

Chapter 6

Legal Options: Managing Conflict Between Listed Species

6.1 Background

Dealing with conflicting demands for water from a reservoir system is nothing new for reservoir managers. However the rising number of species protected by the Endangered Species Act (ESA) of 1973 (ESA, 1988) impacted by reservoir operation makes the balancing process even more complicated. Historically, the ESA elevates the needs of listed species to the highest priority when balancing tradeoffs between conflicting demands. Unfortunately, the ESA does not include clear direction on how to balance conflicting needs between listed species. Since different interest groups may be supporting different endangered or threatened species, this problem can be particularly troublesome for reservoir managers to address. This chapter presents ideas that possibly could help resolve conflicts between different listed (or candidate) species under the following assumptions:

- the reservoir manager is interested and committed to adjust reservoir operation as possible to help resolve conflict arising from different public and/or private interests
- the requirements and intent of the current Endangered Species Act provisions will be upheld (i.e., reservoir managers will seek to conserve and promote recovery of endangered and threatened species)
- relevant state and local laws regarding Endangered Species will be followed.

This section is not intended to address the effectiveness of the current ESA or comment on the various debates in Congress over the reauthorization of the ESA. However, potential changes in the ESA legislation could impact the specifics of this approach. Also, since states have differing laws surrounding environmental protection, state laws are not addressed in this chapter but would need to be for actual implementation of this approach in a particular region.

6.2 Endangered Species Act Provisions

The Endangered Species Act embodies a legal conviction to preserve and recover species (and the ecosystems on which they depend) in danger of extinction (ESA, 1988; § 1531(a)). In response to concern over modern extinction rates, Congress put powerful regulatory tools in the ESA that place species preservation above almost all other interests (Smith, et al., 1993). The act designates two categories of classification warranting different levels of attention. A species is listed as “endangered” -- thus deserving of the most stringent ESA protection measures -- when it is “in danger of extinction throughout all or a significant portion of its range” (ESA, 1988; §

1532(6)). A species is listed as “threatened” if the species is likely to become endangered within the “foreseeable future” (ESA, 1988; § 1532 (20)). Final authority for listing a species lies with either the Secretary of the Interior or Secretary of Commerce. The Interior’s Fish and Wildlife Service (USFWS) is charged with the bulk of the duties under the ESA (Smith, et al., 1993). The legislation states that listing determinations must be based solely on evidence from the “best scientific and commercial data available” (ESA, 1988; § 1533 (b)(1)(a)). The act also requires the Secretary to designate “critical habitat” for the species concurrent with listing that define geographic areas “essential to the conservation of the species and ... which may require special management considerations or protection” (ESA, 1988; § 1532 (5)(A)). (Although according to Smith, et al. (1993), the USFWS had only designated critical habitat for 16 percent of the listed species as of 1991.) Section 4 of the ESA also directs the Secretary to develop “recovery plans” for listed species that identify measures (and their costs) to promote recovery and criteria to determine when they have recovered sufficiently to be removed from the list.

Upon official listing, the ESA offers multiple levels of protection. Section 9 of the ESA states that no person (including private and government individuals and agencies) may “take” any endangered species, where “take” is defined “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct” (ESA, 1988; § 1532 (19)). In *Palila v. Hawaii Department of Land and Natural Resources* in 1988, “take” was interpreted to include “habitat destruction that prevents the recovery of a species.” Section 9 also forbids actions that “maliciously damage or destroy” endangered plants on federal lands and prohibits commerce or possession of any kind for all listed species. Threatened species do not receive protection from taking automatically, but the Secretary can apply any portion or all of Section 9 as required for their conservation and recovery (Smith, et al., 1993).

Federal agencies are charged to further the purposes of the ESA in Section 7. Before performing an action that may affect a listed species or its critical habitat, the agency must consult with the Secretary and provide a “biological assessment” of the potential impacts resulting from the proposed action. The Secretary has authority to require the agency to adjust its proposed actions to mitigate the action’s negative consequences. The Secretary also can grant a permit authorizing the agency to take a specified number of the listed species, as long as the taking is consistent with the agreed upon conservation actions. This consultation and permitted taking provides one mechanism within the ESA for federal reservoir managers to handle conflicting demands between listed species. (State and private parties may also obtain take permits via a “habitat conservation plan” (HCP) under Section 10 (ESA, 1988; § 1539 (a)).)

Although Sections 7 and 10 provide mechanisms to handle special cases through the federal consultation process and the habitat conservation plan, these mechanisms do not directly address how to “balance” (or prioritize) conflicting demands between competing listed species. Perhaps the most direct mention of prioritizing between species is found in Section 7 with regard to recovery plans. The act directs the Secretary to “give priority to those endangered species or threatened species, without regard to taxonomic classification, that are most likely to benefit from such plans, particularly those species that are, or may be, in conflict with construction or other forms of economic activity” when deciding how to allocate resources for recovery plans (ESA, 1988; § 1533 (f)(1)(A)). While this section does not directly address the issue of conflict

between species, it seems to indicate that the intent of the law is to provide the most benefit to listed species as possible with a finite set of resources. Furthermore, ecosystem preservation is a basic intent of the ESA, which seeks to “provide a means whereby the ecosystems upon which endangered and threatened species depend may be conserved” (ESA, 1988; § 1531 (b)). Smith, et al. (1993) and others advocate the use of a more holistic approach that gives priority to integrated, multi species recovery plans and habitat conservation plans (HCPs) for listed and candidate (petitioned for consideration by the Secretary but not yet processed) species that offer the most potential benefit in a given ecological community. This multi species approach for addressing conflicts between species can be carried out legally under the existing ESA if a cooperative partnership is formed with the USFWS and other involved parties. One example of where this type of partnership has been tried is discussed by Volkman (1992) along the Columbia River System.

6.3 Bill Williams River System Conflict

The operation of Alamo Reservoir located on the Bill Williams River in western Arizona directly impacts the welfare of several listed species (BWRCTC 1994). The Bill Williams River contains the last extensive native riparian habitat in the lower Colorado River area. The lake and riparian forest support several listed species including the bald eagle and riparian obligates such as the southwestern willow flycatcher.

The riparian obligate species depend on the health of the riparian habitat, and the habitat is dependant upon Alamo Reservoir operation. The Wildlife Subcommittee of the Bill Williams River Corridor Technical Committee (BWRCTC) has recommended a flow regime to maintain and enhance the existing riparian environment (BWRCTC 1994). In simple terms, the desired flow regime defines minimum release quantities that vary seasonally to sustain existing trees and also advocates intermittent high flow “pulses” to emulate natural high flows produced by flood events prior to construction of Alamo Dam. The “pulse” flows are thought to be necessary for recruitment and long term viability of the riparian vegetation.

The bald eagles are affected more by the reservoir than the riparian habitat downstream. In 1988, the U.S. Fish and Wildlife Service (USFWS) issued a letter to the U.S. Army Corps of Engineers (USACE) recommending that the lake level be kept above 1,100 ft to maintain sufficient forage area for the bald eagles under the provisions of the National Environmental Protection Act (NEPA) and ESA. Another consideration is the location of eagle nesting each year. If the bald eagles establish their seasonal nest in a snag over the lake the nest can be in danger of inundation from rising reservoir levels. Nest inundation can be considered a taking under ESA since the USACE has some control over reservoir level.

Therefore, a long term conflict exists between the riparian obligate species and the bald eagles. In fact, a conflict exists in protecting the eagles -- protecting the eagle nests against inundation actually reduces the time the lake is above 1,100 feet (to provide adequate forage area for the eagles). Prescriptive and simulation model results have demonstrated that the requested

flow regime for riparian habitat can be met more often if the reservoir level is kept higher than historical levels. This is reasonable since long periods of drought can occur in the desert region where Alamo Reservoir is located. If the reservoir is operated to maintain a low level, the desired minimum flows for the riparian habitat frequently can not be met during periods of drought. Chapter 5 shows that if the USACE operates to try and prevent inundation of an eagle nest, the ability to meet long term riparian habitat needs (and thus other listed species' needs) is significantly reduced.

In the strictest sense, the USACE actions could be said to constitute a taking for either case. Inundation of the eagle nest could be interpreted as a taking (if other alternatives have not been established under the ESA Section 7 federal consultation process). If the reservoir is operated to protect the eagle nests, the riparian habitat's long term viability could be impaired comprising a taking for the riparian obligate species related to their habitat. As discussed before, consultation between the USFWS and the USACE (responsible for operation of Alamo Dam) and other related parties can produce a legally valid plan for resolving this conflict. The BWRCTC has described the likely interaction between reservoir operation parameters and species' response according to the best available data (BWRCTC 1994). Chapter 5 demonstrates a technique using probabilistic simulation to estimate the tradeoffs for different operating policies such as protection against nest inundation.

6.4 Long-term Management Options

Managing competing demands between endangered species is a challenging task that requires cooperation between several disciplines and agencies. Although the ESA does not explicitly address how to balance competing demands between listed species, Sections 7 and 10 provide mechanisms reservoir managers can use to satisfy the act's intents and requirements. Specifically by utilizing the ESA's federal consultation process and through developing a multi species recovery plan. The modeling methods presented in this report can serve as useful tools in determining how to best operate a reservoir system within a multi species recovery plan that focuses on the health of an ecological community.