

TESTIMONY OF DAVID A. VOGEL

Before the House Committee on Resources Hearing on:

- H.R. 2829, To amend the Endangered Species Act of 1973 to require the Secretary of the Interior to give greater weight to scientific or commercial data that is empirical or has been field-tested or peer-reviewed, and for other purposes.
- H.R. 3705, To amend the Endangered Species Act of 1973 to require the Secretary of the Interior to use the best sound science available in implementing the Endangered Species Act.

March 20, 2002

Mr. Chairman and members of the Committee, thank you for the opportunity to testify at this important hearing. My name is David Vogel. I am a fisheries scientist who has worked in this discipline for the past 27 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 12 years I have worked as a consulting scientist on a variety of projects 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 have been a long-time supporter of the fundamental principles of the ESA.

Mr. Chairman, I am here to enthusiastically support H.R. 2829 and H.R. 3705 because these bills will significantly improve the scientific integrity and implementation of the ESA. First, providing peer review when necessary is a proactive approach to prevent the probability of faulty decisions that may be unbeneficial, if not harmful, to species. Second, giving greater weight to empirical information (as compared to theoretical) will increase the probability that the best possible decision is made when it comes to the welfare of fish and wildlife species. These two measures described in the bills will result in substantive improvements and instill greater confidence in future ESA actions.

The ESA Scientific Process: When It Works and When It Does Not

During my career, I have observed many examples of when the ESA process is effective and when it is not effective. I have had extensive involvement with both USFWS and NMFS implementation of the ESA and have seen successes and failures. I have observed examples where the lack of outside input and insufficient

emphasis on empirical data served to undermine the ESA process. The most recent, prominent example took place in the Klamath basin. When I started working on endangered species issues in this region more than 10 years ago, the ESA process was open and dialogue occurred among all parties. Scientific data and information were exchanged and the ESA process allowed for technical input from all individuals. However, over time the process became closed. This culminated into a series of ESA-based actions where only selected information and individuals were included in the formulation of the two final Biological Opinions that cut off water to the Klamath Project in 2001. Only certain information was used by the USFWS and NMFS and additional relevant science-based information was either overlooked or ignored. The agencies gave greater weight to theoretical information to support an assumption for high lake levels and high reservoir releases without acknowledging empirical data that did not support their premise. As you know, a recent National Academy of Sciences' (NAS) review of the 2001 Klamath Biological Opinions concluded (among other findings) that there was insufficient scientific justification to support USFWS's demand for higher-than-historical lake levels for two species of endangered suckers and NMFS's demand for higher-than-historical reservoir releases for threatened coho salmon. Notably, the NAS committee members were unanimous in their conclusions on both Biological Opinions.

In my experience, a common factor in all instances where the ESA process worked effectively has been when the process was open, constructive, and collaborative. The federal employees sought input from knowledgeable scientists and stakeholders both within and outside the government on all sides of the issues. Sometimes scientific debate ensued, but the process improved the agency's decision-making abilities. This open method worked not only to the benefit of potentially affected parties, but also the listed species. This works well because many individuals within USFWS and NMFS do not have all the information and expertise necessary to make the most appropriate decisions and ensure the welfare of species. Simply because an individual works for the federal government does not guarantee his or her scientific authority on fish and wildlife. Commonly, the federal agencies have people with little or no practical field experience in administering the ESA. Having worked within the USFWS and NMFS for 15 years, I believe these two federal agencies need all the technical assistance they can get. I have worked with many outstanding credible biologists. Conversely, I have observed many inexperienced biologists. Additionally, I have seen a high turnover rate in some federal offices resulting in the agency losing their most knowledgeable staff. Peer review would provide these agencies with that necessary technical assistance, if needed. Why wouldn't biologists in these agencies be expected to effectively use the best available scientific information and perspectives? The current ESA does not ensure this situation; H.R. 2829 and H.R. 3705 will. Good science and the best application of accepted scientific principles demand diversity in perspectives and opinions, as well as data/information input from more than sources who are "like-minded".

Benefits of Peer Review and Empirical Data

Inserting peer review into the ESA process is an overdue concept. Furthermore, providing greater weight to empirical, instead of theoretical, information makes sense. These are good measures, not bad, for fish and wildlife resources. The lack of application of good scientific principles in ESA processes can serve to the detriment of these resources. A more rigorous scientific approach is essential for the ESA. It allows for the development of scientific alternatives that, in my experience, will lead to innovative measures to avoid

impacts to listed species, and, importantly, develop proactive actions for improving species habitats and increasing the populations.

Selective, one-sided use of information is inappropriate in the ESA process. In some recent ESA procedural actions, one-sided information was used whereas alternative information was overlooked, ignored, or casually dismissed. The existing process allows one individual to essentially serve as judge and jury. Peer review will provide balance and fair treatment of all information. This is particularly important when other valid, relevant empirical data are available. When the stakes and ramifications are high on both sides of an issue, peer review becomes all the more important. Peer review will also insulate a federal employee from outside pressure that could influence the individual's actions in an improper direction. This latter example points out the fact that it is necessary to protect these people from "peer-pressure" science and engage peer-review science.

Although scientists are supposed to be the most-demanding critics of their work, they sometimes succumb to their strong belief in a particular hypothesis. When this occurs, the scientist becomes attached to that belief and acquires a parental affection to his or her hypothesis. Sometimes the affection is so strong, the individual overlooks or ignores empirical data that is contrary to the person's belief. In this context, the existing ESA process permits the following undesirable scenario: an inexperienced individual administering the ESA has a speculative idea that evolves into an assumption. Over time, that assumption turns into a fact. Ultimately, the presumed fact becomes a mandate under the ESA. In my experience, once this occurs, it is next to impossible to change. Such circumstances can be prevented with appropriate peer review and better use of empirical information instead of conjecture or theories.

There is uncertainty in science. Peer review will, at a minimum, disclose what is known (placing the greatest weight on empirical data) and what is not known when empirical data are not available. This can culminate into the most-well-informed resource management decisions. Too often the doubtfulness is not revealed in the present-day ESA process or is inappropriately veiled behind the over-used phrase, "the best available information". Scientific debate is not only common, but is expected and must be part of the process in order for our knowledge to advance and not remain stagnant. The scientific basis or validity of decisions under the ESA will be improved with these bills.

Peer review is common in many other forums of government work on natural resource issues. For example, I have been performing multi-disciplinary research for CALFED in the Central Valley of California. CALFED is a collaborative effort among 23 state and federal agencies to improve water supplies in California and the health of the San Francisco Bay-Sacramento-San Joaquin River Delta watershed. Peer review of my work and the work of many others for CALFED is mandatory. Why should it be any different with implementation of the ESA when the natural resource ramifications are greater and more global?

I want to emphasize that peer review is not necessary for each and every ESA action. The legislation could specify thresholds of potential ESA procedures that would require peer review based on factors such as calculated risks to the species, potential economical impacts, petitions by affected or concerned individuals,

etc.

Additionally, it is important to recognize that instances will arise where some individuals on either side of a controversial ESA issue will not agree with the outcome of peer review. But at the very least it will elevate technical issues in the ESA to a higher scientific standard of quality and instill greater confidence in the decisions. I have never heard anyone say that peer review is enjoyable, but I firmly believe it is necessary for the advancement of science and the welfare of the species.

Conclusion

In conclusion, many future errors in implementing the ESA could be minimized through a proper peer review of the agencies' rationale for their actions and by placing greater weight on empirical, instead of theoretical, information. However, it is imperative that the execution of peer review not be made into a facade of "like-minded" individuals or agencies promoting or protecting their hypotheses, policies, or positions. Data must be examined with clear objectivity using widely accepted, fundamental scientific principles. Agency policies and positions are not part of the objective equation or scientific process. Good science will lead to good policy and because science is constantly evolving, so should policy. H.R. 2829 and H.R. 3705 will ensure that the Endangered Species Act progresses with science to the ultimate benefit of fish and wildlife resources.