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**Written Testimony  
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(Subcommittee on Water and Power)  
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**Oversight Field Hearing on  
The Endangered Species Act 30 Years Later: The Klamath Project  
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## **Introduction**

Mr. Chairman and other Congressional members, my name is David Vogel. Thank you for the opportunity to testify at this important hearing. I am a fisheries scientist who has worked in this discipline for the past 29 years. I earned a Master of Science degree in Natural Resources (Fisheries) from the University of Michigan in 1979 and a Bachelor of Science degree in Biology from Bowling Green State University in 1974. I previously worked in the Fishery Research and Fishery Resources Divisions of the U.S. Fish and Wildlife Service (USFWS) for 14 years and the National Marine Fisheries Service (NMFS) for 1 year. During my tenure with the federal government, I received numerous superior and outstanding achievement awards and commendations, including Fisheries Management Biologist of the Year Award for six western states. For the past 14 years I have worked as a consulting scientist on behalf of federal, state, and county governments, Indian tribes, and numerous other public and private groups. During my career, I have been extensively involved in Endangered Species Act (ESA) issues including research on threatened and endangered species, listing of species, Section 7 Consultations, Biological Assessments, Biological Opinions, and recovery planning. I was a principal author of the original 1992 Biological Assessment for the Klamath Project and served as a peer reviewer for both of the National Research Council (NRC) Klamath Committee's reports. I have worked as a scientific consultant for the Klamath Water Users Association (KWUA) for the past 12 years.

I would like to bring to your attention several points highly relevant to the purpose of this hearing. The details of my testimony are encompassed by two main topics:

- 1) A serious problem with inconsistent application of ESA science
- 2) The benefits of the recent NRC's review of the Klamath situation

### **Inconsistent Application of ESA Science in the Klamath Basin (The Problem of ESA Double Standards)**

While conducting my research, I uncovered some very troubling information relating to the original listing of the suckers as endangered in 1988. A chronology of events leading up to and following the listing reveals disturbing evidence that should serve as a wake-up call in order to avoid future ESA problems similar to those experienced in the Klamath basin. As you will see, we have learned from the Klamath situation that: 1) the standard to list a species is greatly different than the standard to delist a species; and 2) what the federal agencies claim they will do at the time of species listing (ecosystem approach) can be dramatically different after listing (narrow, singular focus). The following are just some representative examples, although many others exist.

### **Sucker Population Estimates**

The most compelling and prominent reason why the federal government justified listing the two sucker species as "endangered" in 1988 was an apparent abrupt downturn in both

populations during the mid-1980s. At that time, the sucker population declines were characterized as precipitous (Federal Register, Vol. 53, No. 137), alarming (USFWS 1987), drastic (Williams 1986), shocking (Bienz 1986), dramatic, and a crisis (Kobetich 1986a). In 1986, the Klamath Tribes believed that both species would become extinct by 1991 without immediate action (Kimbol 1986). At the same time, the Bureau of Indian Affairs (BIA) suggested the shortnose suckers would be extinct in just a few years (BIA 1986). In 1987, a USFWS report stated that the consensus of opinion was: “*shortnose suckers are in danger of dying out in the next several years*” (Williams 1987). In 1984, the Upper Klamath Lake population of shortnose suckers was estimated at 2,650 fish and in 1985 too few fish could be found to estimate the population size. The estimated Lost River sucker population was 23,123 fish in 1984 and 11,861 fish in 1985 (Federal Register, Vol. 53, No. 137). In the Lost River watershed, it was assumed (incorrectly) that only a small population of Lost River suckers were present and that the shortnose suckers had so extensively hybridized, their populations were discounted as contributing to the species (Kobetich 1986a, Federal Register, Vol. 53, No. 137). To support the decision to list the suckers, the USFWS believed the only significant remaining populations were in Upper Klamath Lake. We now know that the assumptions by the USFWS were in error and the assumed sucker population crisis never materialized. In fact, shortly after listing of the species, the populations demonstrated dramatic increases.

The estimates used to justify an extremely low population in the 1980s were based on a very limited, inappropriate technique and exceptionally small sample size, but was deemed adequate by the USFWS to support listing the species. However, more than a decade later, with a much more valid, sophisticated technique and extremely large sample sizes that amply demonstrated very high sucker populations, the new method was deemed by the USFWS as unsuitable for use in delisting. Displaying a striking inconsistent application of ESA science in its recent decision not to accept a delisting petition, the USFWS concluded, “*Comparisons between current estimates and those made during the fishery, prior to its termination in 1987, are not informative due to extreme differences in methodology. Population estimates made since listing, while numerically higher than earlier estimates, show no overall trend for increasing populations within the last decade.*” (Federal Register, Vol. 67, No. 93). The science on the suckers evolved with beneficial new information, but the USFWS’s application of the ESA did not.

One of the most revealing statements demonstrating a conflicting use of the ESA is provided by the USFWS in a 1986 internal memorandum. At that time, the USFWS believed that there were only about 12,000 Lost River suckers in Upper Klamath Lake and that suckers elsewhere were hybridized or simply small, remnant populations. Yet given those circumstances, the USFWS concluded: “*We have chosen not to pursue listing of the Lost River and Klamath largescale suckers at this time because of their larger population sizes and broader distribution*” [compared to the shortnose suckers] (Kobetich 1986a). It is apparent the agency flip-flopped its standard for “endangered” status because by the mid-1990s, it was determined that the Lost River suckers greatly exceeded the original 12,000 population by tens of thousands of fish and were found over a greater geographic area, yet the species remained “endangered”.

## **Sucker Recruitment**

The lack of significant recruitment of both species was considered by the USFWS as a convincing reason to list the species as “endangered” in 1988, suggesting that neither species of sucker had spawned successfully in Oregon for approximately 18 years (Federal Register, Vol. 53, No. 137, citing Scopettone 1986). Conversely, it is now evident that the Upper Klamath Lake sucker populations have gone from assumed little or no recruitment in the approximate 18 years prior to listing, to recruitment *in every year including substantial recruitment in some years* (NRC 2004). Based on data collected during the 1990s, we now know the USFWS’s assumptions on sucker recruitment were flawed.

## **Harvest of Suckers**

Just prior to the listing of the suckers in 1988, a sport snag fishery was allowed. Before 1969, the fishery was largely unregulated with no harvest limit; in 1969 a generous bag limit of 10 fish per angler was imposed (Golden 1969). During the early to mid-1980s, despite the belief that the numbers of fish were in a state of rapid decline, the State of Oregon still allowed the sport snag fishery. Ultimately, because of increased focus on the status of the sucker populations, Oregon eliminated the fishery in 1987. What is particularly interesting about this circumstance is that written records indicate that none of the involved individuals at the time believed that the annual sport harvest of thousands of suckers on their spawning grounds was a significant factor contributing to the declines in the populations (e.g., Andreason 1975). In 1986, the USFWS concluded, “*Loss of fish to the snag fishery does not appear to have a causal factor in the decline.*” (Kobetich 1986a) and “*Fishing does not appear to be a significant threat for any of the suckers.*” (Kobetich 1986b). However, an examination of historical records demonstrates that the harvest of suckers was extensive (Cornacchia 1967, Golden 1969). The first detailed description explaining how and why the snag fishery caused significant harm to the sucker populations was provided by Vogel (1992). More recently, the NRC Klamath Committee came to the same conclusion (NRC 2004). If the USFWS would have properly assessed the known impacts on the suckers caused by the snag fishery and the benefits from ceasing the fishery, it very likely could have affected the ultimate listing decision.

Simply stated, the largely unregulated snag fishery slaughtered the sucker populations. Since the fishery was eliminated in 1987, the two sucker populations dramatically rebounded. The threat was removed and the populations increased ten-fold. But unlike the rationale to originally list the species, the current inflexibility of the ESA will not account for that major beneficial effect.

## **Species Distribution**

As stated earlier, the USFWS essentially discounted the Lost River suckers in the drainage as a significant contribution to the species status because only a “*small, remnant population*” was present in Clear Lake. The shortnose suckers in the drainage were essentially written off because of purported extensive hybridization.

As soon as just three years after the sucker listing, it became evident that the USFWS's assumptions on the status of shortnose suckers and Lost River suckers in the Lost River/Clear Lake watershed had been in serious error. Surveys performed shortly after the sucker listing found a substantial (reported as "common") population of shortnose suckers in Clear Lake exhibiting a young age distribution (1-23 years) and young Lost River suckers (3-23 years old). Within California, the surveyors considered populations of both species as "*relatively abundant, particularly shortnose, and exist in mixed age populations, indicating successful reproduction*" (Buettner and Scopettone 1991).

The geographic range in which the suckers are found in the watershed is now known to be much larger than believed at the time the suckers were listed as endangered in 1988. For example, other than the abundant population of shortnose suckers found by surveys performed in Clear Lake just after the listing, it was reported in 1991 that shortnose suckers were found "*throughout the Clear Lake watershed in the upper basin*". It was also reported that "*there may be a substantial population*" of Lost River suckers in Clear Lake (Buettner and Scopettone 1991). Since the 1991 report, shortnose suckers have also been found at Bonanza Springs, Anderson-Rose Dam, and Tule Lake; Lost River suckers have been found at the latter two locations. Recent population estimates for suckers in the Lost River/Clear Lake watershed indicate their numbers are substantial and that hybridization is no longer considered a significant issue (NRC 2004). Tens of thousands of shortnose suckers, exhibiting good recruitment, are now known to exist in Gerber Reservoir.

Had it been known, these major findings undoubtedly would have had a significant influence on the listing decision. Again, unlike the rationale used to list the species, the inflexibility of the ESA has not accounted for this major improvement to fish distribution throughout the watershed.

### **The USFWS and NMFS Singular Focus on the Klamath Project**

The Endangered Species Act of 1973 states: "*The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved ...*". Despite the so-called ecosystem approach to species recovery advocated by the USFWS and NMFS, their actions in the Klamath basin over the past decade amply demonstrates that the exact opposite took place. They focused on: 1) a single-species approach; and 2) Klamath Project operations.

At the time of the listings in 1988, the Klamath Project was not identified as having known adverse affects on the sucker populations, yet four years after the listing, using limited or no empirical data, the USFWS turned to the Klamath Project as their singular focus. Paradoxically, since the early 1990s, despite new beneficial empirical evidence on the improving status of the species and lack of relationship with Klamath Project operations, the USFWS became ever more centered on project operations and increased restrictions on irrigators instead of paying attention to more obvious, fundamental problems for the species. This circumstance caused tremendous expense in dollars and time by diverting resources away from other known factors affecting the species.

In 1987, the USFWS published a notice in the Federal Register soliciting comments on the proposed listing of the two suckers as endangered species. No public hearing was requested or held, probably because the USFWS did not identify Klamath Project operations as affecting the species. For the most part, the listing was innocuous. Only 13 written comments were received, with none opposed to the listing. Only two private parties responded; the rest of the comments in support of the listing came from government agencies, an Indian Tribe, and environmental organizations. Numerous documents prior to the sucker listing made it evident that the USFWS would not focus on the Klamath Project. If the suckers were proposed for listing today, it would be interesting to note how many individuals would oppose it knowing the scientific facts that the last 16 years have produced; particularly if the USFWS would have revealed that it was going to focus its attention on Klamath Project operations.

A similar circumstance occurred with NMFS during and after the coho salmon listing in the lower basin. It cited the reasons to list coho salmon, excluding Klamath Project operations as a significant factor affecting the species. However, shortly following the listing, and with no supporting data, NMFS chose to center its attention on the Klamath Project as the principal factor affecting coho salmon. Both agencies adopted a single-minded approach of focusing on Klamath Project operations to artificially create high reservoir levels and high reservoir releases. This puzzling, similar sequence of events has yet to be explained by agency officials. What compelling, empirical scientific data would cause a broad-spectrum approach for species recovery to quickly turn into a narrow, singular attack on Klamath Project irrigators?

Based on what was learned in the Klamath basin, what the agencies say they will do at the time of a listing and what they end up doing after the listing are radically different. These problems have continued well after the sucker and coho listings. Now that the independent NRC report has been published, hopefully, this unbiased and balanced document will put things back on track toward a more holistic approach. The fact remains, despite the ESA mandate, the USFWS and NMFS did not use an ecosystem-based approach for species recovery.

### **The NRC's Klamath Report**

As an individual who has been extensively involved with ESA technical issues in the Klamath basin for more than a decade, I can tell you that the NRC's final report is a long-overdue breath of fresh air for the basin. For reasons now clearly evident, our original recommendation for an outside technical review of the ESA activities in the Klamath basin by an objective group such as the National Academy of Sciences *back in 1993* (KWUA 1993) was an important first step. The benefits of an ESA peer review are obvious after reading the NRC's final report.

The NRC Klamath Committee and the NRC staff should be commended for a job well done. Despite intense efforts by some agencies and individuals, the NRC Committee did not succumb to "peer pressure science" to derive their conclusions. Science needs open dialogue and debate, not the animosity and close-mindedness that some isolated individuals and groups have generated in the basin.

We are beginning to see signs of progress with ESA activities in the basin. However, alarmingly, there are some individuals within the agencies that are in a state of denial over the findings and conclusions of the NRC's report. This is evident, for example, when you examine the recent NOAA Fisheries revised incidental take statement for the Klamath Project Biological Opinion. The agency did not mention or incorporate the pertinent findings of the final NRC report and continued to cite non-peer reviewed draft reports to form their "opinions". Also unfortunately, there appears to be a disturbing mindset and trend among some groups to spend time and funds unnecessarily on litigation when it comes to ESA issues. That approach will stifle the scientific advancement of species recovery. These two circumstances should not be allowed to occur. Despite the NRC's final report, the USFWS and NMFS still have too much focus on the Klamath Project (as indicated from recent Biological Opinions) and not enough emphasis on a watershed-wide approach. The NRC final report should serve as the primary mechanism to get the Klamath situation back on track toward species recovery and reduction of resource conflicts. The agencies need to begin focusing on other factors affecting the species and other, more creative and inclusive methods to satisfy the ESA statute (NRC 2004).

It is very important to note that many of the most pertinent findings, conclusions, and recommendations of the NRC Klamath Committee were not new to the USFWS or NMFS. The NRC final report advocates a watershed approach, peer review, greater stakeholder involvement, oversight of agency actions, focus on factors other than the Klamath Project operations, reduction of resource conflicts, and incorporation of the principles of adaptive management toward species recovery. Over the past decade, I and others reported much of the same and similar technical findings and recommendations to those two agencies, but were mainly ignored (e.g., Vogel 1992, KBWUPA 1993, KBWUPA et al. 1994, KWUA et al. 2001, and comments by the KWUA on the USFWS and NMFS Biological Opinions). Additionally, the NRC's major conclusion that there is insufficient scientific justification for high reservoir levels and high instream flows was always prominent in our technical comments on the agencies' biological opinions during the past decade.

## **Summary**

### **Inconsistent Application of the ESA**

In the Klamath basin, the science associated with the species evolved, but the ESA did not adapt or incorporate that science. At the time of the 1988 listing of the suckers as endangered species, the information on population status, geographic distribution, and recruitment was either in error or the sucker populations have demonstrated a remarkable improvement over the past decade. I believe it was a combination of both. The two sucker populations are now conclusively known to be much greater in size, demonstrating major increases in recruitment, and are found over a much broader geographic range than originally reported in the 1988 ESA listing notice. Despite this indisputable empirical evidence, current implementation of the ESA does not provide the flexibility necessary to downlist or delist the species. The process and rationale to list a species should not be held to a different standard for delisting a species. Additionally, despite the ESA

mandate, the USFWS and NMFS did not use an ecosystem-based approach for species recovery and inappropriately focused their resources on the Klamath Project.

### **The NRC Klamath Report**

The NRC Klamath Committee's final report was an outstanding effort and the product must serve as a catalyst to advance balanced natural resource management in the basin. If federal agencies meaningfully incorporate many of the NRC's principal findings, conclusions, and recommendations, we fully expect positive results to the species recovery and reduced resource conflicts. We should use the momentum of the NRC's final report to guide recovery efforts and watershed improvements. However, if the agencies do not take this pro-active approach, we could again return to the disaster that transpired in 2001. If the manner in which the ESA is administered in the Klamath basin does not change, it is unlikely that the species will ever be delisted. This circumstance would not be a result of biological reasons, but because of procedural problems with the ESA and its implementation.

Science is constantly evolving based on new research and information. Why shouldn't the ESA also evolve and adapt based on lessons learned such as those in the Klamath Basin?

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