

The ABC's of the ESA

Terminology

Species—The Endangered Species Act (ESA) defines a “species” to include any “distinct population segment (DPS) of any species of vertebrate...which interbreeds when mature.” The National Marine Fisheries Service’s (NMFS) policy states that a salmonid population will be considered a “species” or DPS under the ESA if it represents an evolutionary significant unit (ESU) of the biological species. In order to qualify as an ESU a population must:

1. be reproductively isolated from other populations units of the same species, and
2. represent an important component of the evolutionary legacy of the biological species.

Endangered v. threatened—An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Section 9 “Take” Prohibitions—Section 9 of the ESA prohibits “take” of listed species. Take is defined broadly to mean, among other things, to harass, harm, injure, or kill. NMFS and the U.S. Fish and Wildlife Service have further defined the term “harm” to include significant habitat alteration which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including, breeding, feeding, spawning, rearing, migrating, feeding, or sheltering. Violations of section 9 are punishable by civil and criminal penalties. Private citizens can use the courts to stop violations of section 9.

4(d) Rules—Section 4(d) of the ESA authorizes the National Marine Fisheries Service (NMFS) to customize regulations to conserve threatened species (the 4(d) rule also applies to section 9 take prohibitions). A 4(d) rule “excepts” activities or programs deemed by NMFS to “conserve” listed species from ESA restrictions. The rule may adopt state or other programs (e.g., forest regulations), thus exempting such activities from section 9. NMFS has posted 4(d) rules on its website.

ESA process

Initially, either by petition or agency-initiated, there is a review to determine if the species is threatened or endangered. Once the species makes the list, critical habitat areas are designated. Then NMFS and/or the US Fish and Wildlife Service (the Services) identify activities that may result in “take” of the species. The Services then implement a variety of consultation and permitting processes required by the ESA, including formulating recovery plans that can guide recovery efforts. Several fish ESUs in Washington State are listed as endangered or threatened¹.

Designated critical habitat

Upon final listing, NMFS must designate critical habitat for listed species to the maximum extent prudent. For salmonids, NMFS has designated the “adjacent riparian zone” to all accessible streams as critical habitat. In previous listings, this riparian zone was defined as areas within a 300-foot horizontal distance from the water body. In recent listings, NMFS defines this area as providing the following functions: shade, streambank stability, sediment and nutrient regulation, and input of large woody debris.

Glossary

- 4(d) rules exempts activities from take
- BO biological opinion
- DPS distinct population segment
- ESA Endangered Species Act
- ESU evolutionary significant unit
- FFR Forest Fish Report
- MPI matrix of pathways and indicators
- NMFS National Marine Fisheries Service
- PFC properly functioning condition
- RPA reasonable and prudent alternatives
- Section 7 - consulting requirement
- Section 9 - take prohibitions
- US FWS US Fish and Wildlife Service
- VSP Viable Salmonid Populations

¹ see <http://www.nwr.noaa.gov/>

Section 7 — Consultation

NMFS and the US Fish and Wildlife Service formally and informally consult with other agencies to ensure federal actions avoid jeopardizing listed species. After analyzing the effects of a proposed action, the environmental baseline, and the status of the species, the Services issue a biological opinion (BO) and recommend reasonable and prudent alternatives (RPAs) if warranted. If no RPAs to the proposed action exist that can avoid jeopardy, the federal government may convene agency heads and determine whether the actions should be permitted to go forward notwithstanding its effects on the species. This process is sometimes termed “convening the God Squad.”

In August 1999, NMFS issued a policy document describing the standards it uses in conducting section 7 consultations for habitat-altering activities. At the heart of this analysis is the concept known as “properly functioning condition” or PFC. NMFS defines PFC as “the sustained presence of natural habitat-forming processes in a watershed that are necessary for the long-term survival of the species through the full range of environmental variation.” In its proposed 4(d) rules NMFS identified an additional concept known as “Viable Salmonid Populations” or VSP. This concept identifies

- 1) criteria for defining populations within ESUs, and
- 2) criteria for evaluating the status of these populations.

NMFS will apply the PFC concept in its consultations by looking at “actions that are found likely to impair currently properly functioning habitat, appreciably reduce the functioning of already impaired habitat, or retard the long-term progress of impaired habitat towards PFC at the population or ESU scale.” In applying this concept, NMFS uses a “matrix of pathways and indicators” (MPI) which identifies pathways for determining the effects of an action. Eighteen habitat condition indicators (e.g., temperature, width/depth ratio) are associated with three levels of environmental baseline condition: properly functioning, at risk, and not properly functioning. The effects of the action upon each indicator are classified by whether it will restore, maintain, or degrade the indicator.

Section 7 and recovery planning

In applying the VSP concept in its proposed 4(d) rules, NMFS states that harvest and hatchery activities must not preclude a population from achieving “viable status” unless the activities “will not appreciably reduce the likelihood of survival and recovery of the ESU.” The VSP concept provides a basis for recovery planning. For example, by identifying “independent populations” within ESUs, and identifying the relative importance of these populations for recovery purposes, NMFS may begin to make trade-off between highly degraded areas with little recovery potential, and highly productive areas that may sustain survival and recovery functions.

Washington 4(d) exceptions — timber harvest

Washington issued a Forest Fish Report (FFR) that contains recommendations for regulation changes. The Washington Forest Practices Board intends to adopt regulation changes by June 2000. Elements of the FFR that NMFS concludes will conserve listed salmonids include the following:

1. adequate classification of water bodies;
2. proper design and maintenance of roads;
3. protection of unstable slopes;
4. achievement of PFC along riparian corridors.

These elements will be achieved by requiring riparian management zones along all fish-bearing streams. Monitoring and adaptive management will be key components of the plan.

For more information about the ESA and its effects on salmonids, visit NMFS’ web site at <http://www.nwr.noaa.gov/>

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