

Matt Kenna, CO Bar # 22159  
Western Environmental Law Center  
679 E. 2<sup>nd</sup> Ave., Suite 11B  
Durango, CO 81301  
(970) 385-6941  
mattkenna@gmail.com  
Applicant *Pro Hac Vice*

Attorney for Plaintiffs

IN THE UNITED STATES DISTRICT COURT FOR THE  
DISTRICT OF ARIZONA

CENTER FOR BIOLOGICAL  
DIVERSITY; SIERRA CLUB; GLEN  
CANYON INSTITUTE; LIVING  
RIVERS; and ARIZONA WILDLIFE  
FEDERATION

Plaintiffs,

v.

**COMPLAINT FOR  
DECLARATORY AND  
INJUNCTIVE RELIEF**

UNITED STATES BUREAU  
OF RECLAMATION; and GALE  
NORTON, SECRETARY OF  
THE INTERIOR

Defendants.

**I. INTRODUCTION**

1. The United States Bureau of Reclamation and Gale Norton, Secretary of the Interior are violating the Grand Canyon Protection Act of 1992, Pub. L. No. 102-575, § 1802, by operating Glen Canyon Dam in a way that fails to “project, mitigate adverse impacts to, and improve the values for

which Grand Canyon National Park and Glen Canyon National Recreation Area were established.” The defendants are also in violation of the Endangered Species Act, 16 U.S.C. § 1533 et seq. (“ESA”) by having failed to reinitiate consultation with the U.S. Fish and Wildlife Service in the face of new information regarding the effects of the dam upon the humpback chub, razorback sucker, Colorado pikeminnow, and bonytail chub, and are in violation of the National Environmental Policy Act, 42 U.S.C. § 4321 et seq. (“NEPA”) by failing to prepare a supplemental environmental impact statement (“EIS”) on dam operations. This suit seeks an order compelling the defendants to reinitiate consultation and to supplement their EIS to protect and recover these species and the habitat of the Grand Canyon and Colorado River. However, this suit does not seek to enjoin any dam operations while these procedures occur.

## **II. JURISDICTION AND VENUE**

2. This Court has jurisdiction over this action pursuant to 16 U.S.C. § 1540(g)(1)(A) and 28 U.S.C. § 1331.

3. Venue in this court is proper under 16 U.S.C. § 1540(g)(3)(A) and 28 U.S.C. § 1391(e).

## **III. PARTIES**

4. Plaintiff CENTER FOR BIOLOGICAL DIVERSITY (“CBD”) is a New Mexico non-profit corporation with offices in Phoenix and Tucson, Arizona;

Silver City, New Mexico; and San Diego and Berkeley, California. The Tucson office is its primary office. CBD is actively involved in species and habitat protection issues throughout North America and the World. CBD's members (including its staff) include Arizona residents with biological health, educational, scientific research, moral, spiritual and recreational interests in the Colorado River ecosystem, which includes the Grand Canyon and the native fish species which currently and have historically inhabited it. CBD and its members have participated in extensive efforts to protect and preserve the Colorado River ecosystem, and use the exact river stretches and adjacent tracts of land downstream of Glen Canyon Dam at issue in this suit. CBD brings this action on its own behalf and on behalf of its adversely affected members and staff.

5. Plaintiff SIERRA CLUB was founded in 1892 and is the nation's oldest grass-roots environmental organization. The Sierra Club is incorporated in California, and has its headquarters in San Francisco, California. It has more than 773,000 members nationwide, including thousands of members in Arizona. The Sierra Club is dedicated to the protection and preservation of the natural and human environment, including especially the Colorado River ecosystem, the Grand Canyon, and their endangered fish species. The Sierra Club's purpose is to explore, enjoy and protect the wild places of the earth; to practice and promote the responsible

use of the earth's ecosystems and resources; and to educate and enlist humanity to protect and restore the quality of the natural and human environments. The Sierra Club has members in Arizona whose recreational, aesthetic, business and/or environmental interests have been, are being, and will be, adversely affected by Defendants' actions as set forth herein.

Members of the Sierra Club use and enjoy the Colorado River, the Grand Canyon, and their endangered fish species for outdoor recreation and scientific study of various kinds, including nature study, bird-watching, photography, river running, backpacking, camping, solitude, and a variety of other activities. The Sierra Club brings this action on behalf of itself and its members.

6. Plaintiff GLEN CANYON INSTITUTE is a Utah non-profit corporation with its principle place of business in Salt Lake City, Utah. The Glen Canyon Institute is dedicated to the restoration of Glen Canyon and the rest of the Colorado River and the natural habitats and native species supported by it. Since its inception in 1996, Glen Canyon Institute has led efforts to restore the Colorado River ecosystem through public education, scientific research and public debate. The Glen Canyon Institute brings this action on its own behalf and on behalf of its 1,500 regional and national members including those who live in Arizona who regularly visit the Colorado River.

7. Plaintiff LIVING RIVERS is a Utah non-profit corporation with its principle place of business in Moab, Utah. Living Rivers is dedicated to the restoration of the natural hydrological and ecological processes within the Colorado River watershed so as to protect and restore the watershed's native species and their habitats. Since its inception in 2000, Living Rivers has led efforts to protect and restore endangered fish habitat below Glen Canyon Dam. Many of Living Rivers' members, including its staff, have visited, and intend to continue to visit, Grand Canyon's river corridor, for observation, research, aesthetic enjoyment, and other recreational, scientific, and educational activities. Living Rivers brings this action on its own behalf and on behalf of its members.

8. Plaintiff ARIZONA WILDLIFE FEDERATION is an Arizona non-profit corporation dedicated to the conservation of Arizona's wildlife and wildlife habitats. Founded in 1923, it is Arizona's oldest conservation organization. Its members reside throughout the state of Arizona, and most are hunters and anglers. Many members of the Arizona Wildlife Federation recreate on the Colorado River near Glen Canyon Dam or within the Grand Canyon. The Arizona Wildlife Federation brings this action on behalf of itself and its members.

9. The defendants' failure to protect the Grand Canyon National Park and the Glen Canyon National Recreational Area through their current operation of Glen Canyon Dam, and failure to reinitiate ESA consultation and supplement the EIS regarding dam operations, have prevented the implementation of protective measures essential for protection of these special areas and the endangered fish species that rely upon them. The above-described biological health, cultural, educational, scientific, aesthetic, conservation and recreational interests of the plaintiffs have been, are being, and will continue to be adversely affected and irreparably injured by the defendants' actions and inactions.

10. THE UNITED STATES BUREAU OF RECLAMATION ("Bureau") is a federal agency with responsibility for operation of Glen Canyon Dam, and has the duty to reinitiate consultation with the United States Fish and Wildlife Service ("FWS") regarding the effects of dam operations on species listed under the ESA when appropriate, and to supplement its EISs where required as well.

11. GALE NORTON ("Secretary") is the Secretary of the Interior. She has the duty under the ESA to request reinitiation of consultation where necessary, and to ensure operation of Glen Canyon Dam in such a manner needed to protect the Grand Canyon National Park and Glen Canyon National Recreation Area under the Grand Canyon Protection Act of 1992.

She is sued in her official capacity.

#### **IV. FACTS**

12. “Glen Canyon Dam was constructed and is operated by the Bureau of Reclamation, an agency within the Department of Interior. The controversy surrounding the construction of the dam is often cited as the beginning of the modern-day environmental movement.” <http://www.nps.gov/glca/damindx.htm> (U.S. Park Service website). The dam lies in Arizona and impounds the Colorado River in Glen Canyon in Arizona and Utah, creating a very large reservoir behind it known as Lake Powell.

13. The dam harms the downstream environment of the Colorado River and the Grand Canyon by releasing water in unnatural temperature, quantity, quality, and frequency. It deprives the Grand Canyon of sediment and nutrients needed for natural beaches and proper wildlife habitat.

14. Congress sought to address the problems caused by the way the dam was operated by passing the Grand Canyon Protection Act of 1992, Pub. L. No. 102-575, § 1802, which requires the Bureau to “operate Glen Canyon Dam . . . in such a manner as to project, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established.”

15. Regarding the effects of the current operations of dam on endangered Colorado River fish:

The four species of concern, the razorback sucker (*Xyrauchen texanus*), Colorado [pikeminnow]<sup>1</sup> (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and bonytail chub (*Gila elegans*) are listed as endangered under the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). These fishes are threatened with extinction due to the cumulative effects of environmental impacts that have resulted in habitat loss (including alterations to natural flows and changes to temperature and sediment regimes), proliferation of nonnative introduced fish, and other man-induced disturbances. \* \* \*

The historical ranges of the four endangered fishes have been fragmented by construction of dams and water diversions throughout the Basin. \* \* \* Dams and diversions have fragmented former fish habitat and restricted fish movement. As a result, genetic interchange (emigration and immigration of individuals) between some fish populations is no longer possible. High flood flows were once normal in the Basin and provided food and nutrient exchange between river channels and shallow-water flood plain habitats. These high flows are now controlled by numerous dams. As a result of these dams, major changes also have occurred in water quality, quantity, temperature, sediment load and nutrient transport, and other characteristics of the aquatic environment (Carlson and Muth 1989). The altered river conditions that have resulted now provide suitable habitats for introduced, nonnative fish.

16.17.59 Fed. Reg. 13,374-375 (Mar. 21, 1994).

18. "The purposes of [the ESA] are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, [and] to provide a program for the conservation of such endangered species and threatened species . . . ." 16 U.S.C. § 1531(b). To this end, the ESA requires that the Secretary protect such species and their habitats by listing them as either "threatened" or "endangered," and by

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<sup>1</sup>. The Colorado pikeminnow was formerly known as the Colorado squawfish (footnote added).



designating "critical habitat" for each listed threatened or endangered species. 16 U.S.C. § 1533. "Critical habitat" means those areas that are essential to the "conservation" of a species. 16 U.S.C. § 1532(5)(A).

"Conservation" means "the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." 16 U.S.C. § 1532(3).

19. The ESA requires federal agencies to consult with the FWS in order to ensure that agency actions are "not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification" of designated "critical habitat." 16 U.S.C. § 1536(a)(2). The consultation process results in a "biological opinion" which determines whether "jeopardy or adverse modification" is found, and if so, which outlines "reasonable and prudent alternatives" for the agency action.

20. After consultation on an agency actions has already occurred:

Reinitiation of formal consultation is required and shall be requested by the Federal agency or by the Service, where discretionary Federal involvement or control over the action has been retained or is authorized by law and:

(a) If the amount or extent of taking specified in the incidental take statement is exceeded;

(b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;

(c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not

considered in the biological opinion; or

(d) If a new species is listed or critical habitat designated that may be affected by the identified action.

50 C.F.R. § 402.16.

21. On December 21, 1994, a “Final Biological Opinion on the Operation of Glen Canyon Dam (2-21-93-F-167)” was prepared by the FWS, which found jeopardy of extinction to the humpback chub and the razorback sucker, and which included a Reasonable and Prudent Alternative “to prevent jeopardy to the endangered fish of Grand Canyon” resulting from Bureau of Reclamation’s Glen Canyon Dam operational scheme. This alternative is the “Adaptive Management” of the “Modified Low Fluctuating Flow Alternative” (“MLFF”) of Bureau of Reclamation’s “Final Environmental Impact Statement on the Operation of Glen Canyon Dam.”

22. New information reveals effects of the MLFF operational scheme are harming the humpback chub, razorback sucker, Colorado pikeminnow, bonytail chub, their designated critical habitats, and the Colorado River/Grand Canyon environment in a manner and extent not previously considered. On October 26, 2005, the U.S. Geological Survey released a document entitled “The State of the Colorado River Ecosystem in Grand Canyon.” The report states:

Today, three of the eight native fish species have been eliminated from the Colorado River in Glen and Grand Canyons (roundtail chub (*Gila robusta*), bonytail chub (*Gila elegans*), and Colorado pikeminnow)

. . . (p. 35)

Overall, about 15%–20% of the adult humpback chub are dying each year. If this mortality rate and the dramatically reduced recruitment rate of young chub experienced since the early 1990s remain unchanged, there will be a decline in the adult population of humpback chub from the present 3,000–5,000 fish to a level of 1,500–2,000 adult fish over the next 10–15 yr. (p. 45)

[T]he flow regime [MLFF] has not reversed the decline in recruitment and adult abundance.... Approximately 15%–20% of the adult humpback chub population is dying each year. These fish are most likely being replaced, albeit at a lower rate, predominately by young humpback chub that have spent the first 3 to 4 yr of their lives in the Little Colorado River. In other words, the MLFF alternative had either a negative effect or no effect at all, but it has not had a measurable beneficial effect on humpback chub . . . (p. 47)

[T]he authors of the preceding chapters presented evidence that dam operations during the last 10 yr under the preferred alternative of the MLFF have not restored fine-sediment resources or native fish populations in Grand Canyon, both of which are resources of significant importance to the program . . . (p. 208)

The Grand Canyon population of the federally endangered humpback chub (*Gila cypha*) has declined during the past decade under MLFF operations. Only eight native fish species were historically found in Grand Canyon. Six of these were desert species endemic (not found elsewhere) to the Colorado River ecosystem, making this one of the most unusual fish communities in the world (Mueller and Marsh, 2002). Of the original eight, only four remain in Grand Canyon, namely the humpback chub, the bluehead sucker (*Catostomus discobolus*), the flannelmouth sucker (*Catostomus latipinnis*), and the speckled dace (*Rhinichthys osculus*). Of these four, only the humpback chub is endangered, and its numbers have dropped dramatically in the last decade. At the same time, nonnative fish have increased in both diversity and abundance. The reasons for the decline of native fish are commonly cited to include dramatic changes in the thermal, sediment, and hydrologic regimes of the river because of the construction and operation of numerous dams in the basin, the introduction of nonnative predatory and competitive fishes, and the introduction of diseases and

parasites . . . (p. 208)

Our knowledge about the cause and effect between dam operations and chub decline is incomplete; we do know, however, that the current MLFF operation has not resulted in increased survival and recruitment of humpback chub, despite the prediction of the EIS . . . (p. 208)

[I]t is clear that the restrictions on dam operations since 1991 have not produced the hoped-for restoration and maintenance of this endangered species . . . During the MLFF, basin hydrology has varied from drought to wet conditions and then back to drought conditions. Through these conditions, the decline of the humpback chub has continued. This trend leads to questions about whether daily, monthly, or even annual patterns of dam operation alone are relevant to native fish recruitment or whether changes in the sediment and thermal regimes of the river imposed by regulation have had the greatest influence on native fishes. Further, the issue of nonnative fishes and their potential to limit recruitment of native fish through predation and competition (although highly suspected by scientists as a significant factor) remains unresolved in Grand Canyon . . . (pp. 208, 214)

[T]he relatively stable habitat conditions created under the MLFF during protracted drought conditions, coupled with a coarsening of substrate in the river channel . . . appear to have greatly favored rainbow trout (*Oncorhynchus mykiss*), particularly in the Lees Ferry reach, as reflected in their increasing numbers during the last decade. (p. 214)

Research and monitoring have conclusively demonstrated a net loss of fine sediment from the Colorado River ecosystem under the MLFF. Closure of Glen Canyon Dam eliminated about 84% of the sand that historically entered Grand Canyon . . . (p. 214)

We also know from research on coarse sediment dynamics that there has been an overall trend for the Grand Canyon reach to experience coarsening of the substrate in the river channel since completion of Glen Canyon Dam. As fine sediment is eroded because of dam operations, gravel and larger material remain. The impact of this “coarsening” of the river substrate has two potential biological implications: first is the creation of preferred habitat for benthic

invertebrates, which are an important component of the aquatic ecology of the system, and second is the creation of spawning substrate for the nonnative rainbow trout. Both of these changes move the system farther from predam conditions and potentially benefit nonnative species like trout at the expense of natives. (p. 214)

Research and monitoring conducted by U.S. Geological Survey scientists and their cooperators have conclusively demonstrated a net loss of sediment from the system and have documented the decline of the federally endangered humpback chub during the last decade . . . (p. 218)

23. The purpose of NEPA, “recognizing the profound impact of man’s activity on the interrelations of all components of the human environment, particularly the profound influences of population growth [and] high-density urbanization,” is to “use all practicable means and measures . . . to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.” 42 U.S.C. § 4331(a).

24. To this end, NEPA requires federal agencies to prepare Environmental Impact Statements (“EISs”) for all actions which they approve “significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). EISs are detailed reports completed after a thorough analysis and study which report on the environmental effects of the action, and which describe alternatives to the action. An agency “[s]hall prepare supplements to . . . final environmental impact statements if: . . . (ii) There are significant new circumstances or information relevant to environmental concerns and

bearing on the proposed action or its impacts.” 40 C.F.R. § 1502.9(c).

### **FIRST CLAIM FOR RELIEF**

25. The above paragraphs are incorporated here by reference.

26. Based on the above facts and legal obligations, the Secretary is violating the Grand Canyon Protection Act of 1992, by failing to “operate Glen Canyon Dam . . . in such a manner as to project, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established.” Pub. L. No. 102-575, § 1802. Therefore, the Secretary is acting in a manner that is arbitrary, capricious, and otherwise not in accordance with law. 5 U.S.C. §§ 702-706.

### **SECOND CLAIM FOR RELIEF**

27. The above paragraphs are incorporated here by reference.

28. Based on the above facts and legal obligations, the defendants are required to reinitiate consultation with FWS over the effects of Glen Canyon Dam operations, pursuant to 50 C.F.R. § 402.16. and 16 U.S.C. § 1536(a)(2), to ensure that the dam is operated in a manner that will not jeopardize the existence of endangered fish species or adversely modify their critical habitat, by providing for a more natural flow and water temperature regime, and by providing adequate downstream nutrients and sediment. Because the defendants have failed to comply with this requirement, they have violated the ESA, and have otherwise failed to act and/or have acted in a manner that

is arbitrary, capricious, and otherwise not in accordance with law. 16 U.S.C. § 1540(g)(1)(A); 5 U.S.C. §§ 702-706.

### **THIRD CLAIM FOR RELIEF**

29. The above paragraphs are incorporated here by reference.

30. Based on the above facts and legal obligations, the Bureau is required to prepare a supplemental EIS for its Glen Canyon Dam operations to analyze the effects of dam operations and to consider alternatives, and its failure to do so violates NEPA and the CEQ regulations. 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.9(c)(1). Therefore, the Bureau is acting in a manner that is arbitrary, capricious, and otherwise not in accordance with law. 5 U.S.C. §§ 702-706.

### **REQUEST FOR RELIEF**

FOR THESE REASONS, plaintiffs respectfully request that this Court enter judgment providing the following relief:

1. Declare that defendants are in violation of the Grand Canyon Protection Act of 1992, the ESA, and NEPA, by failing to operate Glen Canyon Dam in such a manner as to project, mitigate adverse impacts to, and improve the values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established, by having failed to reinitiate consultation pursuant to the ESA over the effects of dam operations on endangered fish species, and by failing to prepare a supplemental EIS;

2. Direct by injunction that the defendants immediately reinitiate ESA consultation and begin preparing a supplemental EIS, to ensure the protection of the Grand Canyon and its environs and endangered fish species. Plaintiffs do not request the Court to issue any injunctive relief directly affecting dam operations; and

3. Grant plaintiffs their costs of litigation, including reasonable attorney fees as provided by 16 U.S.C. § 1540(g)(4) and 28 U.S.C. § 2412.

RESPECTFULLY SUBMITTED February 15, 2006.

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Matt Kenna  
Western Environmental Law Center  
Attorney for Plaintiffs