

**United States Department of the Interior
U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021
Telephone: (602) 242-0210 FAX: (602) 242-2513**

AESO/SE
2-21-96-F-161

March 21, 1997

Ms. Cindy Lester
Arizona-Nevada Area Office
U.S. Army Corps of Engineers
3636 North Central Avenue Suite 760
Phoenix, Arizona 85012-1936

Dear Ms. Lester:

The U.S. Fish and Wildlife Service has reviewed the information provided for the proposed issuance of a permit under section 404 of the Clean Water Act for the Blue Water Marina, Casino and Resort in La Paz County, Arizona. Your December 16, 1996 request for formal consultation was received on December 18, 1996. This document represents the Service's biological opinion on the effects of that action on the endangered razorback sucker (*Xyrauchen texanus*) and its designated critical habitat in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.).

This biological opinion is based on information provided in the February 1, 1996 biological assessment, the October 26, 1996 mitigation plan, the public notice for the section 404 permit, other letters between the Corps of Engineers and the Service, meetings and telephone calls with the Corps and project proponents, field investigations, data in our files and other sources of information. A complete administrative record of this consultation is on file in this office.

Consultation history

The Corps held a pre-application meeting for the proposed permit on September 11, 1995 and it was determined that section 7 consultation would be necessary due to the presence of the razorback sucker and Yuma clapper rail (*Rallus longirostris yumanensis*) in the project area. The endangered bonytail chub (*Gila elegans*) was also included in the initial informal consultation although it has been extirpated from the project area. The proposed development is within the boundaries of designated critical habitat for the razorback sucker, in this case the Colorado River and its 100-year floodplain. On February 1, 1996, the Corps requested Service concurrence with findings of no effect to the razorback sucker and bonytail chub, may affect but not likely to adversely affect to the Yuma clapper rail, and not likely to adversely modify critical habitat for the razorback sucker. The Service responded in a letter dated February 29, 1996 concurring with the findings for the bonytail chub and Yuma clapper rail but not with the findings for the razorback sucker and its critical habitat. The Service requested additional information on the project site. That information was provided by the Corps and the applicant in a letter dated June 4, 1996. Telephone discussions of the proposed action were held on June 26, 1996 between the Service and the Corps and the Service and the applicant's representative. The Service informed the Corps on June 27, 1996 that we still could not concur with the finding for the razorback sucker and designated critical habitat. On July 9, 1996, the Service met with the Corps and the

applicant to address outstanding issues relating to the project. Subsequent to the meeting, the applicant developed a mitigation plan to address effects to razorback sucker and other important resources in the area of the proposed development. This plan was transmitted to the Service by the Corps with the request for formal consultation.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Corps proposes to issue a permit under section 404 of the Clean Water Act for the development of a riverside resort on the eastern shore of the Colorado River on lands owned by the Colorado River Indian Tribes (CRIT). The CRIT would own and operate the resort. At completion, the resort would cover 73 acres and have a hotel, casino, RV park, shops and other recreational attractions, a swimming beach, launch ramp and a 165 slip full-service marina. Most of the slips would be for use of hotel and RV park guests and the remainder for visitors arriving to use resort facilities or the casino. The marina would be created by dredging out behind the existing beach to create a sheltered lagoon with a protective berm between it and the river. No facilities would intrude into the river channel.

As part of the mitigation necessary for the issuance of the 404 permit, the CRIT developed a mitigation plan that includes four items to address potential adverse effects to razorback suckers and important wetland habitats. This mitigation plan may be considered part of the proposed action for the purposes of consultation since implementation of the plan is required by the 404 permit.

The four items to mitigate for effects to razorback sucker are:

1. Provide a one to two acre grow-out pond/holding facility for threatened and endangered fish species at the north end of No Name Lake.
2. Provide eighteen acres for fish rearing ponds and support facilities (the Achii Hanyo Project) as a production and grow-out facility for threatened and endangered fish species.
3. Minimize the impact of river-related recreational activities to Moovalya Lake and associated wetlands.
4. Develop an educational program for use at Blue Water Resort that discusses biological resources in the area, including threatened and endangered fishes and wetland resources.

Details of these items are included in the mitigation plan provided to the Service for this consultation and are incorporated by reference. The Achii Hanyo Project is a joint effort of the CRIT and the Service and is more fully described in the lease agreement. The Achii Hanyo Project can only be used as mitigation for the Blue Water project unless additional resources are provided to it by the CRIT. The CRIT owns all the land involved in the mitigation plan, but does not own or manage the Colorado River. The CRIT has working relationships with the agencies that have controls under various legal and regulatory authorities over activities on the river.

Description of the action area

Because of the nature of the proposed action, the effects of the action will be felt beyond the footprint of the resort itself. Boats launched from the resort will be able to utilize the entire reach of the Colorado River between Parker and Headgate Rock Dams. Boat traffic initiating in

upstream areas could also come and utilize the resort and some of its facilities. In addition, the resort facility will attract non-boating users from out of the immediate area, some of which already use the Colorado River for other types of recreation, others which do not. Land-based visitors to the resort's casino are not constrained to stay at the resort, and can utilize hotels, RV parks or other commercial and recreational opportunities in the Parker Strip. The Service believes that based on the types and potential uses, that the area of the proposed action be defined as the Colorado River corridor between Parker Dam and Headgate Rock Dam. These two structures form barriers to boat traffic moving into or out of the area, although boats can be retrieved and relaunched above Parker Dam in Lake Havasu and below Headgate Rock Dam into the Colorado River. It is also understood that land-based visitors can reach other areas along the river out of the defined project area, such as Lake Havasu City, Blythe or Laughlin.

Land ownership with the project area is varied, with CRIT, Bureau of Land Management, State of Arizona, county lands in Arizona and California, and private lands being present. The Colorado River through the project area is generally narrow with rock outcrops bordering areas of the channel. The floodplain of the river is constrained by this rocky topography. Floodplain features such as backwaters and marshes are not common in the project area and those that are present are in the more downstream portions. Alluvial shorelines are also more common in the downstream portions of the area.

Within the specific project area (Parker Dam to Headgate Rock Dam), flows in the Colorado River are dictated by releases from Parker Dam and are controlled by water orders from downstream users and to a lesser extent by power production. Parker Dam does not have a cold tailrace, but the water is clear and most sediments have been transported downstream. Water levels can vary as much as four feet with releases between approximately 4,000 to 18,000 cubic feet per second in the spring and summer (USBR 1996). Fall and winter releases also vary, but the maximum flows are less so the magnitude of change is reduced. These fluctuations cause erosion and deposition of sediments, exposure of gravel and sand bars in the channel, and reduce the water levels in adjacent wetlands and backwaters. Although it does not have a storage reservoir, the presence of Headgate Rock Dam ameliorates some degree of the fluctuations in the lower end of the project area. Water backed up behind the dam is also lower in velocity than in upstream reaches.

Recreational uses dominate the project area. Shoreline development in the project area is extensive, particularly on the Arizona side. In addition to public parks and commercial RV or trailer parks with beaches and boat launch areas, homes and businesses are built to the water's edge in some places. Boat docks and some bank stabilization are associated with such developments. The entire reach of the river between the two dams is heavily utilized by boats and personal watercraft. Wake damage to un-modified shorelines and shallows occurs at some level, influenced to some extent by water level fluctuations. The amount of undeveloped shoreline in the project area is limited both because of natural topography and existing human developments.

Headgate Rock Dam is located less than a mile downstream of the proposed action. As noted earlier, presence of the dam creates an area of quieter water above it. The main irrigation canal for the CRIT is located on the Arizona side at the dam. Within and immediately adjacent to the footprint of the proposed project, the alluvial shoreline that would be disturbed for the proposed action has been used for many years as a formal and informal recreation site. An existing RV park, beach, boat race pit area, restaurant and marina front on the river with boat storage facilities, an permanent RV/trailer park and gas station on the east side of the access road that parallels the river. Some of these facilities are no longer in operation. Personal watercraft and other types of powerboat races are held at the site each year. On the western shore of the

Colorado River opposite from the specific project site are a series of wetlands and ponds (Moovalya Lake and associated wetlands). The Moovalya Lake area is used by recreationists for fishing.

STATUS OF THE SPECIES (RANGE-WIDE)

Razorback sucker

Listing History

The razorback sucker was first proposed for listing under the Act on April 24, 1978, as a threatened species. The proposed rule was withdrawn on May 27, 1980 due to changes to the listing process included in the 1978 amendments to the Act; the amendments required all listings to be completed within two years of publication of the proposed rule and that deadline was not met. The 1978 amendments also required that critical habitat be included in the listing of most species; however, no critical habitat package was developed for the proposed listing of the species.

In March, 1989, the Service was petitioned by a consortium of environmental groups to list the razorback sucker as an endangered species. The Service made a positive finding on the petition in June, 1989, that was published in the Federal Register on August 15, 1989. The finding stated that a status review was in progress and provided for submission of additional information through December 15, 1989. The proposed rule to list the species as endangered was published on May 22, 1990, and the final rule was published on October 23, 1991. The effective date of the rule was November 22, 1991. Critical habitat was designated in 1994 and is discussed elsewhere in this section.

Species Description

The razorback sucker is the only representative of the genus *Xyrauchen* and was described from specimens taken from the "Colorado and New Rivers" (Abbott 1861) and Gila River (Kirsch 1889) in Arizona. This native sucker is distinguished from all others by the sharp edged, bony keel that rises abruptly behind the head. The body is robust with a short and deep caudal peduncle (Bestgen 1990). The razorback sucker may reach lengths of one meter and weigh five to six kilograms (Minckley 1973). Adult fish in Lake Mohave reached about half this maximum size and weight (Minckley 1983). Razorback suckers are long-lived fish, reaching the age of at least the mid-40's (McCarthy and Minckley 1987).

Life History

Life history information for the razorback sucker was recently summarized in the status review for the species (Bestgen 1990), in *Battle Against Extinction: Native Fish Management in the American West* (Minckley and Deacon 1991), and in the biological support document for critical habitat designation (USFWS 1993). The life history information presented in this biological opinion is primarily taken from these sources and is only a brief summary of the available information. For additional information, please consult these referenced documents or the other available literature.

The razorback sucker was once abundant in the Colorado River and its major tributaries throughout the Basin, occupying 3,500 miles of river in the United States and Mexico (USFWS 1993). Records from the late 1800's and early 1900's indicated the species was abundant in the lower Colorado and Gila River drainages (Kirsch 1889, Gilbert and Scofield 1898, Minckley

1983, Bestgen 1990).

Adult razorback suckers utilize most of the available riverine habitats, although there may be an avoidance of whitewater type habitats. Main channel habitats used tend to be low velocity ones such as pools, eddies, nearshore runs, and channels associated with sand or gravel bars (summarized in Bestgen 1990). Backwaters, oxbows, and sloughs were well-used habitat areas adjacent to the main channel; flooded bottomlands are important in the spring and early summer (summarized in Bestgen 1990). Razorback suckers may be somewhat sedentary, however considerable movement over a year has been noted in several studies (USFWS 1993). Spawning migrations have been observed or inferred in several locales (Jordan 1891, Minckley 1973, Osmundson and Kaeding 1989, Bestgen 1990, Tyus and Karp 1990).

Spawning takes place in the late winter to early summer depending upon local water temperatures. Various studies have presented a range of water temperatures at which spawning occurs. In general, temperatures between 10° to 20° C are appropriate (summarized in Bestgen 1990). Spawning areas included gravel bars or rocky runs in the main channel (Tyus and Karp 1990), and flooded bottomlands (Osmundson and Kaeding 1989). There is an increased use of higher velocity waters in the spring, although this is countered by the movements into the warmer, shallower backwaters and inundated bottomlands in early summer (McAda and Wydoski 1980, Tyus and Karp 1989, Osmundson and Kaeding 1989).

Habitat needs of larval razorback suckers are not well known. Warm, shallow water appears to be important. Shallow shorelines, backwaters, inundated bottomlands and similar areas have been identified (Sigler and Miller 1963, Marsh and Minckley 1989, Tyus and Karp 1989, 1990, Minckley et al. 1991). For the first period of life, larval razorbacks are nocturnal and hide during the day. Diet during this period is mostly plankton (Marsh and Langhorst 1988, Papoulias 1988). Young fish grow fairly quickly with growth slowing once adult size is reached (McCarthy and Minckley 1987). Little is known of juvenile habitat preferences.

Population Dynamics

The razorback sucker is adapted to the widely fluctuating physical environment of the historic Colorado River. Adults can live 45-50 years, and once reaching maturity between two and seven years of age (Minckley 1983), apparently produce viable gametes even when quite old. The ability of razorback suckers to spawn in a variety of habitats, flows and over a long season are also survival adaptations. Given the vagaries of the historic Colorado River, successful recruitment likely varied tremendously from year to year even without catastrophic flood or drought. In the event of several consecutive years with little or no recruitment (due to either too much or too little water), the demographics of the population as a whole might shift, but future reproduction would not be compromised. Average fecundity recorded in studies ranged from 100,800 to 46,740 eggs per female (Bestgen 1990). With the long reproductive life and the fecundity of the species, it would be possible to quickly restore populations to former levels after a catastrophic loss.

Rangewide Present Status

The razorback sucker was listed as an endangered species due to widespread extirpation of populations and significant declines in remaining populations throughout the range of the species. The causes of these losses are changes to biological and physical features of the habitat. The effects of these changes to the razorback sucker has most clearly manifested themselves in the almost complete lack of natural recruitment to any population in the historic range of the species. As a result, most populations are composed of aging individuals and are becoming

smaller as the adults die off without replacement by young fish. The situation is severe enough that the Service has determined the razorback sucker to be in danger of extinction in the wild. This precarious status has a significant effect on the findings of biological opinions dealing with projects that may affect the razorback sucker.

As a consequence of jeopardy findings for water development issues in the Upper Colorado River Basin (Colorado, New Mexico, Utah, Wyoming), the Service and affected water users and developers initiated the Recovery Implementation Program for endangered big-river fish, including the razorback sucker. The intent of this program was to serve as a reasonable and prudent alternative that provided for the recovery of the species while water development continued. Although underway for several years, significant recovery results have not been achieved, thus while the "paper" status of the species is improved, the actual status has not significantly changed. No such program currently exists for the Lower Colorado River Basin, although the Multi-Species Conservation Program would attempt to develop a similar effort for the lower Colorado River. Efforts to establish self-sustaining populations of razorback sucker in the Gila, Salt and Verde Rivers in Arizona has not succeeded although efforts continue in the Verde River. Augmentation efforts along the lower Colorado River propose to replace the aging populations in Lakes Havasu and Mohave and the river below Parker Dam with young fish from protected-rearing site programs. This program will prevent the imminent extinction of the species in the wild, but does not ensure long term survival or recovery. Overall, the status of the razorback sucker continues to decline although short-term improvements in actual population size and age distribution are forestalling extinction in the wild.

Species' Response to a Proposed Action

It is very difficult to generalize about how the razorback sucker would respond to the varied actions that have taken place within its habitat. The Colorado River existing today is significantly different from that found historically. Dams, reservoirs, diversions, channelization, and shoreline developments have altered the pattern of habitats once available. The introduction of non-native fish species has added a further dimension to the overall effect to native fish habitats. The effect of these changes has been the loss of most razorback sucker populations. Whether these losses would have been as significant with just physical changes to the habitat is difficult to assess. The persistence of adult razorback suckers in the lower Colorado River shows they can survive in the physically and biologically altered habitats. However, although there is significant evidence of reproductive activity, there is little to no recruitment to the population, indicating that some element or elements in the altered habitats prevents survival of young fish.

Critical Habitat

Critical habitat is defined in the Act to include areas, whether occupied or not, that are essential to the conservation of the species. Conservation is defined in the Act as that needed to bring about the complete recovery of the species. Efforts to designate critical habitat began with the proposed rule to list of the razorback sucker in 1990.

The May 22, 1990 proposed rule did not contain a proposal to designate critical habitat. The final rule listing the razorback sucker as an endangered species stated that critical habitat was not determinable at the time of listing. This gave the Service an additional year to obtain further habitat information. On October 30, 1991, the Service received a notice of intent to sue from the Sierra Club Legal Defense Fund over failure to designate critical habitat at the time of listing. After review of additional information available, the Service concluded on December 6, 1991, that designation of critical habitat was both determinable and prudent. After a ruling that the

Service had violated the Act by not designating critical habitat with the listing of the species, the U.S. District Court in Denver, Colorado, ordered the Service to publish a proposed rule to designate critical habitat within 90 days of the Court's order.

The Service determined that since the habitats of the razorback sucker overlapped with those of the bonytail chub, Colorado squawfish (*Ptychocheilus lucius*) and humpback chub (*Gila cypha*), and the issues facing these species were very similar, that designating critical habitat for all four species would be appropriate. The proposed rule was published on January 29, 1993 and contained proposed critical habitat for the four listed native Colorado River fish. The final rule to designate critical habitat was published on March 21, 1994 with an effective date of April 20, 1994.

Critical habitat for the razorback sucker includes portions of the Colorado, Duchesne, Green, Gunnison, San Juan, White and Yampa Rivers in the Upper Basin and the Colorado, Gila, Salt and Verde Rivers in the Lower Basin. All critical habitat reaches were considered to be occupied at the time of designation. Within the project area, critical habitat consists of the Colorado River from Parker Dam to Headgate Rock Dam, including the 100-year floodplain. This is part of the Parker Dam to Imperial Dam reach of critical habitat.

The designation of critical habitat for the Colorado River fishes highlighted two important issues for these species.

(1) Specific problems with habitat have resulted in the extirpation of these species from most of their historic range. Areas considered for designation as critical habitat are evaluated against the constituent elements deemed essential to species conservation. The conservative definition of critical habitats includes only those areas undisturbed or unmodified, and therefore possessing all the constituent elements in the correct proportion, but this definition fails to address the existing situation of the Colorado River fishes. There is little aquatic habitat in the Colorado River Basin that has not been affected in some way by development activities. Thus the designated areas do not support all the constituent elements in the same way as an undisturbed system might.

(2) The rangewide status of these species has been greatly impacted. The immediate need to provide for the conservation of the razorback sucker is to prevent extinction in the wild. For that reason, any location that contained even a remnant population of razorback sucker was included in critical habitat designation. The management of such areas is crucial to ensuring that activities undertaken there do not adversely affect what is left of these populations.

Critical habitat determinations include analysis of those areas that may require special management considerations or protection. There is nothing in the regulations that states the areas must be pristine, only that they are essential to the conservation of the species. Post-designation management actions to improve the quality of the critical habitat to support the listed species is part of the survival and recovery processes.

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, and 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.

The environmental baseline for the razorback sucker in the lower Colorado River as a whole and within the smaller confines of the action area is consistent with the status of the species throughout its range. In the Upper Basin, most biological opinions that deal with, for example, changes to water flows, are jeopardy opinions because of the precarious status of the razorback sucker and the other big river fish species. The lower Colorado River is not and has not been for many years, a pristine system. At the time of this consultation, the aquatic and riparian habitats of the Colorado River have been changed by a variety of human activities that have occurred over the last 100 years. The status of the species in the lower Colorado River is no less precarious than in the Upper Basin and the lower Colorado River contains the largest remaining population of razorback suckers.

There have not been many completed section 7 consultations on Federal actions in the action area. The major Federal actions on the river mostly predate the ESA, however, it was in response to a major Federal action that the Service determined the environmental baseline that will be used for all future consultations. Past consultations on Coast Guard Marine Event Permits, Corps section 404 permits and similar limited activities have mostly been handled as informals, however, that may change in the future. It is important to consider that the effects of small, individual activities on the habitats and resources in the river may be limited, however, the effects of such actions can become significant over time as more actions are proposed and put into place. This gradual increase in effects can be as damaging as the effects of a single large action and eventually enhance or depress the environmental baseline.

Status of the species in the action area

The size of the population of razorback suckers in the Parker Strip above Headgate Rock Dam is unknown but based on available information, it is likely to be very small. This is, however, the only area on the lower Colorado River where a few sub-adult razorback suckers have been found that do not appear to have been released from one of the rearing pond operations but are the result of natural recruitment. Over the last several years, sub-adult razorback suckers have been found in the irrigation canals on the CRIT reservation when those canals are drawn down in the fall. The spawning area that produces these fish is not known, but must be upstream of Headgate Rock Dam since the main canal originates above the dam. What spawning habitat for razorback suckers remains in the main channel in the action area is likely adversely affected by water level fluctuations coming from Parker Dam releases. The area immediately above Headgate Rock Dam is somewhat more stable as far as water level changes, and contains the only significant backwater/wetland area in the action area and the canal system originates there. The probable importance of this lower reach of the action area to endangered fish cannot be understated.

EFFECTS OF THE ACTION

Facilities constructed as part of the proposed action would be located on upland areas as well as along the river shoreline. The casino, hotel and other land-based facilities could be constructed without a section 404 permit if washes were also avoided. However, CRIT has maintained that the water-based features are an integral part of the overall project. It is thus appropriate to consider the effects of constructing and operating the entire resort in this analysis.

Direct effects of the proposed action involve the removal of material from the existing beach to create the cove for the marina, placement of materials (gravels) to create the swimming beach and development of a concrete launch ramp. The development of the marina increases the water surface area of the river, and creates an additional 4.5 acre area of quiet water that may be occupied by fish, especially non-native species such as carp (*Cyprinus carpio*) which are commonly observed in similar areas. Since the immediate project area is adjacent to the existing

wetlands and the ponded area behind Headgate Rock Dam, this additional area lacks the significance it might have if constructed in other portions of the action area. Creation of the marina cove would not disturb existing spawning or nursery habitat for razorback suckers, including the CRIT canal system. The potential increase in non-native fish resulting from the marina cove could have some effect on native and non-native fish populations that access the canal system.

The value of the marina cove as habitat for any fish, native or non-native, could be limited due to contaminants such as oil and gasoline and organic wastes. Other sources of contaminants would be via runoff off parking lots and other hard surfaces that would drain into the river. The existing boat use of the area is in the main channel, where greater flows and dilution move contaminants through the area and downstream. Reduced circulation within the marina area may result in local increases to contaminants. Whether there is a measurable effect to razorback suckers in the project area from these increases is unknown, but within the lower Colorado River as a whole, increases in contaminants may become an issue in the future.

The existing beach area is well used by recreationists and there is considerable use of boats and personal watercraft in the area both by individuals and as part of organized races. Wake damage to shorelines in Moovalya Lake and the associated wetlands from this existing use has occurred. Some of this existing use would be displaced by the construction and operation of the proposed action. Where these recreationists would disperse to is not known. It is not known if the boat races would relocate or continue to be accommodated at the facility. Other sites for informal recreation will continue to exist in proximity to the resort. The presence of the resort facilities may encourage boaters from upriver to come downstream to use the marina facilities such as the gas dock, or to visit the casino or restaurants. Boats moored at the marina may also contribute to increased traffic on the river. The provision for a "no wake" zone in front of the resort to protect Moovalya Lake and the associated wetlands would negate the effects of any boating increase as far as wake damage is concerned, and would reduce the level of existing wakes. Personal watercraft and other noisy, high-speed craft would no longer be able to access the wetland areas at high speed, reducing disturbances to fish and wildlife in those areas as well as reducing wake damage. While this may enhance the aquatic habitat values of the area, it also makes the area more desirable for less intrusive recreation such as fishing. The Moovalya Lake area is presently used by fishermen and this use would be expected to continue and may increase.

The creation of additional quiet water habitats and elimination of noise disturbances from existing habitats may result in some net increase in non-native fish, although this may be offset to some degree by an increase in fishing pressures. The population of razorback suckers in the project area is very small, yet, some reproduction and possibly recruitment do occur. The small size of the razorback population makes it more vulnerable to increases in populations of non-native competitors and predators due to numbers alone. To offset any of these effects to razorback sucker reproduction and recruitment from the proposed action, the CRIT have included in their mitigation plan two areas to be developed for the purpose of providing additional sub-adult fish for stocking in the lower Colorado River. One is at No Name Lake and the other at the Achii Hanyo Project. Sub-adult fish from these facilities would be stocked into Colorado River waters. The Service has an existing agreement with CRIT not to stock endangered fish in areas within the reservation boundaries, and that agreement will continue to be observed.

The importance of the Achii Hanyo Project to endangered fish recovery on the lower Colorado River is considerable. Present augmentation efforts are hampered by a lack of space in which to raise razorback suckers to releasable size. There are no other facilities near to the Colorado River that can provide the facilities available at Achii Hanyo. This increases the value of what the CRIT has made available through the project over the apparent value. In addition, the CRIT

has added significantly to the value of the Achii Hanyo Project merely by including it in the mitigation plan for the permit. The lease arrangement between CRIT and the Service is for five years and is renewable. However, the CRIT was not under any obligation to renew. Since mitigation for the permit must be maintained in perpetuity, the uncertainty over the future of the Achii Hanyo Project has been reduced. Finally, the Service and CRIT signed, in good faith, the lease agreement. It is obvious that there are areas of ambiguity in that agreement. The Service has reviewed the development of the agreement and believes the position taken by CRIT on the need for additional mitigation at Achii Hanyo for the marina/casino complex is within the limits of the agreement. The Service will support the CRIT position on this issue and abides by the terms of the lease agreement.

The development of the resort at the proposed location does not result in the conversion of unused or unaltered shorelines to developed ones. While this does not improve habitats in the action area, it at least does not contribute to additional losses. As noted earlier, the area is at present used as a beach and for other recreational activities. Whether existing use would be diverted to other existing recreation areas or if new ones would be created is not known and may be a cumulative effect.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, 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 ESA.

Development of new recreational, residential and commercial facilities to serve a growing public interested in using the Colorado River is a certainty within the project area. The specific amount of this new development is not known, but areas available for such are limited. Actions that would directly affect the river channel would likely require a 404 permit and not be covered under this section. Development of areas away from the river would likely increase the demand for recreational facilities on the river and increase boating traffic. Changes in water releases from Parker Dam could occur if agricultural lands were converted to residential/commercial purposes since the water need over the year is not the same. The amount of water involved in such changes could be small, and not detectable in the larger picture of downstream deliveries.

Recreationists displaced from the project site may either go to other recreation sites on the river or stop coming to the Colorado River and recreate elsewhere. The extent of this cannot be predicted, but would have effects to the need for additional recreational facilities or contribute to crowding at existing ones. Persons who do not now come to the Colorado River may do so because of the resort facilities, and stay to enjoy other facilities on the river. Determining how much either situation would contribute to the growth of recreational uses on the river is very difficult and is not possible with the available information.

SUMMARY OF EFFECTS

The effects to the Colorado River and its aquatic habitats from the proposed resort are additive to the existing environmental baseline. These additions are both positive (decreasing adverse effects) and negative (increasing adverse effects). The proposed action contains a set of commitments that essentially eliminate the adverse effects caused by the action. Provided these commitments are met, the environmental baseline would be different in some respects, but not measurably worse than before the project. The additional protection for Moovalya Lake and the associated wetlands may have had a positive effect on a local scale. The potential effects of

enlarging or improving aquatic habitats in such a way that non-native fish populations benefit is offset by the increased capacity to produce razorback suckers for augmentation of existing populations.

CONCLUSION

In making a finding for a specific action, the effects of the baseline, the action itself and the cumulative effects all must be considered. The baseline status for the razorback sucker is already below the jeopardy threshold, and constituent elements in the river and floodplain have been compromised to the extent that adverse modification of critical habitat is also part of the baseline. The effects of the action and cumulative effects must then be evaluated in light of this baseline.

The Service finds that the issuance of the section 404 permit and subsequent development of the Blue Water Marina/Casino resort is not likely to jeopardize the continued existence of the razorback sucker and is not likely to destroy or adversely modify critical habitat. Although the status of the razorback sucker in the lower Colorado River is precarious, the implementation of the proposed action, which includes the mitigation plan, does not contribute to additional declines. The additional opportunity presented in the Achii Hanyo Project will contribute to the survival of the species in the lower Colorado River.

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of ESA, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as 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 any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. 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 a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

For the razorback sucker, the measures below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service has developed the following incidental take statement based on the premise that the RPA will be implemented.

The Service anticipates that incidental take of the razorback sucker by the proposed marina/casino complex will be very difficult to detect and quantify for the following reasons.

First, the amount of direct take expected is very low and would involve eggs and larvae not adults. This take would be from the increase in wake disturbing spawning and nursery areas, but this increase is largely negated by the no-wake zone. Areas above the no-wake zone may see increased wake from boats utilizing the marina, and defining the extent of that increase and the likelihood that eggs and larvae are present in these upstream areas is not possible and not all of the increase could be attributed to the new resort facilities. Second, additional direct take might be attributable to an increase in non-native fish populations from improved conditions, but the amount of any such increase is speculative and not quantifiable. A very limited amount of razorback sucker recruitment may be occurring under the present level of non-native fish, and we do not know what effect any increases would have. The proposed action already attempts to offset this with the grow-out facilities at No Name Lake and the Achii Hanyo Project.

Without knowing the amount of take that is likely to occur, it is difficult to define a level at which it would be exceeded. The Service anticipates that the amount of incidental take, although undefinable, has already been reduced to the extent practicable by the RPA for the proposed project, as long as the mitigation plan is implemented in full and as described, the amount of take should not be exceeded.

It is important to understand that the protections included in the mitigation plan only take effect at the opening of the marina or casino. In the intervening period between the issuance of this biological opinion and the opening of the resort, the existing potential for take due to ongoing actions will continue. Because the use of the beach area is in some measure controlled by CRIT, there is an accompanying responsibility for this take.

Operation of the Blue Water area for water-based recreation will continue as it has until construction requires alterations in operation. As noted previously, in addition to unstructured recreation, the area is used several times a year for boat races (ski races, personal watercraft races and similar activities) that have many boats operating in a constrained area. While the Service has consulted with the U.S. Coast Guard on the issuance of Marine Event Permits for these races, we have not interacted with the CRIT on their issuance of permits or other authorities for these events. In the intervening period, before the RPA comes on line, effects from these races, which produce higher than normal amounts of boat wake, will continue. The mitigation plan recognizes this fact and the need to coordinate with other agencies to manage this use.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The definition of a reasonable and prudent measure is an action consistent with a proposed action's basic design, location, scope, duration and timing. An RPM cannot cause more than a minor change to the project. The Service believes the following RPM is necessary and appropriate to minimize take of razorback sucker.

1. Protection of Moovalya Lake and associated wetlands in the interim period until the marina at the resort is opened and the mitigation plan is implemented.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of ESA, the Corps and the applicant must comply with the following terms and conditions which implement the RPM above. The term and condition is non-discretionary.

To implement RPM 1:

1. The CRIT, in consultation with other responsible agencies, will require that all boat and personal watercraft races in the Blue Water areas have their designated courses and activity areas at or upriver from the future no-wake zone. Safety concerns will be considered in the evaluation and may exempt a specific race from this term and condition if those concerns can be documented a significant. Entry of boats or personal watercraft associated with these events into the future no-wake zone will be allowed, provided low speeds are maintained. These restrictions will be in place from January to May of each year until the permanent, year-round, no wake zone in the RPA is established.

Review requirement: The RPM, with the implementing terms and conditions, are designed to minimize incidental take that otherwise might result from the proposed action due to the time delay in implementing the mitigation plan. Because the result of implementing the RPM would mirror the result of implementing the mitigation plan, any reduction in incidental take would relate to time of implementation of protective measures. If, during the course of this action, the level of incidental take is exceeded, such incidental take represents new information requiring review of the RPMs provided. The Corps must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the RPMs.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of ESA directs Federal agencies to utilize their authorities to further the purposes of ESA 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.

The Service has identified no conservation recommendations for this project.

REINITIATION-CLOSING STATEMENT

This concludes formal consultation on the action outlined in your 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 maintained (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 that was 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.

The Service wishes to be extremely clear on the findings made in this biological opinion. The status of the razorback sucker is significantly below the jeopardy threshold, meaning the survival and recovery of the species has already been compromised. The same is true for the critical

habitat that has already been adversely modified such that the value of these areas to the survival and recovery of the species has been compromised. To a great extent, the Corps' legal authorities do not allow it the regulatory tools to effect changes to the majority of the causes of this situation. We must then focus on what the Corps' role is in the management of the river. The permit under consultation here was for a project that went to specific lengths to reduce or eliminate direct effects. Other projects may not be able to do the same and would adversely effect the existing baseline conditions.

The actual Federal action is the issuance of a permit under section 404 of the Clean Water Act, not the development of the resort. The Service recognizes that the section 404 program on the lower Colorado River is of long-standing and that the Corps has made efforts to coordinate the types and locations of facilities requested under the permit process and minimize the effects of the projects in accordance with the law and regulatory requirements. However, it is clear from the implementation of the section 7 consultation process for these permits, and the present status of the listed fish species and critical habitat in the river, that continuing with the present system of doing individual permits may not be adequately addressing the effects of each permit and the combined effects of several permits being granted in a single area. The Service recommends that the Corps consider a two-level process where the first level looks at the permit process from a programmatic view, and a second level that focuses on the specific permit. We believe the benefits to potential applicants and the agencies from such an approach are sufficient to warrant further investigation. While the Service understands that this process would not apply to the present permit under consultation, it would assist in resolving future projects requiring permits.

If there are any questions regarding this biological opinion, or other matters relating to the section 404 permit program on the lower Colorado River, please contact Lesley Fitzpatrick or Ted Cordery.

Sincerely,

/s/ Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (GM:AZ)
Project Coordinator, Arizona Fishery Resources Office, Fish and Wildlife Service,
Parker, AZ
Manager, Lower Colorado River Refuge Complex Office, Fish and Wildlife Service,
Yuma, AZ

Director, Arizona Game and Fish Department, Phoenix, AZ

LITERATURE CITED

- Abbott, C.C. 1861. Descriptions of four new species of North American Cyprinidae. Proceedings of the Philadelphia Academy of Natural Sciences 12(1860):473-474.
- Bestgen, K.R. 1990. Status review of the razorback sucker, *Xyrauchen texanus*. Report to U.S. Fish and Wildlife Service, Salt Lake City, Utah. Contribution 44, Larval Fish Laboratory, Colorado State University, Fort Collins.
- Gilbert, C.H., and N.B. Scofield. 1898. Notes on a collection of fishes from the Colorado basin in Arizona. Proceedings U.S. National Museum 20:1131.
- Jordan, D.S. 1891. Report of explorations in Colorado and Utah during the summer of 1889 with an account of the fishes found in each of the river basins examined. Bulletin of the United States Fish Commission 9:24.
- Kirsch, P.H. 1889. Notes on a collection of fishes obtained in the Gila River at Fort Thomas, Arizona. Proceedings of the U.S. National Museum 11:555-558.
- Marsh, P.C. and D.R. Langhorst. 1988. Feeding and fate of wild larval razorback sucker. Environmental Biology of Fishes 21:59-67.
- _____, and W.L. Minckley. 1989. Observations on recruitment and ecology of razorback sucker: Lower Colorado River, Arizona-California-Nevada. Great Basin Naturalist 49, 71-78.
- McAda, C.W., and R.S. Wydoski. 1980. The razorback sucker, *Xyrauchen texanus*, in the upper Colorado River basin, 1974-76. U.S. Fish and Wildlife Service Technical Paper 99. 50pp.
- McCarthy, C.W., and W.L. Minckley. 1987. Age estimation for razorback sucker (Pisces:Catostomidae) from Lake Mohave, Arizona and Nevada. Journal of the Arizona-Nevada Academy of Science 21:87-97.
- Minckley, W.L. 1973. Fishes of Arizona. Arizona Game and Fish Department, Phoenix. 293pp.
- _____. 1983. Status of the razorback sucker, *Xyrauchen texanus*(Abbott), in the lower Colorado River Basin. The Southwestern Naturalist 28:165-187.
- _____, and J.E. Deacon. eds. 1991. Battle Against Extinction: Native fish management in the American West. University of Arizona Press, Tucson. 517pp.
- _____, P.C. Marsh, J.E. Brooks, J.E. Johnson, and B.L. Jensen. 1991. Management toward recovery of the razorback sucker. pp 303-357 in Battle Against Extinction: Native fish management in the American West. University of Arizona Press, Tucson.
- Osmundson, D.B., and L.R. Kaeding. 1989. Studies of Colorado squawfish and razorback sucker use of the "15-mile reach" of the Upper Colorado River as part of conservation measures for the Green Mountain and Ruedi Reservoir water sales. Final Report, U.S. Fish and Wildlife Service, Region 6. Grand Junction, Colorado. 81pp.

- Papoulias, D. 1988. Survival and growth of larval razorback sucker, *Xyrauchen texanus*. Master's thesis. Arizona State University, Tempe.
- Sigler, W.F., and R.R. Miller. 1963. Fishes of Utah. Utah Department of Fish and Game, Salt Lake City. 203pp.
- Tyus, H.M., and C.A. Karp. 1989. Habitat use and streamflow needs of rare and endangered fishes, Yampa River, Colorado. U.S. Fish and Wildlife Service, Vernal, Utah. 27pp.
- _____. 1990. Spawning and movements of razorback sucker, *Xyrauchen texanus*, in the Green River basin of Colorado and Utah. *The Southwestern Naturalist* 35:427-433.
- U.S. Bureau of Reclamation. 1996. Description and assessment of operations, maintenance, and sensitive species of the lower Colorado River. Final biological assessment prepared for U.S. Fish and Wildlife Service and Lower Colorado River Multi-Species Conservation Program. Lower Colorado Region, Boulder City, Nevada.
- U.S. Fish and Wildlife Service. 1993. Colorado River Endangered Fishes Critical Habitat, Draft Biological Support Document. Salt Lake City, Utah. 225pp.

2-21-96-F-161

SUMMARY

BIOLOGICAL OPINION ON THE EFFECTS TO RAZORBACK SUCKER FROM THE
ISSUANCE OF A CLEAN WATER ACT SECTION 404 PERMIT FOR THE
CONSTRUCTION OF THE BLUE WATER MARINA, CASINO AND RESORT,
COLORADO RIVER INDIAN TRIBES, LA PAZ COUNTY, ARIZONA

Date of the opinion: March 21, 1997

Action agency: Corps of Engineers

Proposal: To issue a section 404 permit for the development of a marina/casino/resort complex on the banks of the Colorado River.

Species affected: Razorback sucker (*Xyrauchen texanus*) and designated critical habitat below Parker Dam.

Biological opinion: No jeopardy or adverse modification of critical habitat.

Incidental take statement:

Level of take anticipated: Risk of take is from effects of wake on eggs and larvae in shallow water areas and increase in non-native fish populations from increase in protected water areas. Risk of take is reduced by inclusion of mitigation plan with the proposed action, however, ongoing take by similar activities would continue until project was implemented.

Reasonable and prudent measure: One RPM is included and addresses the ongoing take that would eventually be reduced by implementation of the mitigation plan.

Terms and conditions: That for organized boat and personal watercraft races in the Blue Water area, if safety considerations allow, the start and finish lines would be set upstream of the future no-wake zone during the January to May period each year until the permanent no-wake zone is put in place.

Conservation recommendations: No conservation recommendations were made.