



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
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Carlsbad, California 92008



In Reply Refer To:
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JAN 09 2014

Mr. William Metz
U.S. Forest Service
Cleveland National Forest
10845 Rancho Bernardo Road, Suite 200
San Diego, California 92127-2107

Subject: Formal Section 7 Consultation for the Removal of Rock Dams within San Juan Creek, Orange County, California

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the proposed removal of rock dams from San Juan Creek in the Cleveland National Forest, Orange County, California, to improve fish passage. This biological opinion addresses the potential effects of this project on the federally endangered arroyo toad (*Anaxyrus californicus*), in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), and is based on information in our files and the biological assessment submitted by your agency. We previously concurred that designated critical habitat for the arroyo toad is not likely to be adversely affected (see Consultation History); thus, it will not be addressed in this biological opinion. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office (CFWO).

CONSULTATION HISTORY

On September 9, 2013, we received a biological assessment and request for formal section 7 consultation from the Cleveland National Forest (CNF).

On October 28, 2013, we provided a response letter documenting initiation of formal section 7 consultation for the project and concurring that the proposed removal of rock dams from Silverado Creek was not likely to adversely affect the arroyo toad or its designated critical habitat in Silverado and San Juan creeks. Therefore, this biological opinion only addresses potential impacts to arroyo toads in San Juan Creek.

BIOLOGICAL OPINION

PROPOSED ACTION

The CNF proposes to remove 27 rock dams at San Juan Creek (see Figure). The objective of the project is to improve fish passage to benefit the federally endangered southern steelhead (*Oncorhynchus mykiss*) and other aquatic species. Dams will be demolished to the point where

they no longer restrict fish passage and/or impede physical stream processes. Material from the demolished dams will be broken down to appropriate size classes and distributed by hand crews along the stream. For four dams, the materials will be used to reinforce or armor stream banks to protect infrastructure. In some cases, materials will be removed and recycled for use in other areas. Also, dams may be partially demolished to protect adjacent infrastructure such as roads and retaining walls. In these cases, desired fish passage conditions will be achieved without jeopardizing infrastructure. CNF engineers will provide technical oversight on dams that may affect infrastructure. Demolition will likely be completed over the next 1-5 years during the fall months when stream water level is low and most sensitive aquatic species are seasonally absent from wetted habitat. Dams will be demolished using pneumatic or gas-powered drills, jackhammers, non-toxic expanding mortars (safe for use in aquatic environments) and/or explosives. Project activities will occur along approximately 2 miles of San Juan Creek and include 27 dams and about 2 acres of land.

Conservation Measures

1. Project activities will occur during late summer and fall months when the potential presence of arroyo toads is low. Project activities will not occur until late August or September at the earliest to reduce potential impacts to arroyo toads.
2. A biologist will confirm the presence/absence of arroyo toads within the project area prior to implementation and make appropriate adjustments to the demolition methodology, timing, order of implementation, placement of demolished material and number of on-site personnel to protect arroyo toads and habitat.
3. Blasting crews used for implementation will be experienced and trained for use of explosives in and adjacent to aquatic habitat. Blasting and hand crews will be trained to identify arroyo toads and will consult with the CNF Fish Biologist if this species is observed in the project area.
4. At sites where adjacent or downstream infrastructure is a concern, a CNF engineer will provide a site-specific decommissioning plan that may include use of the demolished material to stabilize stream banks, a staged decommissioning process, and/or minimum action to be taken, which allows aquatic organism passage but does not jeopardize infrastructure integrity. This will occur at four dams.
5. All field personnel will be educated about the sensitive biological resources associated with the dam removal project. Any excavated material that is not used for the project will be disposed of at a suitable upland site.
6. A water pollution control plan will be developed to address water quality downstream of dam removal sites. This plan will include actions to provide protective covering for excavated areas or soil stockpile areas.
7. Prior to any demolition activity, a biologist will conduct a briefing session for personnel involved in the project. If arroyo toads are found, the field personnel or project leader

will contact the biologist. The biologist will relocate the arroyo toads out of the project area into nearby suitable habitat. No later than 30 days after completion of the proposed project, the biologist will provide a written report documenting the number of arroyo toads removed from the project area, date and time of capture, specific location of capture, approximate size and age of individuals, and description of relocation sites.

8. All fueling of vehicles will be in a designated area, typically on roads. Equipment will have ongoing inspections for fuel leaks. Straw and/or absorbent material will be used on all drips.

Action Area

According to 50 CFR § 402.02 pursuant to section 7 of the Act, the “action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For this consultation, the action area includes lands within the project footprint of about 2 acres.

STATUS OF THE SPECIES

Overall, we know of 22 populations of arroyo toads distributed from Monterey County south to Baja California, Mexico (Service 2009). In a 5-year review of the arroyo toad, the Service reported that the status of the arroyo toad has improved since listing. Based on its improved status, the Service recommended the arroyo toad be downlisted from endangered to threatened (Service 2009)¹. More detailed information on the status of the arroyo toad can be found in the recovery plan and 5-year review for this species (Service 2009, 1999). Please refer to these documents for detailed information on the life history requirements, threats, and conservation needs of the species rangewide.

There are many arroyo toad occurrences on CNF and surrounding lands; however, most of these are small in size. Most populations occur near the CNF boundary with the bulk of prime breeding habitat often lying just off national forest land (USFS 2000). The occupied habitat on the Trabuco Ranger District includes San Mateo Creek and San Juan Creek. The occupied habitat on the Palomar Ranger District includes Santa Ysabel Creek and associated lower reaches of Temescal Creek (Pamo Valley) and the upper forks of the San Luis Rey River (above Lake Henshaw), including Agua Caliente Creek and Temecula Creek (including the lower reaches of Arroyo Seco Creek). The occupied habitat on the Descanso Ranger District includes Cottonwood Creek, which includes lower reaches of Kitchen and Morena creeks, Potrero Creek, the Sweetwater River, and the upper San Diego River. There are about 8,000 acres of occupied habitat on CNF (Service 2012).

¹ The 5-year review indicates there are 23 populations of arroyo toads, but since this review was completed, the Service has reevaluated the status of the Silverado Canyon population and determined current information to be equivocal regarding the presence of arroyo toads (Service 2013).

The CNF has implemented numerous measures to improve the status of the arroyo toad. The CNF has installed crossings in some areas to help prevent direct and indirect impacts to the arroyo toad including at Orosco Ridge Road and Pine Creek Road (USFS 2005). In 2004, 2 miles of unauthorized roads that were affecting arroyo toad habitat in Noble Creek were permanently closed (USFS 2005). The Lower San Juan Picnic Area, which occurred within San Juan Creek arroyo toad population, has been permanently closed, and the area has been rehabilitated. The CNF acquired 232 acres of arroyo toad habitat at Hook Ranch on Cottonwood Creek and 238 acres of arroyo toad occupied habitat at the San Diego River (Service 2012).

In 2001, a non-jeopardy biological opinion was issued regarding CNF livestock grazing program and its impacts to 10 federally listed species, including the arroyo toad (Service 2001). However, substantive changes to grazing allotments have occurred since this biological opinion was issued, including closure of allotments or placement of allotments into non-use. Thus, the potential for impacts to arroyo toad has been substantially reduced.

In 2003, a non-jeopardy biological opinion was issued that addressed potential impacts to arroyo toad associated with continued use of 73 recreation residences on the CNF. Thirty-seven of these residences occur within Pine Creek area, and 19 occur in San Juan Creek watershed. The CNF proposed and implemented conservation measures to minimize impacts to arroyo toads such as a seasonal restriction on road maintenance to avoid the breeding season and removal of nonnative vegetation, unauthorized water diversions, and unnecessary roads/parking areas around residences (Service 2003). The take exemption from this biological opinion was the mortality on an annual basis of either 2 adults, 6 juveniles, or 1 egg mass at Pine Creek Tract and either 1 adult, 3 juveniles, or 1 egg mass at San Juan Tract. The number of arroyo toads taken on an annual basis through collection and relocation was anticipated to be 5 individuals at the Pine Creek Tract and 2 individuals at San Juan Tract. However, no incidental take from use of the recreation residences has been detected during monitoring since issuance of the opinion.

On November 10, 2010, the CFWO issued a non-jeopardy and no adverse modification biological and conference opinion addressing construction and long-term operations and maintenance of the Sunrise Powerlink (SRPL) Project (Service 2010). The SRPL Project includes construction of a high-voltage 117-mile transmission line and related facilities from south of El Centro in Imperial County to the northeast edge of the Marine Corps Air Station Miramar in San Diego County. The SRPL Project overlaps a small portion of arroyo toad occupied habitat on the southern end of the Descanso Ranger District (i.e., less than 1 acre of occupied habitat). Overall impacts to arroyo toad from the SRPL Project include 42.5 acres of permanent impacts and 84 acres of temporary impacts to arroyo toad suitable habitat and 10.5 acres of permanent impacts and 44.2 acres of temporary impacts to arroyo toad critical habitat, some of which will occur on CNF. However, no arroyo toad occupied riparian habitat will be affected by the SRPL Project. In addition, the SRPL Project includes the long-term protection and management of 836 acres of arroyo toad suitable habitat and 741 acres of arroyo toad critical habitat off the CNF, at the Long Potrero and Nabi sites (Service 2010).

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as the past and present effects of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated effects of all proposed Federal projects in the action area that have undergone section 7 consultation, and the effects of State and private actions that are contemporaneous with the consultation in progress.

Arroyo toads occur within the San Juan watershed on CNF over about 8 miles of stream and 518 acres of habitat (see Figure). In 2012, a biological opinion was completed regarding the potential impacts of recreation and road and trail use and maintenance on CNF. We concluded that the proposed action would not jeopardize the arroyo toad or adversely modify its designated critical habitat based on the proposed use of seasonal closures, fencing and monitoring, and best management practices to minimize the potential impacts of road and trail maintenance. The biological opinion anticipated that the proposed action would result in the observed death or injury of no more than 5 arroyo toads, 60 tadpoles, and 1 egg mass annually and the relocation of no more than 5 arroyo toads and 50 tadpoles annually (Service 2012). Since these impacts were expected to occur across the entire CNF, only a portion of these impacts may occur within the action area. Pursuant to this consultation, only dispersed recreation is anticipated within the action area.

Several nonnative species occur in the action area including the African clawed frog (*Xenopus laevis*), bullfrog (*Rana catesbeiana*), red swamp crayfish (*Procambarus clarkii*), and western mosquitofish (*Gambusia affinis*) (Bonterra Consulting 2008). These species can prey upon arroyo toads (Service 2003).

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 that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the proposed 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.

Direct Effects

Potential effects of the project include the crushing of adult and juvenile arroyo toads due to ground disturbing activities and trampling. Since project activities will occur outside the breeding season, tadpoles and egg masses should not be directly affected by these activities.

Effects to adult and juvenile arroyo toads could occur over the approximately 2 acres that will be impacted by project activities, though impacts will be minimized by monitoring and translocation of arroyo toads from the project sites. Handling of adult and juvenile arroyo toads during translocation could physiologically stress these animals, but we have determined that these

effects are discountable (i.e., extremely unlikely to occur) due to the short-term nature of the activity and short distance that arroyo toads will be moved.

The number of arroyo toads within the action area may vary annually and seasonally. Thus, we cannot precisely predict the number of arroyo toads that may be found within the project area. However, based on implementation of the proposed avoidance and minimization measures, the small size of the project area, and our best professional judgment, we expect that few arroyo toads (i.e., no more than 20 adults and juveniles) will be present in the project area and be moved. Because any arroyo toads missed during the translocation effort and remaining in the project footprint are likely to be aestivating and difficult to detect, we expect that even fewer arroyo toads (i.e., no more than 2) will be observed killed or injured during project implementation. Finally, because the project occurs over only 2 of the 518 acres of occupied habitat on CNF, the number of individuals impacted will be low and is not likely to result in an appreciable reduction in the reproduction, numbers, or distribution of the San Juan Creek arroyo toad population or the species as a whole.

Habitat Loss

Habitat loss is not expected to harm the arroyo toad. Habitat loss will occur on a small scale compared to the habitat available in San Juan Creek and will primarily be temporary. Some limited stream stabilization will be maintained to continue to protect existing infrastructure, such as State Route 74, but new permanent loss in the function of habitat should not occur. In addition, the removal of rock dams could improve habitat conditions for the arroyo toad by restoring shallow areas for breeding and minimizing deeper pools that can support nonnative predators. Thus, the habitat loss associated with the project is insignificant.

Indirect Effects

Water Quality

As a result of project demolition activities, pollutants and sediment could enter and degrade offsite aquatic habitat. However, the potential for this type of water quality degradation to affect the arroyo toad as a result of project activities is discountable due to the scale of project activities, implementation of project activities outside the breeding season, and use of measures to minimize potential for sedimentation or pollutants.

Nonnative Plant Species

Nonnative plant species could be introduced by vehicles and ground disturbance associated with the project. Nonnative plant species such as tamarisk (*Tamarix* species) and giant reed (*Arundo donax*) can stabilize stream terraces and deepen channels, making habitat unsuitable for arroyo toads (Service 1999). White sweet clover (*Melilotus alba*) and iceplant (*Mesembryanthemum* species) can result in the loss of arroyo toad upland habitat by covering stream terraces and creating densely vegetated areas that arroyo toads cannot move through. However, due to the short term nature of the project, the limited ground disturbance, and small area of project activities, the potential for nonnative plant introductions is discountable.

Fish/Nonnative Species Predation

This project may enhance fish passage for steelhead in San Juan Creek watershed. Steelhead may prey on arroyo toad tadpoles. Many of the *Anaxyrus* genus do not appear to be palatable to steelhead (ICF Jones & Stokes 2010), but specific information regarding steelhead predation on arroyo toads is limited. Sweet (Sweet 1992) did not observe predation on arroyo toads despite presenting tadpoles to rainbow trout. Also, though steelhead historically coexisted with arroyo toad in the San Juan Creek watershed and in other areas, they are mostly separated by habitat types. Arroyo toads tend to use shallower areas of stream systems than steelhead and can use areas that seasonally dry.

Finally, the removal of rock dams could minimize predation by reducing or eliminating deeper pools that could support nonnative predators such as African clawed frogs, bullfrogs, red swamp crayfish, and mosquitofish, which are known to occur in the action area. These nonnative species pose a substantial predation risk to arroyo toads, so the long-term effect of the project on arroyo toad predation pressure is likely to be beneficial. In addition, the removal of rock dams could improve habitat for the arroyo toad by restoring shallow breeding pools preferred by arroyo toad.

Effect on Recovery

The proposed project does not conflict with the recovery actions or goals described in the recovery plan for the arroyo toad (Service 1999). No permanent habitat loss is expected, and the potential for mortality to arroyo toads should be minimized by the proposed conservation measures. In addition, the project area includes a small area of potential impacts compared to the range of the arroyo toad and within San Juan Creek on the CNF. As discussed above, the project may improve habitat conditions for this species.

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. We are unaware of any non-Federal actions affecting listed species that are reasonably certain to occur in the action area considered by this opinion.

CONCLUSION

After reviewing the current status of the species, the environmental baseline for the action area, effects of the proposed action, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the arroyo toad. Our conclusion is based on the following:

1. The project affects a small amount of habitat compared to the range of the arroyo toad and within San Juan Creek on CNF, and any adverse impacts to habitat would be temporary and/or insignificant.
2. The project includes measures to minimize mortality of adult and juvenile arroyo toads and to avoid indirect effects. Impacts from dam removal activities to other life stages are not anticipated; thus, the number of individuals impacted is anticipated to be low and is not likely to result in an appreciable reduction in the reproduction, numbers, or distribution of the arroyo toad in San Juan Creek or rangewide.
3. The removal of rock dams should help minimize predation on arroyo toads by nonnative species by reducing or eliminating deep pools.
4. Due to the limited potential for effects and the small area of the project, the project will not affect the ability of the arroyo toad to recover. The project is anticipated to benefit this species by restoring shallow pools it prefers.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation 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 attempt to engage in any such conduct. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Harass is defined 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 7(o)(2) of the Act, 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

Quantifying the precise number of arroyo toads that may be incidentally taken is difficult because the number of arroyo toads in a particular location fluctuates from year to year and burrowing behavior makes the detection of individuals and project-related mortality difficult. However, we have estimated levels of take based on the size of the project area and our best professional judgment. If the amount or extent of incidental take is exceeded, it will trigger reinitiation of consultation.

Incidental take of the arroyo toad is exempted for the CNF as follows:

- Death or injury of 2 adult or juvenile arroyo toads from crushing or trampling and the capture and handling of 20 arroyo toads during project activities. The amount or extent

of incidental take will be exceeded if more than 2 arroyo toads are found dead as a result of the project or more than 20 arroyo toads are captured and handled.

EFFECT OF THE TAKE

In this biological opinion, we determined that the level of anticipated take is not likely to result in jeopardy to the arroyo toad.

REASONABLE AND PRUDENT MEASURE

The CNF will implement conservation measures as part of the proposed action to minimize the incidental take of arroyo toads. In addition, the following reasonable and prudent measure is necessary to monitor and report the effects of incidental take on arroyo toads.

- The CNF will monitor and report on incidental take of arroyo toads associated with the proposed action.

TERM AND CONDITION

To be exempt from the prohibitions of section 9 of the Act, the CNF must comply with the following term and condition, which implements the reasonable and prudent measure described above and outlines reporting and monitoring requirements. Terms and conditions are non-discretionary.

- In the written report under conservation measure 7, the CNF will also report on any arroyo toads found dead or injured due to project activities. The CNF also will provide the CFWO a written report within 3 days of observing death or injury of arroyo toads potentially associated with project implementation. This report will include the date, time, and location of the observation. The purpose of this reporting is to ensure that the project does not exceed estimated take levels.

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, help implement recovery plans, or to develop information. We have no additional conservation recommendations beyond those recommendations provided in previous biological opinions for CNF.

REINITIATION NOTICE

This concludes formal consultation on the proposed action outlined in the initiation request. 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 proposed 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 listed species or critical habitat that was not considered in this opinion; or 4) a species is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact Jesse Bennett of this office at 760-431-9440, extension 305.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'S' followed by a horizontal line that loops back under the 'S'.

Scott A. Sobiech
Acting Field Supervisor

LITERATURE CITED

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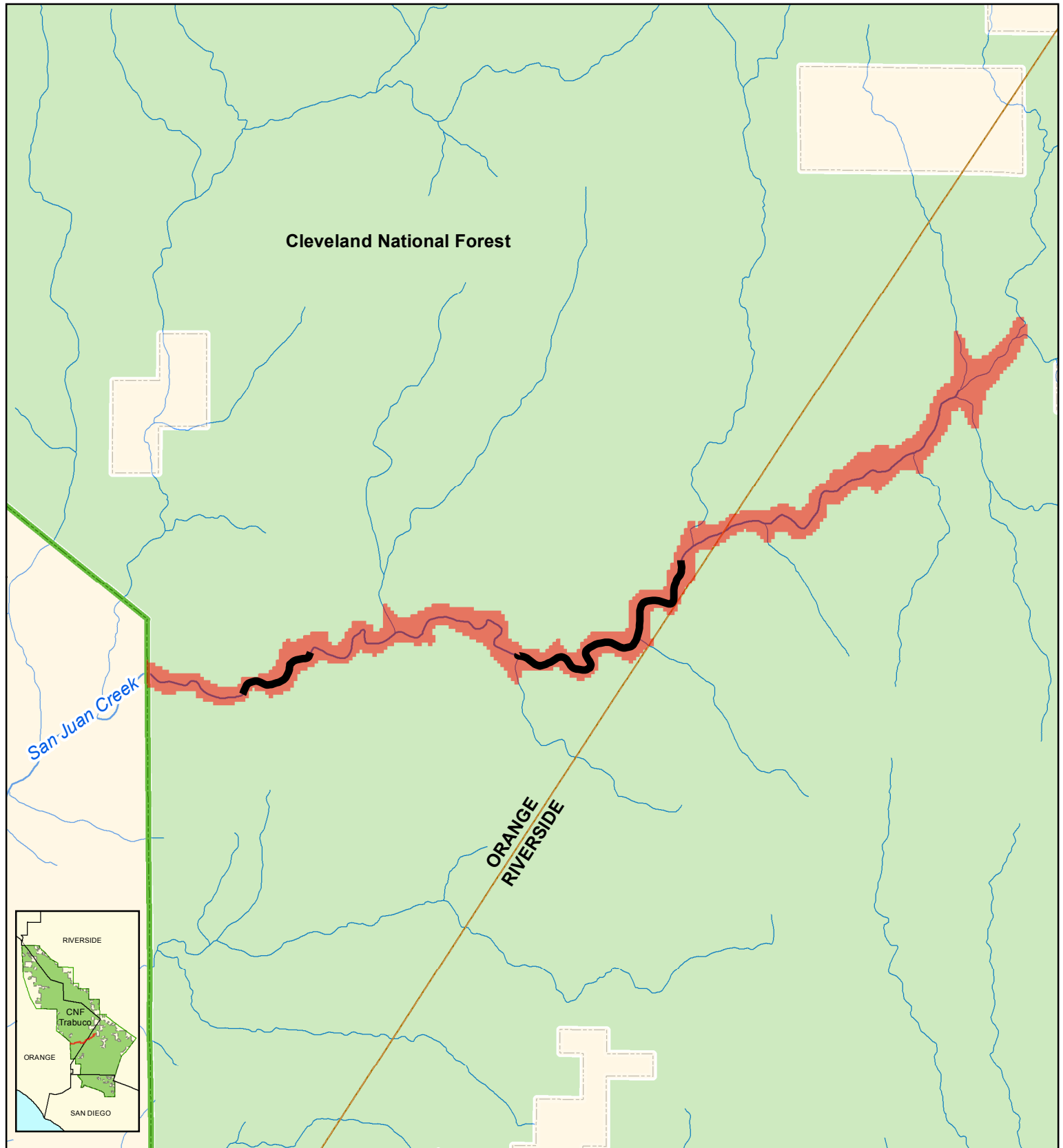


U.S. Fish & Wildlife Service

Carlsbad Fish and Wildlife Office

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Dam Removal Area and Arroyo Toad Occupied
Habitat in San Juan Creek



PRODUCED BY GIS SERVICES
CARLSBAD FIELD OFFICE
GIS CONTACT: ED TURNER
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MAP DATE: 10/31/13
DATA SOURCE: USFS
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Legend

- San Juan Creek Dam Removal Area
- Arroyo Toad Occupied Habitat
- US Forest Service Lands
- US Forest Service Administrative Boundary