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Saving Endangered Species Poses Water Policy Challenge

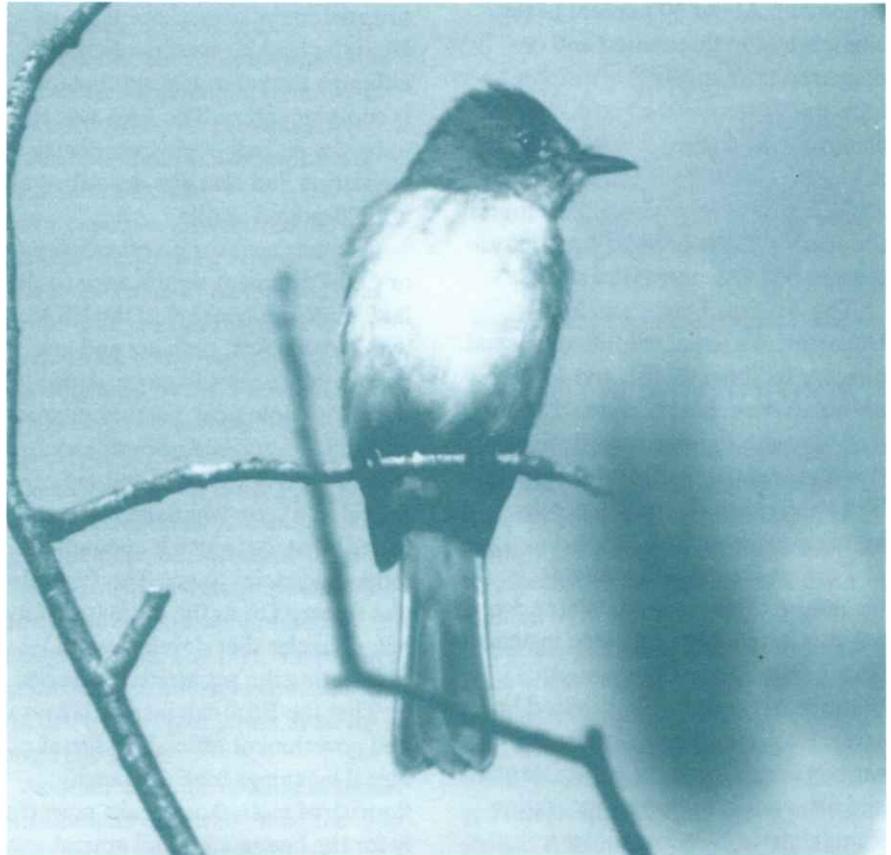
by Joe Gelt

Because the Endangered Species Act is concerned with the effects of human activities on the natural environment, the law covers a lot of ground, both real and figurative. It can regulate large geographic areas of desert, mountains and forests, as well as have wide legal implications affecting a range of human activities: political, social, economic, and cultural.

ESA's enforcement, however, is broadest, most complicated and far-reaching when applied to habitat and species that rely on water. As a result, the law has special significance in Arizona and the West. Here historical, geological and political factors contribute to make water a highly charged public policy issue. ESA at times adds volatility to the issues.

West, Prime ESA Area

Constructed water projects often are a cause of ESA activity, and the West, amongst its many claims



When developing water projects, officials have had to consider the plight of the endangered southwestern willow flycatcher, an effort that at times has sparked controversy. (Photo: George Andrejko, Arizona Game & Fish Department)

to fame, is a land of many human-made water projects. Out West, tinkering with rivers and streams, blocking and diverting them for agricultural and urban uses—irrigating crops, filling swimming pools, and watering lush, verdant landscapes—has been a major regional activity, accomplished, of course, with federal support. Moreover, diverting and transferring water likely will continue

to be an important strategy to enable the West to further grow and develop.

Moving water about, beyond its natural site to other destinations and uses, is not done without inconvenience and hazard to species relying on the original source and condition of the water. This is especially true since, of all environmental settings, water hosts the widest variety

of forms of life. Water literally is a breeding ground for life, with lakes, ponds, river systems, and associated wetlands biologically rich areas of concentrated life forms. This is especially true in arid areas, such as Arizona and the West. With water areas few and far between, species tend to cluster in such locations.

Further, a goodly percentage of species in need of protection rely, in one way or another, on an aquatic environment. About 60 percent of the animals on the threatened and endangered list nationally are either totally aquatic or need an aquatic ecosystem to complete their life cycle. A Nature Conservancy study of 20,000 native American species found the species depending on aquatic systems to be in the most dire straits.

The Arizona Game and Fish Department's list of wildlife of special concern includes 27 fish and 11 amphibians. Also, of the 24 listed mammals four are found primarily in riparian areas, and 25 of the 42 listed bird species are directly dependent upon riparian habitat.

Further complicating matters is the nature of water itself. Water does not stay in one place, flowing instead from headwaters to river mouth. Water is a resource often shared by several states and many users, for various purposes, from agricultural and urban uses to power generation. Regulation to save or protect a species or habitat along a river area can have implications all up and down the river. Things can, and do, get complicated.

Whether the frequent and, at times, broad and intensive ESA activity in the West benefits the region or is to its disadvantage — and opinions vary on this point — most people at least agree that the act significantly affects western water policy. Knowledge of the ESA will help in understanding its influence on Arizona and western water management.

Endangered Species Act Defined

In what might seem an unlikely strategy at a law symposium, speakers at the University of Colorado's Natural Resources Law Center's summer conference at times chose the power of metaphor over legal terminology when defining the ESA. With some degree of appropriateness, several speakers related the ESA to species of animals, although the reference was not entirely complimentary. The ESA was said to be the pit bull of environmental legislation and also was described as a 1,000-pound gorilla.

Another speaker noted religious or Old Testament significance to the law, when she connected the ESA with Noah's Ark, both act and ark preserving species from perilous fates. Psychological metaphors arose with ESA described as both a guilt trip and therapy, and chemistry provided a term when the law was called a catalyst since it compelled federal agencies to act. The ESA also was referred to as the ultimate safety net; debacles that develop over implementing the act are train wrecks.

That the ESA can inspire lawyers and government officials to forsake literal meanings for the dramatic flourish of metaphor speaks powerfully for the law's emotional appeal. And the choice of metaphors indicates something about the feelings involved. A 1,000-pound gorilla, Noah's Ark, a guilt trip and a train wreck clearly reflect complex and conflicting opinions. A review of the actual law and its application would help explain the reason for some of these feelings.

The purpose of the ESA, which was passed in 1973, is to conserve the nation's biological heritage consisting of its animal and plant species. The law enlists all federal agencies and departments in the effort to conserve

threatened and endangered species and to promote the purposes of the act. As stated in Section 7 of the act, all federal agencies are "to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence" of an endangered species or "result in the destruction or modification of habitat of such species."

The U.S. Fish and Wildlife Service is the agency within the Department of the Interior charged with surveying species status and to list those found to be "threatened" or "endangered." (The National Marine Fisheries Service of the Commerce Department deals with species occurring in marine environments and with anadromous fish.) "Threatened" species are considered likely to become endangered within the foreseeable future throughout all or a significant portion of their range. In greater peril, "endangered" species confront extinction.

The ESA also charges the above agencies to identify and designate "critical habitat" for listed species,

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based upon the best scientific data available. This is to identify and protect habitat essential to the species' survival and recovery. Critical habitat is the specific areas, within or outside the species' geographical range at the time of listing, which contain essential physical or biological features for conserving the species and which may require special management or protection.

Workings of ESA

Any federal agency involved in an activity that possibly could adversely affect a listed species or critical habitat must determine if, in fact, harm will result from that activity. Such federal agencies might be the Environmental Protection Agency in its concern for water quality, the Army Corps of Engineers when issuing a 404 permit or, as is frequently the case in Arizona, the U.S. Bureau of Reclamation when modifying one of its many water projects in the state. The federally involved agency, or as it is called in the act, the action agency, makes the first move.

The action agency's first step is to determine if the activity will adversely affect a listed or proposed species or critical habitat. During this process USFWS is available to provide information and technical assistance. In the majority of situations, investigations end at this point, with the action agency finding its project has no effect on listed species or habitat. No ESA concern thus arises.

If, on the other hand, the action agency finds the activity may affect species or habitat then steps are taken to ensure ESA compliance. Actions taken by USFWS to ensure ESA compliance vary, from informal consultations to the implementation of specific remedies called "reasonable and prudent alternatives." This represents a range of mandatory activities, from the least to the most restrictive.

Consultation is step one. Consultations between the action agency and the USFWS can be informal or formal. During informal consultations USFWS may suggest project modifications to avoid adverse impacts to listed species or critical habitat, with the proposed modification posing little or no change to the project's objectives. Or informal consultations may conclude with agreement that neither species nor habitat will be adversely affected by the project. Informal consultations often are routine occurrences, of limited newsworthiness, yet providing the modus operandi for accomplishing much EPA business.

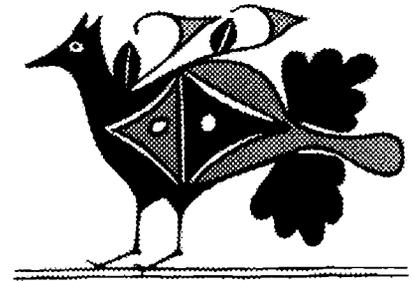
For example, Arizona Game and Fish was dredging an area of Mittry Lake near Yuma to restore wetland habitat. The restoration work required using heavy equipment in an area inhabited by the Yuma clapper rail, an endangered bird. AGF, BuRec and USFWS worked together to develop a plan to avert a potential endangered species problem. According to the plan, construction work would occur only during the birds' non-breeding season, September through March. The plan was worked out through an informal consultation process, to the satisfaction of all involved agencies.

Another example of ESA informal consultations occurred along the Verde River when the Arizona Department of Transportation worked on a pier by the I-17 crossing of the river, in a designated critical habitat for the razorback sucker, an endangered fish. Through consultations with the USFWS, a plan was developed to stretch a net across the flow of the stream above the construction site, to ensure that no razorback suckers enter the area. This too represents a low-profile endangered species action amiably settled, without confrontation or major costs.

Consultations, specifically at the informal level, settle over 95 percent of

ESA matters in Arizona. Of the 4,591 consultations at the Arizona state office for ESA compliance between October 1, 1983 and September 11, 1996 4,483 were informal, with only 208 consultations advancing into formal consultations.

If an issue is not resolved at the informal level, formal consultations take place. Formal consultations follow statutory procedures resulting in



San Ildefonso pottery bird design

USFWL issuing a written biological opinion. The opinion determines whether the proposed action poses jeopardy to a listed species or adversely modifies a designated critical habitat.

Jeopardy opinions result in fuller ESA enforcement; they do not, as is sometimes reported, provide cause to shut down a project. Jeopardy opinions are uncommon. As per the previously quoted figures, of the 208 formal consultations, out of the total of 4,483 consultations conducted in Arizona from 1983 to 1996, only eight or about 0.2 percent of the total projects reviewed and eventually completed resulted in a jeopardy opinion.

The incidents of jeopardy opinion in Arizona relating to water projects include U.S. Bureau of Reclamation's Upper Verde water exchanges; BuRec's Central Arizona Project and the introduction and spread of exotic fish; BuRec's operation of modified Roosevelt Dam; BuRec's expansion of Lake Pleasant; BuRec's operation of Glen Canyon Dam (two

jeopardy opinions); BuRec's construction of the Tucson CAP aqueduct and the Tumamoc globeberry vine; and the Environmental Protection Agency's water quality standards for navigable waterways.

USFWS almost always issues "reasonable and prudent alternatives" with a jeopardy opinion. RPAs are central to the ESA issue, provoking concern and often controversy, since they designate actions an agency must take to mitigate the jeopardy its project imposes on a species. Agencies in charge of a project sometime complain that RPAs are costly and/or disruptive to planned operations. USFWS officials reply that costs to implement RPAs, compared to total project costs, are seldom unreasonable. They point out the total environmental modification costs for CAP constitute only about one percent of the total project costs.

Nearly 40 percent of the species on the protected list now are stable or improving. Innovative measures are called for to restore the habitat for the remaining 60 percent. The condition of many of these species serve as important indicators of the sometimes declining health of the human habitat.

In Arizona no water projects have been shut down to comply with ESA enforcement. In several situations, however, RPAs were imposed that required certain modifications to protect species and habitat, thereby removing the jeopardy situation. The spread of exotic fish via the CAP and the expansion of Roosevelt Lake are two such examples.

The following discussions of these two situations help to identify some of the concerns and situations that arise with ESA enforcement and compliance. With ESA a variable to consider, complications can ensue—administrative, biological and political—to challenge, and sometimes frustrate water managers.

ESA Protecting Species

A project as vast and complex as the Central Arizona Project is likely to run into ESA problems. How could it not? The CAP consists of a 336-mile canal transporting water from the Colorado River into the interior of the state. CAP serves a large geographical area of Arizona, its complicated operations requiring the transport, treatment and storage of large quantities of water. During project construction about 40 ESA concerns arose, some readily resolved through informal consultations between BuRec and USFWS, with others requiring more elaborate efforts.

A major ESA concern arose in 1990 when BuRec began constructing a connecting canal between the CAP aqueduct system and the Pima lateral, a segment of the San Carlos Irrigation Project. Constructing the connecting canal had a special significance; it established a direct water-to-water connection between CAP and a local river system. CAP Colorado River water would mix with water from another river, in this case, the Gila River.

With the mixing of the waters Colorado River fish would likely be introduced into the Gila River and possibly threaten two endangered native fish, the spinedace and loach minnow, located upstream in Aravaipa Creek. This potential threat to native endangered fish needed to be considered.

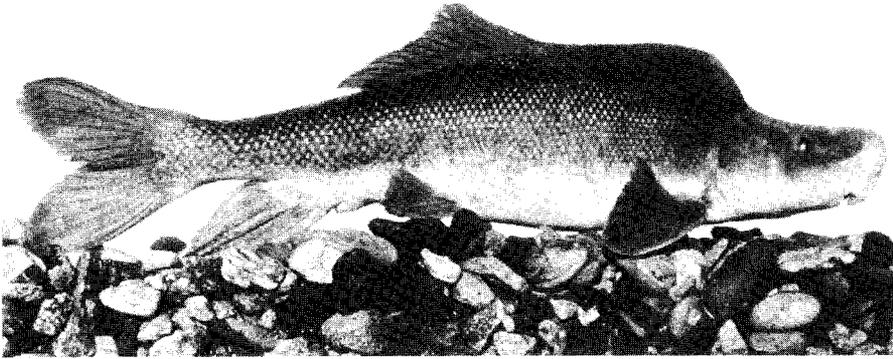
BuRec conducted a biological assessment that determined the construction may indeed affect the native fish species. With this determination the process moved into its next phase, with BuRec and the USFWS entering into formal consultation. This generally results in USFWS issuing a biological opinion stating whether a species will, in fact, be jeopardized if BuRec constructs the connecting canal.

The consultation process between BuRec and USFWS developed into an involved and complicated process, its focus expanding beyond concern with the Pima lateral to encompass the Gila River Basin, including the Hassayampa, Agua Fria, Salt, Verde, San Pedro, middle and upper Gila rivers and associated tributaries in both Arizona and New Mexico. With the broadening of concern and geographic focus two additional endangered fish were identified for protection, the Gila top minnow and razorback sucker. Instead of taking the prescribed 120 days, the consultation process continued for about three years, reflecting the substantial differences of opinion between BuRec and USFWS about the probable and actual threat posed to native species by CAP fish.

To summarize the fine points of each side's argument is beyond the scope of this newsletter. Presumably the positions were arrived at after expert interpretation of the biological data. That differing conclusions were reached perplexes and frustrates some officials who look to science to provide definitive answers. Whether—and to what extent—science is able to do this is itself debatable. Nevertheless, because of ESA biological controversies, critics often fault the scientific process involved in listing species.

In 1994 USFWS finally issued its biological opinion. The agency concluded that over its 100-year life the CAP canal system would allow non-native fish species to enter central and southern Arizona waters. Once established in these waters they would jeopardize the four species of endangered Arizona fish.

Having issued a jeopardy opinion USFWS then worked with BuRec to identify possible RPAs to avoid jeopardizing the native fish. The two agencies finally agreed upon RPAs that would include BuRec establishing two conservation funds, each at \$250,000 per year for 25 years, to sup-



In an ESA action the U.S. Bureau of Reclamation took precautions to ensure that Colorado River fish would not enter state waters via the CAP canal and pose a threat to endangered native fish such as the razorback sucker, pictured above. (Photo: Arizona Game & Fish Department)

port USFWS activities on behalf of native fish. One fund would support conservation actions for threatened and endangered native fish; the other would support research on controlling undesirable non-native fish and fund eradication efforts, if necessary.

Through the RPAs USFWS also required BuRec to construct two pairs of fish barriers, a pair on Aravaipa Creek and a pair on the San Pedro River. The barriers are to be small concrete dams, about four to 10 feet high, that would block the upstream movement of fish. Also, BuRec is to establish an information and education program to educate anglers and the public to avoid introducing non-native sport fish, bait fish or aquarium fish into local waters.

Further, BuRec is to annually sample and monitor Arizona fish populations for the life of the CAP. This is to detect any changes in fish populations or note any new non-native fish occurring in waters with native fish. By agreeing to carry out the above RPAs, BuRec avoided a jeopardy situation, enabling the agency to proceed with construction plans in ESA compliance.

A complication arose when the Central Arizona Water Conservation District, which operates and maintains the CAP, found the BuRec-

USFWS agreement not to its liking. CAWCD's ire was raised because it would be responsible for about two-thirds of the cost of implementing the RPAs. Construction-related cost are estimated to be about \$12 million, with about \$100,000 for monitoring. CAWCD disagreed with USFWS's biological opinion and opposed BuRec's acceptance of the RPAs.

In response CAWCD submitted its own report essentially refuting the findings of the USFWS biological opinion. CAWCD then requested that USFWS rescind its opinion and asked BuRec to reinstate consultations based on its new information. BuRec and USFWS's subsequent refusal prompted CAWCD to threaten litigation.

The possibility of litigation increased when the Southwest Center for Biological Diversity also threatened litigation over USFWS's biological opinion. Contrary to CAWCD's position, however, the center claimed the opinion did not go far enough in protecting native fish. Neither threats have materialized into actual lawsuits. Meanwhile, as BuRec worked on implementing the RPAs a political development further complicated matters.

Congressman Jim Kolbe and Senator Jon Kyle, in their proposed

amendments to the FY 97 BuRec budget, zeroed out funding to implement the RPAs. BuRec officials are unsure whether the action was intended mainly to reduce the national budget or whether a gesture against this specific ESA decision was intended. Without such funding, however, BuRec lacks money to carry out the RPAs, and would technically be in violation of the ESA. BuRec officials puzzle about what would be the next step, whether to renegotiate the RPAs, accept the consequences of being in violation of the ESA, or seek other available funding to keep the RPAs on track.

The ESA process in this situation was a long, drawn-out affair, yet still was not settled to the satisfaction of some interests. That the discussions were conducted behind closed doors, without the participation of varied interests, might have discouraged a more general agreement. This, however, is the usual ESA procedure.

BuRec was concerned that by opening the process to varied interests, an already unwieldy negotiation would be further complicated. As a result, despite the expressed interest of many outside organizations, including CAWCD and Arizona Game and Fish, the process was closed to outside involvement. This might partly explain CAWCD's dissatisfaction with the final outcome.

An oft-proposed ESA reform is opening the process to involve more and varied interests, from state and local government to environmental and utility interests. The idea is that with broader and more varied participation, less down-the-line disagreement and conflict would ensue.

The above scenario describes USFWS action to protect native fish species. Along with specific species, ESA also protects critical habitat, with a recent issue concerned with protecting the habitat of the Southwest willow flycatcher along the expanded shores of Roosevelt Lake.

ESA Protecting Habitat

Work was recently completed on rebuilding Roosevelt Dam, a major construction project undertaken to increase the storage capacity of Roosevelt Lake. Among the entities involved in the rebuilding project are BuRec, CAWCD, Salt River Project (SRP), and various Phoenix area cities.

After three years of work and the expenditure of \$430 million, a new and improved version of the dam was dedicated April 12. The height of the dam was raised by 77 feet to a total of 357 feet, and the lake's capacity increased to 3.4 million acre-feet, with about 1.6 acre-feet for water storage and the rest for use for flood control.

The dam's increased capacity established a new high-water mark at Roosevelt Lake and, at the same time, raised endangered species concerns. The USFWS claims the new high-water mark threatens a nesting area of the southwestern willow flycatcher, an endangered species.

To project participants this was unexpected and unwelcomed news. Prior to beginning construction all necessary procedures were followed to ensure that no endangered species would be disturbed. An Environmental Impact Statement prepared in 1988 did not locate any willow flycatchers in the area. The birds first arrived in the area in 1993 and were listed as endangered in 1995, as construction on the dam concluded.

The bird is nesting in two areas at Roosevelt Lake, in the east where the Salt River flows into the lake and the west where Tonto Creek enters. At these locales, the willow flycatcher is demonstrating surprising adaptability, nesting in saltcedar rather than its willow namesake, despite patches of the latter located nearby.

The willow flycatcher migrates from Central America and southern Mexico arriving in Southern Arizona

in late May, mates during June, and fledges its young in early July. Water levels at Roosevelt Lake usually peak about late April and May, about the time of the willow flycatcher's arrival. USFWL is concerned that flycatchers may arrive in the area to find their nesting trees mostly underwater.

The nesting trees are growing close to the old high-water level, 2,136 feet above sea level. The new construction raises the high-water level 15 feet, to 2,151 feet above sea level. The 15-foot difference between the old and new highwater marks represents the new storage capacity of the lake, an investment costing Phoenix-area cities about \$44 million

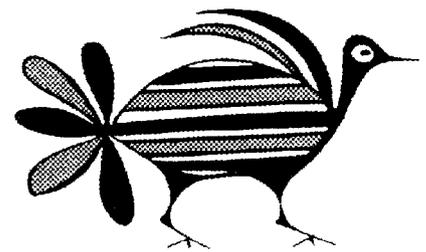
At issue is whether the rising levels of Roosevelt Lake will disturb the nesting areas of the bird. USFWL believes that sufficient risks exist to pose a jeopardy to the nesting area. The agency fears if the habitat is destroyed, the bird will be lost to Roosevelt Lake. Further, the agency claims the loss of the willow flycatcher at Roosevelt Lake will seriously affect the species in the entire Southwest.

BuRec biologists question the need to take action to protect the present nesting site of the willow flycatcher. They say the bird's present nesting trees were not always in the area and may not be in the future. Riparian vegetation fluctuates, the scouring action of floods wiping out growth that later grows back. In fact, aerial photography shows that the nesting trees were not in the current location after the 1978 and 1980 floods. The saltcedar grew during the early 1990s. Presumably a future flood will wipe them out, to begin the cycle all over again.

Some biologists believe that if the habitat dies, it will regrow further up the slope at a slightly higher elevation where inundation is less likely. How long this would take and whether the new trees will be suitable for flycatcher nesting, however, is uncertain.

An issue of interest in the Roosevelt Lake situation regards protecting a species in an ecosystem dominated by an exotic plant, the saltcedar. To protect this invasive plant, the bane of many western waterways, strikes a discordant note to many biologists.

SRP officials expect inflows will be sufficiently large to fill the new storage space only once every five to seven years, or possibly once every three to four years if the relatively wet



San Ildefonso pottery bird design

weather of recent decades continues. Even then water will remain only for a few months before being drawn down. They question whether the inundation caused by such infrequent and temporary use of this storage area will destroy the flycatchers' nesting trees. Possibly the saltcedar will be able to withstand several months of inundation, every four years or so.

USFWS devised a list of RPAs to be adopted to offset expected damages and to help preserve the species. The mitigation measures include purchasing a small ranch along the San Pedro River, near its junction with Aravaipa Creek. The ranch has a riparian area with the potential for establishing good flycatcher habitat. Mitigation monies also will be used to study the flycatcher. For example, such funds paid for banding the birds and collecting blood samples to determine the genetic diversity of the Roosevelt Lake population.

Mitigation monies also might be used to fence riparian areas along Tonto Creek and to encourage new tree growth at Roosevelt Lake at a higher water level. Finally money is to be used to trap cowbirds, a species that threatens the willow flycatcher. Cowbirds lay eggs in willow flycatcher nests, and the latter then cares for them to the neglect of their own eggs. The costs to implement the RPAs is about \$8 million.

Although mitigation measures are underway the issue may not yet be settled. A possibility still exists that a lawsuit could be filed claiming the mitigation measures are not adequate to protect the willow flycatcher. An injunction against filling Roosevelt Lake then might be sought until better mitigation measures are in place.

Despite the imposition of additional costs, some officials are grateful the situation did not involve even greater complexity and expenditures. This could have occurred if the Arizona USFWS shared the view of officials in the Denver USFWS office regarding a Denver water utility's efforts to renew leases on dams located on U.S. Forest Service land. USFWS in Denver is taking an historical view in this matter, claiming the dams' effects on species and habitat are to be reviewed from the time the dams were constructed, not at the point of lease renewal.

To historically evaluate Roosevelt Dam would have meant considering, not just the additional 15 feet gained by enlarging the dam, but to look at the impact of the original 270 feet resulting from the 1911 construction. The implications of this interpretation of the ESA to western water management would be enormous.

Arizona's Species Protecting Role

Arizona does not have any specific laws to protect species, although

several state agencies are indirectly involved in the task. For example, the Arizona Department of Water Resources, when reviewing applications to appropriate surface water rights, considers the general public interest. ADWR interprets this to mean that no harm will occur to any native habitat and/or species. Some projects, such as the modification of Roosevelt Lake, are reviewed by both ADWR and USFWS for possible effects on species.

Arizona Game and Fish also has a role in protecting species. As part of its regulation of the taking of wildlife, the AGF Commission prohibits killing of Gila Monsters and three species of rattlesnakes. Although basically a hunting regulation, this provision also serves to protect these species.

Also AGF gathers information to support efforts at protecting species. The agency maintains a database with information about sensitive and endangered species in Arizona. This information is available to USFWS and other agencies and individuals working at protecting species. AGF also publishes a listing, "Wildlife of Special Concern." The list is intended to "red flag" certain species needing special considerations. It has no statutory or enforcement powers to require AGF consultations regarding any proposed actions.

AGF carefully distinguishes its listing from the federal list of threatened and endangered species. AGF's listing once was titled "Threatened Native Wildlife in Arizona," with categories of "state threatened" and "state endangered." AGF discovered, however, that using the words "threatened" and "endangered" led people to believe that state categories were identical with the federal listing, which was not true. The state listing serves to promote prompt and early management actions, thus at times precluding the need for a federal listing of a particular species.

In its review of Environmental Impact Statements required under the National Environmental Policy Act, AGF considers the needs of the fish and wildlife in the state, with special attention paid to any threatened or endangered species. If it deems necessary, AGF will suggest project changes and modifications. AGF also participates in the review of Army Corp of Engineers 404 permits. Also AGF provides input during the public comment period when USFWS is considering listing a species or habitat.

Some states — e.g., neighboring California — have their own endangered species act. Efforts to pass an Arizona endangered species act, however, have not met with much success. The most recent attempt occurred six years ago and received only a single vote in committee. Attracting much more support and attention have been recent legislative efforts by Arizona Legislator Jeff Groscost. He has proposed two bills to limit ESA activities in the state.

Groscost proposed legislation two years ago that would have made it a misdemeanor for any person in Arizona to cooperate with the federal government on endangered species. Groscost again introduced legislation this year to limit federal ESA enforcement in the state. His most recent bill would have required legislative approval for any Arizona state agency or government entity, including cities and counties, to coordinate with the federal government on endangered species. The bill narrowly failed by two votes.

Groscost's strategy is to challenge the federal government on its endangered species authority, which is derived under interstate commerce provisions. If a federally-listed species occurs only in Arizona, Groscost believes the federal government has no constitutional authority to regulate it.

ESA Raises Controversy, Opposition

Given the law's broad range of coverage and the complicated, far-reaching effects of its enforcement, ESA often provokes controversy and conflict. Various objections arise, from the philosophical, to the highly emotional, to a practical concern about its workability in a day-to-day context.

Behind ESA's intent to protect endangered species and habitat is the philosophical premise that humans have a responsibility for the survival and existence of species. To some, this premise implies a moral obligation, beyond whatever legal commitments this or any other law sets.

Viewed in this light the ESA raises some basic questions, and how they are answered reflects an attitude or belief about life — human, animal and plant. At issue is an interpretation of the importance of human life in relationship to other species existing on Earth. Key questions include: Are there any justifications for humans to pursue activities that could lead to the extinction of a species? Which derived benefits, if indeed any, are of sufficient worth and value to compensate for the extinction of a species?

Some people argue that to respond to these questions is to participate in a religious quest to determine the role and meaning of human life on earth. They interpret the ESA as saying that humans exist as one species among many others in the world, and that human plans and projects are not so mighty to justify endangering the existence of any species. This view is at variance with the Old Testament notion that humans have dominance over the creatures of the earth.

(ESA's religious association is nicely expressed in the rhyming phrase "God Squad." The God Squad is another name for the En-

dangered Species Committee.

Authorized by the ESA, this committee reviews applications that seek exemptions from provisions of the act.)

Others argue from a much different perspective. They in turn don't believe the continued existence of a species necessarily justifies endangering or threatening human projects, especially those promising wide economic benefits. Offered the choice between the unthreatened existence of a species of fish or the maximum delivery of water and hydroelectric resources, they might choose the latter.

The two above positions could be viewed at either end of a spectrum running from extreme support to profound disapproval of the ESA. That, in efforts to defend and criticize the ESA, these positions widely range from the religious to the materialistic is another measure of the act's broad challenge of some basic human assumptions. Philosophy as much as law is at stake.

A topic of philosophical enquiry, a threatened species achieves another level of abstraction when it becomes a symbol. In the heat of battle between environmentalists and those stressing economic priorities, the individual species sometimes symbolizes the underlying political and economic differences between disputants, its role as living organism taking second place.

To some extent this is an issue along the San Pedro River where a contentious situation brews. Some environmentalists, expressing concern that groundwater pumping threatens the flow of the San Pedro River, oppose future growth in the Sierra Vista-Fort Huachuca area. To protect the river flow, the Southwest Center for Biological Diversity filed endangered species petitions on behalf of several species that occur along the river.

To many local people the real issue is economic growth, and the identified species merely represent a

ploy by meddlesome outside interests to accomplish their own agendas; i.e., to foster an anti-growth mentality and control public lands.

At the philosophical and symbolic level, ESA issues are difficult to pin down, with the result that informed critiques of what works and what does not, becomes difficult. More readily addressed are specific operational, in-the-field ESA concerns.

Many people fault the ESA for its undue emphasis on protecting individual species, with insufficient attention paid to the ecosystem. A species is a part of its ecosystem, supported by it and in turn contributing to it. Whatever protection is afforded to a species will be incomplete without also preserving its ecosystem. Awareness of the role of the ecosystem has been fairly recent, arising mostly after the passage of the ESA. As a result, ESA enforcement often has slighted ecosystem principles.

Among other identified areas of needed ESA change is more reliance on sound, credible science, including rigorous biological review, when determining listings. Much ESA controversy arises over the justification of listings which some critics believe often to be based on deficient science.

Much frustration with ESA has resulted from states feeling left out of the process. To many people, the ESA represents one more example of the "feds" telling states what to do. As a result, not only are ESA provisions resented, but that they originated from Washington made compliance with the ESA doubly galling at times, especially during this era of alleged anti-federal feelings. To many people ESA reform must begin with greater state, and even local involvement and participation.

Private Property Concerns

Private property concerns often loom large when the ESA is

criticized. At issue is not the negotiations among large federal agencies, each with an appropriated budget; instead, the issue often is individual and groups of private land owners needing to meet ESA compliance, generally with limited personal finances.

Such events often make the news, not because they represent expensive, complicated, high-stake undertakings, but because of the seemingly incongruent match of private citizens one-on-one with a federal agency. Often private landowners are viewed as victims enmeshed in legal entanglements not of their own making. Some recent innovations in ESA enforcement, however, have been worked out to address private property concerns.

In a letter to the editor in the September 22 "Arizona Daily Star" a private property owner expressed concerns about a USFWS proposal to declare the cactus ferruginous pygmy owl an endangered species and to designate some areas along the Santa Cruz River in the Tucson area as critical habitat. He wrote, "If this designation is established, it may severely reduce property values, restrict private property use and could prohibit recreation along these washes." To what extent does the ESA limit private owners use of their property?

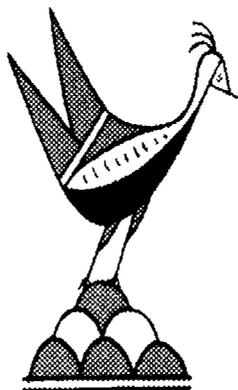
Several scenarios are possible depending upon different circumstances. For example, a person owning property, even if it were not designated critical habitat, could not kill, harm or harass – in legal terms "take" – a pygmy owl on the property, if the bird were declared an endangered species, without first obtaining a permit.

That some areas of private lands are designated as critical habitat will in no way affect what owners do on their lands providing it is strictly a private action, without any kind of federal nexus; e.g., a federal permit is not required nor is a federal loan requested. In such circumstances a per-

son owning land designated critical habitat for the pygmy owl could, for example, remove trees to clear an area for a shed.

If an owner of land designated as critical habitat wants to engage in an activity adversely affecting the habitat, and the activity in some way involves federal funding, permitting, or other action then USFWS must be notified. For example, if critical habitat were designated for the pygmy owl and the owner of such land wanted to clear trees to build a corral, with the project involving filling in a wash, a Corps of Engineers 404 permit would be required.

This would establish a federal nexus or connection, and the owner would need to check with USFWS on ESA compliance. USFWS then would consult with the owner to work out modifications and to issue a permit to allow the project to proceed while minimizing harm to the habitat. Possibly USFWS would suggest changing the location of the corral or that the owner plant trees in a designated area



San Ildefonso pottery bird design

as a mitigation measure.

A recent policy emphasis to meet private property owners' concerns is "safe harbors." "Safe harbors" was developed in response to concerns that landowners, if worried that their land might be designated a critical habitat, might take the preemptive action of eliminating such habitat; thus

avoiding perceived ESA hassles. Obviously this is not to the benefit of the species.

Per a "safe harbors" settlement, if a landowner agrees to manage the land to attract listed species, the government will hold future regulations of those lands to a minimum. Thus a return to baseline conditions – the prevailing situation when the agreement was signed – would be the worst-case scenario, with the best-case providing at least short-term habitat availability for the species.

Also to accommodate interests of private property owners USFWS proposed a "small landowner exemption" for threatened species. With the assumption that small landowners do not significantly affect threatened species, various exemptions are allowed; e.g., on activities conducted on residential properties or on five acres or less.

Habitat Conservation Plans or HCPs are another strategy to meet the needs of private property owners. A landowner would not be able to clear trees for buildings if the action involved a "take" of an endangered species. The landowner, however, could apply for a USFWS permit to allow the "taking" of endangered or threatened species incidental to otherwise lawful activities, if the taking is mitigated by conservation measures. To obtain such a permit, the landowner would develop an HCP, with USFWS acting as an advisor. An HCP typically would include provisions to minimize "take," by reducing or compensating for the action.

In a 1982 ESA amendment Congress designated the HCP option. Its use, however, has not been emphasized until fairly recently. As of February 1996 112 incidental take permits have been issued for HCPs, with 15 permit amendments issued and approximately 200 HCPs being developed. Two HCPs are being developed in Arizona. In the ten

years prior to the Clinton Administration only 15 HCPs were in effect.

In another example of the ESA engendering colorful phrasing, a “no surprises” or “a deal is a deal” policy has been adopted to reassure those who have developed HCPs. In effect, the policy states that HCP participants will face no further requirements or restrictions without their consent, even if the status of the species covered by an HCP worsens.

Washington Tackles ESA

That dissatisfaction with the ESA might result in a major legislative overhaul of the law seemed a distinct possibility after the 1994 election. Republicans gained control of both houses of Congress while an anti-federal, anti-regulatory mood seemingly prevailed in the land.

As a result, in the early days of the 104th Congress the ESA seemed vulnerable. Beseated by controversy the ESA itself had become something of an endangered species, with those favoring the act seeking to protect and preserve it, and those opposed viewing it as a species of law that is expendable, to be changed and modified.

Various legislative efforts to “reform” the ESA included a provision to restrict government’s takings power by ensuring payment to landowners in circumstances that would greatly limit ESA’s effectiveness. Risk assessment/cost benefit legislation also was proposed to establish a process of rulemaking that would greatly limit the listing of new species under the ESA. ESA funding was threatened and actually reduced.

In other action the Endangered Species Conservation and Management Act of 1995 was proposed to reauthorize the ESA. This act would have greatly limited ESA’s involvement in water issues. Dams, hydroplants, irrigation projects and other

water-related rights would have been exempted from ESA jurisdiction. These changes along with other proposed ESA enforcement limitations prompted Secretary of the Interior Bruce Babbitt to comment, “If Noah had to follow all the rules in this bill, he wouldn’t have needed an ark. He could have fit all the animals he was allowed to save in a canoe.”

In its most successful anti-ESA maneuver Congress temporarily halted the listing of any new threatened and endangered species, as well as final designation of critical habitat for a full year beginning April 1995. However, despite the early bravado of ESA critics, the act, except for the moratorium, managed to survive undamaged. Whatever changes now await ESA will come after the fall elections. ESA supporters believe that such changes will be more reasonable and less disruptive than what was proposed this year.

Meanwhile officials of the Clinton administration have stated that a virtue of the ESA is its flexibility, and that the law can be creatively interpreted to meet the justified concerns of many of its critics. Further, they believe that many of the problems resulting from its enforcement can be remedied by the law, as written, without the need to rewrite or otherwise radically change the law. Efforts therefore have been made to administer the law in a way to mitigate some of the previous difficulties and problems, thus reducing some of the conflict arising from the law.

Nontraditional ESA Strategy

Amidst calls to revise or otherwise change the ESA, a program is underway in Arizona to test new methods of administering and enforcing the law. The Lower Colorado River Multi-Species Conservation Program (MSCP) represents an ef-

fort to work out new ESA strategies in previously troublesome compliance areas. Success of the program would demonstrate ESA flexibility and could encourage new methods of operation.

In March 1994, USFWS designated the lower Colorado River as a critical habitat for three big river fish: the razorback sucker and the bonytail and humpback chub. The affected area includes the portion below Glen Canyon Dam to the Southerly International Boundary and contains the 100-year floodplain and reservoir full-pool elevations within Arizona, California and Nevada. The designated critical habitat area includes 1,200 miles of the Lower Basin. Of that amount approximately 800 miles are within Arizona, with the remaining 400 miles shared by the Lower Division States.

The critical habitat designation portended changes in Colorado River management. In assessing the possible significance of these changes water and power interests in the lower Colorado River basin states — Arizona, California and Nevada — became concerned that USFWS efforts to protect species and habitat might jeopardize present and future water and hydroelectric power supplies.

The risks were sufficiently formidable to prompt various Colorado River interests to design a strategy for their mutual benefit. This was the beginnings of the MSCP. The program represents a preemptive effort to work out solutions to species problems in an attempt to offset any adverse ESA directives. It is also a protective maneuver to ensure input during ESA negotiations.

This was a daunting task, to work out problems over a vast land area, with many and diverse agencies, organizations and individuals each having interests at stake. The challenging situation called for nontraditional strategies. With Secretary of Interior Bruce Babbitt supporting a

more flexible ESA approach, the times seemed ripe for such an endeavor.

ESA's enforcement usually is top-down, with the federal government calling the shots, often to the alleged disadvantage of state and local interests. In contrast, MSCP is made up of wide and varied representation. Interested participants include the three Lower Colorado River basin states' water, power and wildlife agencies, various Department of the Interior agencies — Bureau of Land Management, Bureau of Reclamation, Fish and Wildlife Service and the National Park Service — mainstem Indian tribes, environmental organizations, and Arizona municipal and agricultural interests.

The above nontraditional working partners meet in open, collaborative, consensus-building sessions to discuss and decide important issues. This is not the usual ESA fashion. Traditionally USFWS would meet with an action agency behind closed doors to decide many ESA matters.

(Not unique to this project, the collaborative strategy is taking hold throughout the West to resolve natural resource and environmental issues. The intent is for those closest to the situation to become involved and work out problems, thus minimizing the heavy hand of federal regulation and enforcement. A new publication devoted to consensus decision-making, "Chronicle of Community," recently got started. The publication included a feature that began, "The buzz of consensus is all around the West now. You can hear it being whispered by the grasses, moaned by the trees, gurgled by the fishes, hummed by the bees." And, it might be added, orchestrated by officials along the Lower Colorado River Basin.)

Broadly representational, the project also has a wide focus. Program organizers soon realized that much more was at stake than the four

listed big river fish. They found that many more ESA-listed plant and wildlife species occurred or could occur in the river corridor. Also, many other species cited as candidates for listing were present in the designated critical habitat. With the presence, real and potential, of many other threatened and endangered species, future ESA hassles were likely along the Lower Colorado River.

In response to this situation, the MSCP, rather than just focusing on



Above is the triangular leaf of the Tumamoca macdougalii. Since delisted, the plant species was an issue during construction of the CAP Tucson aqueduct. (Photo: U.S. Fish & Wildlife)

recently listed fish, is taking a multi-species, ecosystem-based perspective. This is unique to most ESA compliance strategies which usually consider a single species. For example, the Upper Colorado River Basin ESA approach is to focus mainly on the endangered fish.

In contrast, MSCP's range of interest will include more than 100 federal or state-listed candidates and sensitive species and their associated habitats, ranging from aquatic, wetland and riparian habitats, to upland

areas. The biological needs of mammals, birds, fish, amphibians and reptiles, as well as invertebrates and plants will be addressed.

Another innovative aspect of the MSCP is its attempt to address state and private uses of the river along with federal uses within a single overall river management plan. The usual ESA course of action is to have parallel processes for federal and non-federal users.

In effect this means that lower basin states' water and wildlife entities are developing a Habitat Conservation Plan to address state and private river uses; meanwhile federal agencies are preparing a biological document on federal river uses to comply with sections of the ESA. With the two documents to be combined into a single plan, all participants are taking an equal role in working toward a common management solution. This is a new and untried ESA strategy.

Plans call for developing a suitable ecosystem-based conservation program within three years. Cost to develop the program and interim conservation measures is expected to be about \$4.5 million, with 50 percent of the cost to be shared among participating federal agencies. The Lower Colorado River basin states will share the remaining 50 percent. Of this amount California is to pay 50 percent, Arizona 30 percent and Nevada 20 percent. Arizona's allocation, about \$675,000, is to be equitably shared by various users of Colorado River waters.

Participants hope successful implementation of the program will demonstrate to critics that the ESA offers workable and viable options to preserve species without unduly disrupting established, ongoing activities. Successful results also will show the act can rally varied interests to work together and that ESA compliance need not be a forced, lockstep march to rigid federal regulations.

Conclusion

More ESA consultations occur in the West than in other regions of the country. The downside to this situation is readily apparent. Enforcing a law generally restricts an activity, often to the consternation of those wanting to engage in that activity. Unless general agreement exists about a law and its provisions — certainly not the case with the ESA — enforcement often begets controversy.

Another view of the situation also is worth considering. The reason the West may seem to experience an undue proportion of ESA enforcement is that the West, to its great, good fortune, has a larger number of existing native species than do other parts of the country. Given the facts of modern life, this means that more threatened and endangered species are likely to occur in the West than in the East, where growth and development long ago eradicated many of their native species. ESA problems in the West might well prompt the envy of other regions.

ESA activity in the West is a sign

that the importance of the region's still plentiful and diverse plant and animal life is recognized. Further, they are sufficiently valued to justify a great expenditure of effort, resources and money, to ensure their survival. Even the controversy, if creatively and productively managed, can encourage a more favorable climate for the acceptance and enforcement of the law. At one level, the protection of species represents the hope of the entire western region.

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