restoration Activities

Restoration activities will only occur in areas where wildfires have previously occurred within the action area. Because these areas have been affected by fire and fire suppression activities, habitat for both flycatchers and rails has been eliminated or greatly reduced at these sites. Some of the most intense actions within this proposed project are associated with restoration activities. These actions include the use of heavy equipment, ground disturbance, installation of irrigation systems, and planting and seeding. However, because these areas do not support habitat for flycatchers and rails, we do not anticipate any effects from these actions. Should areas of suitable habitat for either species develop on these sites prior to project implementation, surveys would be conducted to document presence or absence of the species. If the area is occupied, the appropriate project conservation measures would apply.

Fire

Fire will only be used as part of the proposed project to burn slash piles associated with the mechanical removal of vegetation for fuel breaks and WUI buffers. Burning of slash piles will occur away from areas of occupied habitat for the flycatcher and rail. We do not anticipate any effects to either species as a result of burning slash piles.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Farming, ranching activities, rural development, and recreational activities occur in the lower Gila River on non-Federal lands and result in the clearing of vegetation, groundwater pumping, agricultural return flow, pesticide use, and disturbance of flycatchers and rails and their habitats in the action area. Upstream activities such as groundwater pumping, as well as operation of Coolidge Dam, threaten the base flow of the middle and lower Gila River. Diversion of

streamflow for agriculture and pumping of groundwater occur along all major stream courses in the action area, usually on private land. Increased urban development is anticipated along the Gila River and water used in some areas could be shifted from agricultural use to industrial or domestic use. Base flow in this reach of the Gila River is primarily maintained by sewage effluent and agricultural return flows. Conversion of agricultural lands to urban and other land uses may result in the reduction or loss of flow in the river that would likely cause a concomitant reduction in the habitat for flycatchers and rails. Flooding, as a result of extreme precipitation events also alters habitat suitability and composition, at least in the short term.

As urban populations expand, so does the demand for recreational sites. Recreation within the action area can result in the disturbance of flycatchers and rails. Some forms of recreation, such as OHV use, can also result in impacts to habitat and increase the likelihood of wildfire. Recreational activities occurring on private and non-Federal lands is currently subject to little or no management in the action area.

CONCLUSION

Southwestern willow flycatcher

After reviewing the current status of the flycatcher and its critical habitat, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the flycatcher. No critical habitat has been designated for this species in the action area; therefore, none will be affected. We present these conclusions for the following reasons:

- Although the entire action area has not been surveyed, it is unlikely that any flycatcher territories will be affected because none have been documented by past survey efforts in the action area. Current flycatcher use of the action area appears to be for migration only.
- Surveys will be conducted in habitat within and adjacent to treatment areas before implementation, and conservation measures, such as seasonal restrictions, will be implemented as appropriate to minimize or eliminate adverse effects.
- Most actions will occur outside the breeding season.
- The use of backpack sprayers during the breeding season will not result in nest abandonment or failure because actions will be directed by survey results and because of the short-term, low-disturbance nature of the action.
- Established and maintained fuel breaks should reduce the threat of fire in breeding and migration habitat.
- Restoration efforts in areas previously burned by wildfire will improve the quality and extent of habitat in the action area.

Yuma clapper rail

After reviewing the current status of the rail, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the rail. No critical habitat has been designated for this species; therefore, none will be affected. We present these conclusions for the following reasons:

- Most actions will not occur in rail habitat due to the natural fuel break conditions that exist in rail habitat, e.g. open water, inundated vegetation, etc.
- Surveys will be conducted in habitat within and adjacent to treatment areas before implementation, and conservation measures, such as seasonal restrictions and buffer zones, will be implemented as appropriate to minimize or eliminate adverse effects.
- Most actions will occur outside the breeding season, and the actions that may occur during the breeding season will not result in nest abandonment due to the short-term, low-disturbance nature of the actions.
- The use of backpack sprayers during the breeding season will not result in nest failure because of the use of buffer zones and the short-term, low-disturbance nature of the action.
- Established and maintained fuel breaks may minimize the threat of fire in breeding and foraging rail habitat.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

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 is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

Southwestern willow flycatcher

The FWS does not anticipate that the proposed action will result in incidental take of any flycatchers because:

- no nesting territories have been documented in the action area;
- surveys have been completed in some portions of the action area, but only a few possible migrant flycatchers were detected;
- additionally, surveys will be conducted and, if any occupied habitat is documented, conservation measures will be implemented to avoid take of any flycatchers.

Yuma clapper rail

The FWS does not anticipate that the proposed action will result in incidental take of any rails because:

- the proposed action will primarily occur outside of rail habitat (areas inundated with water);
- surveys will be conducted and, if any occupied habitat is documented, conservation measures will be implemented to avoid take of any rails;
- most actions will occur outside the breeding season, eliminating the potential take of nests or eggs;
- buffer zones will be established around rail habitat to avoid disturbance of rails and their habitat during the non-breeding season.

A logical case can be made that incidental take of either or both of these species may occur due to subsequent maintenance activities, but the likelihood is very low. Maintenance treatments could occur at any time of the year, but would be directed outside the breeding seasons for flycatchers and rails to the extent possible. Maintenance treatments could result in the disturbance of both species during both nesting and migration seasons, however, the extent of habitat affected and the short-term, low-disturbance nature of the action in combination with buffer-area implementation, reduces the likelihood of take to below a reasonable certainty.

The Fish and Wildlife Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. " 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. " 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

Reporting Requirements/Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 W. Broadway Rd, Suite 113, Mesa, Arizona, 85202, telephone: 480/967-7900) 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 plans for these species, 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.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the proposed hazardous fuels reduction and vegetation restoration in the lower Gila River, Maricopa County, Arizona. 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.

We appreciate your efforts to identify and minimize effects to listed species from this project.

Any questions or comments concerning this biological opinion should be directed to Scott Richardson (520) 670-6150 (x242) or Sherry Barrett (x223) of my Tucson staff. Please refer to the consultation number 22410-2009-F-0509 in future correspondence concerning this project.

/s/ Steven L. Spangle

cc: Field Supervisor, Fish and Wildlife Service, Phoenix, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ
Assistant Field Supervisor, Fish and Wildlife Service, Phoenix, AZ
State Director, Arizona, Bureau of Land Management, Phoenix AZ

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Mesa, AZ
Regional Supervisor, Arizona Game and Fish Department, Yuma, AZ

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TABLES AND FIGURES

Figure 1. Project Location.

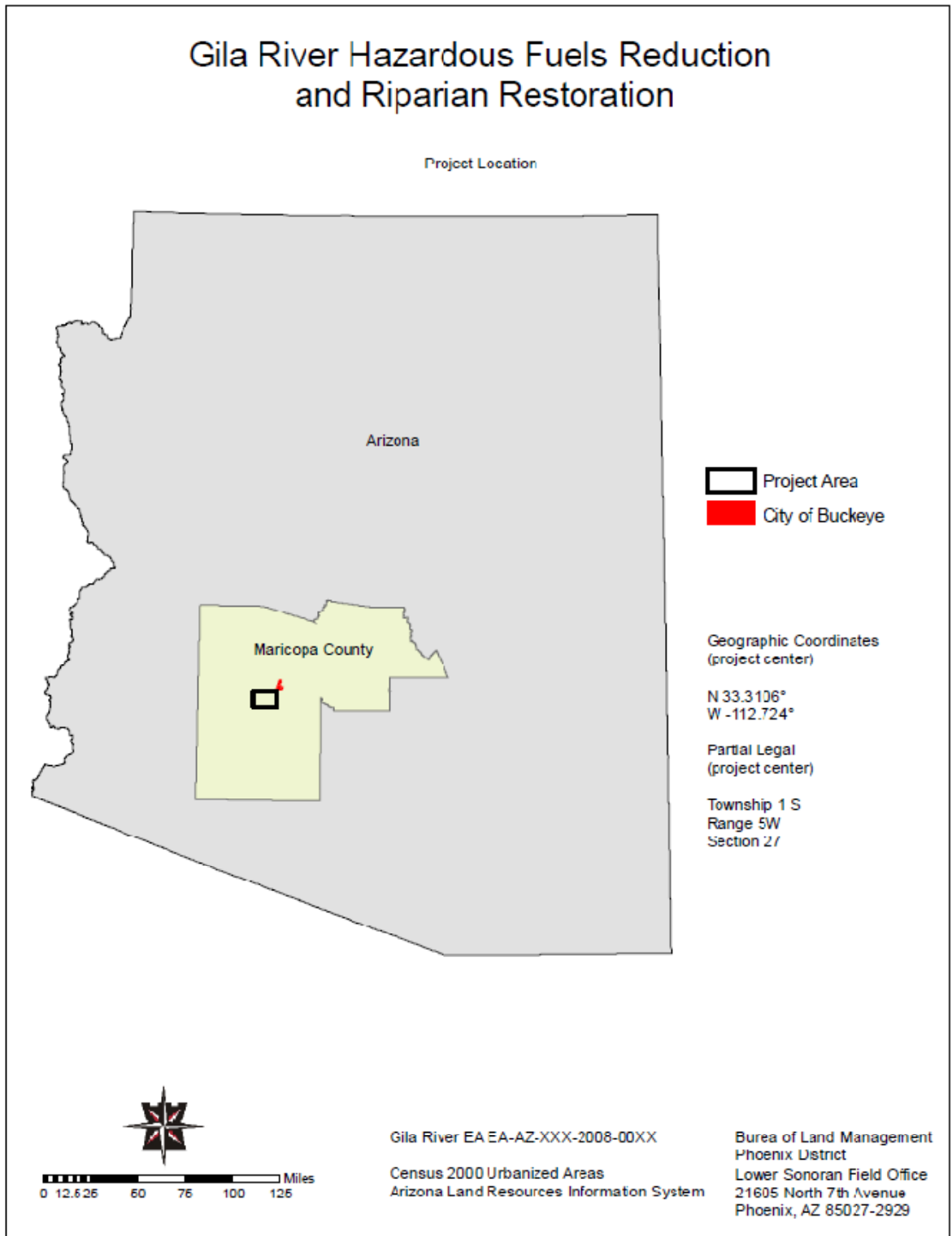


Figure 2. Vegetation in the project area.

