

50/23  
108  
155

Scanned / logged



# United States Department of the Interior

U.S. Fish and Wildlife Service  
Arizona Ecological Services Field Office  
2321 West Royal Palm Road, Suite 103  
Phoenix, Arizona 85021-4951  
Telephone: (602) 242-0210 Fax: (602) 242-2513



In Reply Refer to:

AESO/SE  
22410-2009-TA-0319

DAPA

December 17, 2009

RECEIVED

DEC 22 2009

CHIEF PATROL AGENT  
TUCSON, ARIZONA

Mr. Robert W. Gilbert, Chief Patrol Agent  
U.S. Customs and Border Protection  
2430 South Swan Road  
Tucson, Arizona 85711

Dear Chief Gilbert:

Per recent discussions among Bill Radke, Manager, San Bernardino and Leslie Canyon National Wildlife Refuges (NWRs), my staff, and your agents, this letter seeks to address the effects of specific Border Patrol (OBP) operations on listed species that occur on and adjacent to the San Bernardino NWR in southeastern Arizona. We believe the steps outlined below will serve to minimize effects to listed species and provide Endangered Species Act (ESA) coverage to your activities, without compromising the important work you are doing in the area.

### Affected Resources

San Bernardino NWR was established to protect threatened and endangered fish species, including the Yaqui topminnow, Yaqui chub, Yaqui catfish, and beautiful shiner. Black Draw is one of the few locations in which these fish occur in the United States. The endangered Huachuca water umbel also occurs in Black Draw, and the threatened Chiricahua leopard frog occurs within the drainage. **Critical habitat has been designated on San Bernardino NWR for the fish species mentioned above except the Yaqui topminnow.** As with most drainages in Arizona, significant flood events can have a profound influence on streams and their inhabitants, particularly when stream morphology is altered and if activities near the streams create new sediment sources.

### Environmental Compliance Context

**Federal agencies are mandated to comply with a variety of land use laws, including the National Environmental Policy Act (NEPA) and ESA, among others.** The Fish and Wildlife Service is the lead Federal agency for administration of the ESA in Arizona, and as such, we have been working with Federal, State, and private agencies and entities in southeastern Arizona for many years to achieve compliance with that law, which both insulates those entities and agencies from legal liability while promoting conservation of threatened and endangered species and their



habitats. All Federal agencies must consult with the Fish and Wildlife Service on actions that may affect federally listed threatened or endangered species, pursuant to section 7(a)(2) of the ESA. For instance, in the San Bernardino Valley, we have completed section 7 consultations with the Bureau of Land Management on livestock grazing activities and a variety of other BLM actions. All activities at San Bernardino and Leslie Canyon NWRs and all activities funded, authorized, or carried out by the Forest Service on lands in the Peloncillo Mountains and other areas of the Coronado National Forest have also undergone section 7 consultation. As well, we have worked with private landowners in the valley on ESA compliance and species conservation through Safe Harbor Agreements and Habitat Conservation Plans. Under the authority of section 102 of the REAL ID Act, the Secretary of Homeland Security waived a variety of legal requirements, including NEPA and the ESA, in order to expeditiously construct barriers and roads at the international border. However, there is no authority under the Real ID Act to waive OBP operations from environmental laws, and to date, those operations in the San Bernardino Valley and elsewhere in the Tucson Sector have yet to be evaluated under the requirements of section 7(a)(2) of the ESA.

#### Border Patrol Activities

A border vehicle fence and road constructed on the Refuge in 2008, which were covered by a Real ID Act section 102 waiver, occupy the border through the San Bernardino Valley, including the San Bernardino NWR. Based on concerns expressed by Refuge Manager Radke, on June 1 and 2, 2009, the Corps of Engineers, working on behalf of Customs and Border Protection, removed the dirt fill and inadequately sized culvert that were placed in Black Draw as part of constructing the border road. The culvert and fill were removed to preclude further damage to Black Draw from erosion and siltation. We have been informed by Dave Guzewich of LMI that a "railroad car bridge" will be installed over Black Draw in 2010. Further, on June 2, 2009, temporary Jersey barriers were delivered to the site to preclude vehicles from traversing Black Draw until the bridge is in place. We commend OBP and the Corps of Engineers for responding to our concerns in a timely manner.

However, issues remain, and we seek your assistance in resolving them as quickly as possible in order to prevent the significant, and perhaps irreversible, environmental damage we believe is imminent. Specifically, we are concerned with operating vehicles off of established roadways or across wetlands and flowing streams, road dragging, and other activities that can accelerate erosion and mobilize fragile hydric soils characteristic of the San Bernardino NWR. All of these impacts will negatively influence the threatened and endangered species and their recovery on the refuge.

#### Effects of Border Patrol activities on Threatened and Endangered Species

Operations that may adversely affect listed species include those that would result in eliminating vegetation, altering natural water flow, reducing water absorption and infiltration, impacting aquifer recharge capacity, impacting wetlands or uplands with petroleum products or other pollutants, and/or increasing siltation within perennial and seasonal streams or washes. A variety of CBP activities are of potential concern to protection of listed fish and other aquatic organisms in the San Bernardino Valley. Some of these CBP activities include: road dragging,



enlarging/upgrading existing roads or two-tracks, new roads initiated through off-road activities, increased vehicle speeds resulting from upgrading roadways, and vegetation clearing. Some of the possible disturbances to listed species from these CBP activities could include soil disturbance, vegetation disturbance, noise disturbance, light disturbance, chemical application, collisions, air quality disturbance, water quality disturbance, increased vehicle traffic, and increased pedestrian traffic. Vehicle use, especially off of established roads, but also dragging of roads increases the potential for soil particles to become airborne during dry periods (affecting air quality, vegetation transpiration, and pollination) and increasing siltation of streams and other wetlands during precipitation events (affecting oxygen availability, gill function, and reproduction of listed fish species).

The biggest issue is erosional and sedimentation problems in drainages, particularly Black Draw and Astin Spring, that are likely to adversely affect listed fish and critical habitat. Road dragging loosens surface material, which then is mobilized during precipitation events, washing sediments into these drainages where fishes and their habitats are adversely affected. Yaqui topminnow and Yaqui chub (both listed as endangered) occur in Black Draw and the Astin Spring drainage within 100 yards of Geronimo Trail in areas dragged by OBP, and critical habitat occurs just downstream of Geronimo Trail in Black Draw. Sedimentation from road dragging also occurs in Hay Hollow, but the distance from Geronimo Trail to where fish habitat occurs is great enough to likely render those effects insignificant. Currently, the border road is not dragged through San Bernardino NWR; however, OBP is anticipating dragging the shoulder of the border road in the future. Additional effects are likely to occur to fishes and fish habitat from this activity.

Refuge Manager Bill Radke has met with OBP agents and identified and discussed specific accelerated erosion and siltation issues at Astin Draw adjacent to Geronimo Trail Road and at Black Draw adjacent to the border road resulting from road dragging and/or new roads. He also identified and discussed with OBP representatives vegetation changes and water flow changes along the border road resulting from clearing and initiating the new road. The impacts of these activities adversely affect listed species and their habitats in Astin Spring and in Black Draw and indicate a need for ESA section 7 consultation.

In regard to evaluating the effects of your activities, action agencies and the Fish and Wildlife Service are mandated to use the best scientific and commercial data available (section 7(c)(1), 50 CFR 402.14(d), 50 CFR 402.14(g)(8)). In concluding that adverse effects are likely occurring from OBP activities, we have depended upon the observations of Refuge Manager Radke, as described above, but also studies and information from other areas and other surrogate species, as no specific quantitative studies have been conducted in the San Bernardino Valley on the effects of OBP activities on the listed species or critical habitats in question. However, in our best scientific judgment, we believe that many studies on effects of sedimentation on fishes, and erosion and sedimentation analyses of road construction and maintenance, are broadly applicable to OBP activities in the San Bernardino Valley and, combined with on-the-ground informal assessments of effects of your actions, constitute the best scientific and commercial data available, consistent with the ESA and its implementing regulations as cited above.

We recently provided Wayne Lackner with some information and references useful in assessing potential effects of road dragging and maintenance on fishes and their habitats. We have appended that information to this letter. One of the species addressed in that appendix, the Gila



chub, is closely related and is a very good surrogate for the Yaqui chub, which occurs in the Black Draw and Astin Spring drainages within 100 yards of Geronimo Trail.

#### Endangered Species Act Compliance Requirements

Our October 23, 2009, letter from the Fish and Wildlife Service's Regional Director to you outlines operational procedures for accessing San Bernardino NWR and for completing section 7 consultation with us on 'emergency' operations necessary to remedy life-threatening circumstances. However, that process only addresses those specific actions and not all OBP operations in the San Bernardino Valley, which include road dragging along Geronimo Trail, patrolling, interdiction, and other actions. The emergency consultation process also is an inefficient way to address consultation, which requires a separate consultation for each emergency action. We would prefer to consult programmatically and evaluate all of your proposed activities in one consultation.

#### Potential Resolution

We recommend that you promptly initiate and complete programmatic section 7 consultation for your activities in the San Bernardino Valley. Through section 7 consultation, we can exempt certain activities from section 9 prohibitions of take through an incidental take statement, provided that the take does not jeopardize the continued existence of the listed species and the activities do not adversely modify or destroy their critical habitats.

In the interim, before consultation is completed, we recommend you take actions to ensure your activities have minimal effects to listed species and their habitats. The entire 60-foot Roosevelt easement was cleared of vegetation through San Bernardino NWR during construction of the border vehicle barrier. Although covered by the section 102 waiver, we recommend that the portion of the easement not needed for operations be allowed to revegetate to native grasses, which would reduce erosion and sedimentation problems associated with the clearing as watershed function improves. We further recommend that no dragging occur within 25 yards of the Black Draw and Hay Hollow crossings on the border road, nor within 25 yards of the Black Draw and Astin Spring drainages on Geronimo Trail. This measure would greatly reduce the potential for sedimentation into these drainages.

In summary, we look forward to working with you to ensure that all OBP activities minimize the effects to listed species and are in compliance with the ESA. Our preference is that road dragging in the San Bernardino Valley be permanently discontinued but, should you decide that this portion of your operation is crucial to its success, we stand ready to help complete consultation as quickly as possible.



Mr. Robert Gilbert, Chief Patrol Agent

Should you require further assistance or if you have any questions, please contact me at the letterhead phone number (x244) or have your staff contact Sherry Barrett at (520) 670-6150 (x223). Thank you for your continued efforts to conserve endangered species.

Sincerely,



Steven L. Spangle  
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)  
(Attn: Susan Jacobsen)

Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ  
Refuge Manager, San Bernardino National Wildlife Refuge, Douglas, AZ



## APPENDIX

### SUMMARIES OF ANALYSES OF SEDIMENTATION AND EROSION EFFECTS FROM ROADS ON FISHES

#### Gila Box National Riparian Conservation Area Plan, Biological Opinion:

Adverse effects of stream sedimentation to fish and fish habitat have been extensively documented (Murphy *et al.* 1981, Wood *et al.* 1990, Newcombe and MacDonald 1991, Barrett 1992, Megahan *et al.* 1992). Excessive sedimentation may cause channel changes that are adverse to the Gila chub. Excessive sediment may fill backwaters and deep pools used by Gila chub, and sediment deposition in the main channel may cause a tendency toward stream braiding, thus reducing adult chub habitat, as well. Excessive sediment may smother invertebrates, reducing chub food production and availability, and related turbidity may reduce the chub's ability to see and capture food. Fish fry and eggs could also be killed or injured if vehicles are driven through stream segments where these life stages occur.

Barrett, J.C. 1992. Turbidity-induced changes in reactive distance of rainbow trout. Transactions of the American Fisheries Society 121:437-443.

Megahan, W.F., J.P. Potyondy, and K.A. Seyedbagheri. 1992. Best management practices and cumulative effects from sedimentation in the South Fork Salmon River: an Idaho case study. Pp. 401-414 In: Watershed Management. Naiman, R.J., Ed. Springer-Verlag, New York, N.Y.

Murphy, M.L., C.P. Hawkins, and N.H. Anderson. 1981. Effects of canopy modification and accumulated sediment on stream communities. Transactions of the American Fisheries Society 110(4):469-478.

Newcombe, C.P. and D.D. MacDonald. 1991. Effects of suspended sediments on aquatic ecosystems. North American Journal of Fisheries Management 11:72-82.

Wood, D.J., S.G. Fisher, and N.B. Grimm. 1990. Pools in desert streams: limnology and response to disturbance. Journal of the Arizona-Nevada Academy of Science 26:171-182.

#### Safford/Tucson BLM Grazing Program BO

Adult and juvenile spikédace are not inordinately sensitive to moderate amounts of sediment. However, excessive sedimentation may cause channel changes that are adverse to the species. Excessive sediment may fill backwaters that provide larval and juvenile spikédace habitat, and sediment deposition in the main channel may cause a tendency toward stream braiding, thus reducing adult spikédace habitat. Excessive sediment may smother invertebrates, reducing spikédace food production and availability and related turbidity may reduce spikédace ability to see and capture food. Spikédace are believed to use gravel/cobble/coarse sand substrates for spawning (Propst *et al.* 1986, Minckley *et al.* 1991a). Excessive sediment covers those habitats and reduces reproductive success.



Minckley, W.L., P.C. Marsh, J.E. Brooks, J.E. Johnson, and B.L. Jensen. 1991a. Management toward recovery of the razorback sucker. Pp. 303-357. In: Battle against extinction; Native fish management in the American west. Minckley, W.L. and J.E. Deacon, Eds. University of Arizona Press, Tucson, AZ.

Propst, D.L., K.R. Bestgen, and C.W. Painter. 1986. Distribution, status, biology, and conservation of the spikedace (*Meda fulgida*) in New Mexico. Ed. 15. U.S. Fish and Wildlife Service, Endangered Species Reports, 93 pp.

Bonita Creek Fish Barrier. Repatriation, BLM management, and operation of City of Safford facilities, Biological Opinion

Roads and road maintenance accelerate soil erosional rates and modify natural drainage networks, which degrade stream habitat for aquatic species. Erosion from roads often results in sedimentation of streams and declines in spawning habitat when too high a proportion of fine sediment is deposited. Fine sediments may clog spawning gravels and reduce the availability of oxygen to eggs and increase embryo mortality. Sedimentation also has negative effects on macroinvertebrates (Waters 1995), the primary food supply of Gila chub and many other native fish species. Excess sedimentation could likely cover algae-encrusted rocks and affect feeding habits of macroinvertebrates and native fish.

Road construction, maintenance, and repair make roads more traversable, and could likely result in increased visitor traffic through Bonita Creek, although BLM is committed to minimizing road use through the action area. Previous consultations have addressed access and roads in lower Bonita Creek. Please refer to Biological Opinion, Gila Box Riparian National Conservation Area Interdisciplinary Activity Plan, Graham County, Arizona (2-21-92-F-070, 02-21-92-F-0070-R2).

Waters, T. F. 1995. Sediment in streams: sources, biological effects, and control. American Fisheries Society Monograph 7.



Mr. Robert Gilbert, Chief Patrol Agent

8

Biological Opinion on Repair and Maintenance of a Road along the San Francisco River:

In addition to the direct mortalities, loach minnow would be adversely affected by habitat modification and destruction due to the presence, maintenance, and repair of the road. The adverse effects of roads on streams has been extensively documented. Roads and their construction and maintenance cause sediment input into streams, contribute to bank and channel instability and erosion, remove or reduce riparian vegetation, and compact bank soils and stream substrates (Dobyns, 1981; Brozka, 1982; Meehan, 1991; Young, 1994; Waters, 1995). Many indirect adverse effects are attributable to roads along streams, including increased pollution, increased recreational use, increased suburban development, increasing channelization, increased removal of large woody debris, and many others.

Because the stream provides habitat for the loach minnow, the adverse effects of the road on the river are also adverse effects to the loach minnow. The most direct of these effects would be through deposition of additional fine sediment into the river. This would occur as a result of the disturbance of riverbanks during the maintenance of the ascension and descension points on the seven crossings. Unless the improvements to the road from the proposed action result in increased use of the road, the sediment contributed by the presence and use of the road should

See

[http://www.fws.gov/southwest/es/arizona/Documents/Biol\\_Opin/96233\\_Rd\\_San Francisco River.pdf](http://www.fws.gov/southwest/es/arizona/Documents/Biol_Opin/96233_Rd_San_Francisco_River.pdf) for additional information and full citations.