Overview of NOAA Fisheries' Proposed Hatchery Listing Policy & Proposed Listing Determinations for 27 ESUs of West Coast Salmon and Steelhead

Dr. Scott Rumsey
NOAA Fisheries
Protected Resources Division
525 NE Oregon Street, Suite 500
Portland, OR 97232

NOAA Fisheries

- Background
  - *Alsea Valley Alliance v. Evans*
  - Initiation of coast-wide ESA status reviews
  - ESA status review process
- Overview of proposed Hatchery Listing Policy
- Summary of proposed listing determinations

Alsea Valley Alliance v. Evans

- September 2001 District Court ruling that NOAA Fisheries cannot list a subset of an ESU
- Ruling set aside NOAA Fisheries' 1998 listing of Oregon Coast coho; NOAA did not appeal the ruling
- In November 2001 the 9th Circuit Court of Appeals stayed the *Alsea* ruling pending resolution of intervenors' appeal
- In February 2004 the 9th Circuit dismissed the appeal and dissolved the stay

- 2 court cases challenge NOAA Fisheries' steelhead listings in Southern California and the Central Valley for excluding within-ESU rainbow trout from listing.

Initiation of Coast-wide ESA Status Reviews

- Following the *Alsea* ruling, NOAA Fisheries received ten petitions seeking to delist, or redefine and list, several West coast ESUs
- NOAA Fisheries accepted 8 of these petitions for a total of 16 salmon and steelhead ESUs

- NOAA Fisheries elected to include an additional 11 ESUs in the status review update effort

Endangered Species Act Status Review Updates

27 Evolutionarily Significant Units (ESUs) under Review

- 2 sockeye ESUs
- 9 chinook ESUs
- 4 coho ESUs
- 2 chum ESUs
- 10 steelhead ESUs

New Hatchery Listing Policy

- NOAA Fisheries' 1993 interim policy for the consideration of artificial propagation in its ESA listing determinations required revision following the *Alsea* ruling.
- As part of its response to the *Alsea* ruling, NOAA Fisheries committed to revising its policy

- A revised policy was recently proposed in the *Federal Register* (69 FR 31354; June 3, 2004)

  http://www.nwr.noaa.gov

New Hatchery Listing Policy

The proposed policy reaffirms NOAA's commitment to habitat protection and restoration.

The central tenant of the proposed policy is to "...apply this policy in support of the conservation of naturally-spawning salmon and the ecosystems upon which they depend."

Implementation of Proposed Hatchery Listing Policy

Determination of "Species"

- NOAA Fisheries will base it's "species" determinations on the 1991 ESU policy.
- Hatchery stocks and natural populations will be included in an ESU if they are: (1) reproductively isolated from other stocks or populations; and (2) representative of an important component of the evolutionary legacy of the species.
- Hatchery stocks will be included in an ESU provided they are no more divergent from local natural populations than closely related natural populations in the ESU are from each other.

Implementation of Proposed Hatchery Listing Policy

ESU Status Assessments

- Status determinations will be based upon the likelihood of extinction of an *entire* ESU, including:
  - natural populations (i.e., naturally spawning populations with minimal hatchery influence)
  - isolated hatchery stocks
  - mixed populations with integrated natural and hatchery production

Implementation of Proposed Hatchery Listing Policy

ESU Status Assessments

- ESU status assessments are based on abundance, productivity, spatial structure, and diversity (i.e., VSP, *McElhany et al. 2000*).
- In assessing the extinction risk of an ESU in-total, the net contribution of within-ESU hatchery programs will be evaluated to determine if they modify the VSP risks currently limiting the ESU.

Implementation of Proposed Hatchery Listing Policy

ESU Status Assessments

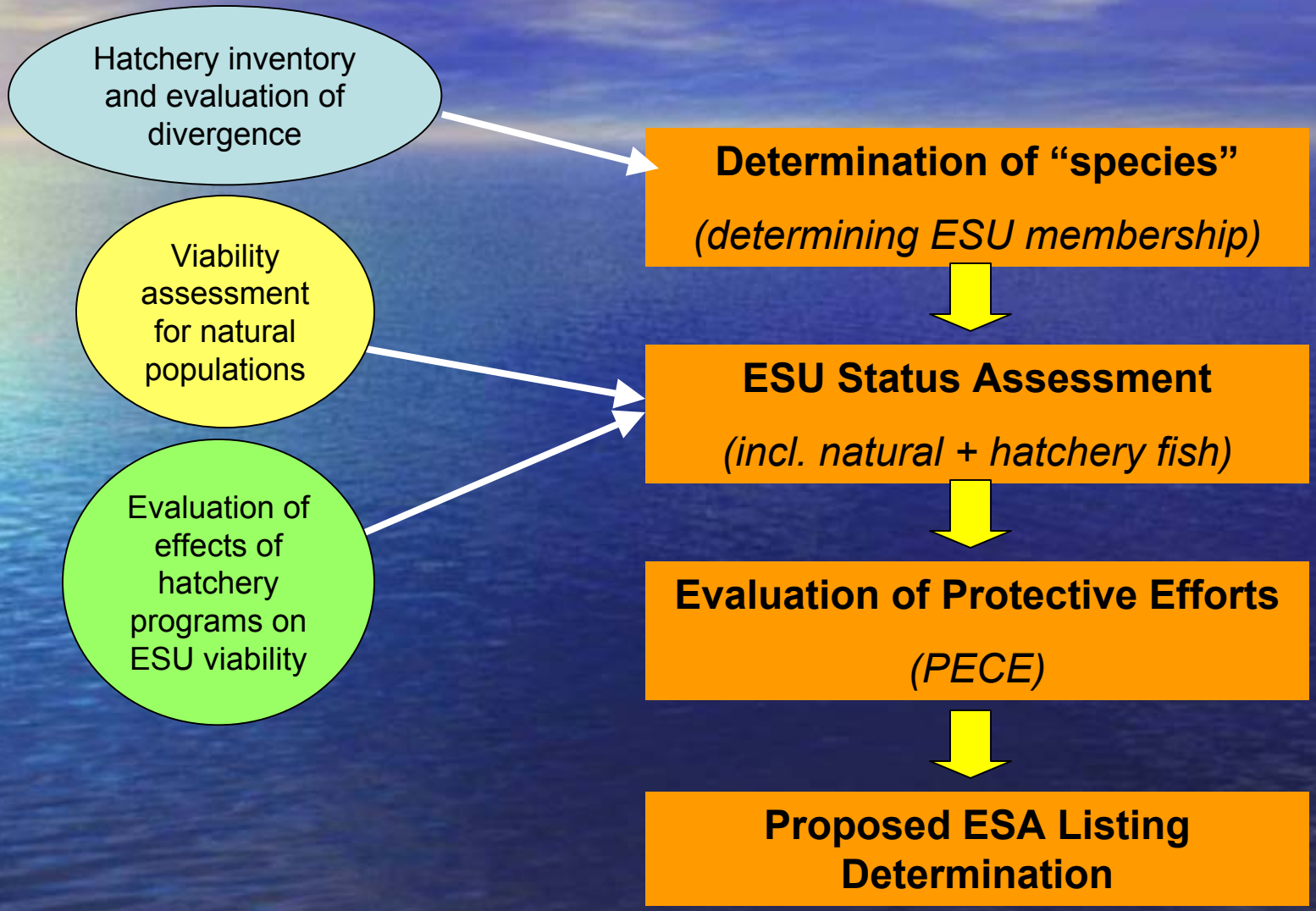
- For an ESU to be viable, it must include natural populations.
- Natural populations reduce ESU extinction risk provided:
    - they are stable or increasing
    - they have adequate spawning and rearing habitat
- Consistent with VSP, a high abundance of hatchery fish within an ESU is not, by itself, sufficient to show that an ESU is viable.

Implementation of Proposed Hatchery Listing Policy

ESA Protective Regulations

- Hatchery programs can produce more fish than are needed in conservation and recovery that are important to fulfilling trust and treaty obligations
- Where appropriate and in accordance with approved harvest plans, NOAA Fisheries will exercise its authority under ESA section 4(d) to allow for the harvest of listed hatchery fish that are surplus to the conservation and recovery needs of an ESU

ESA Status Review Process



Proposed Listing Determinations

- The proposed listing determinations include 4 substantive changes to the current ESA listings for West Coast salmon and steelhead:
  - Upper Columbia River steelhead, currently listed as *endangered*, is being proposed for *threatened* status
  - Sacramento River winter-run chinook, currently listed as *endangered*, is being proposed for *threatened* status
  - Central California Coast coho, currently listed as *threatened*, is being proposed for *endangered* status.
  - Lower Columbia River coho, currently a *candidate* species, is being proposed for *threatened* status

Proposed Listing Determinations
- sockeye ESUs -

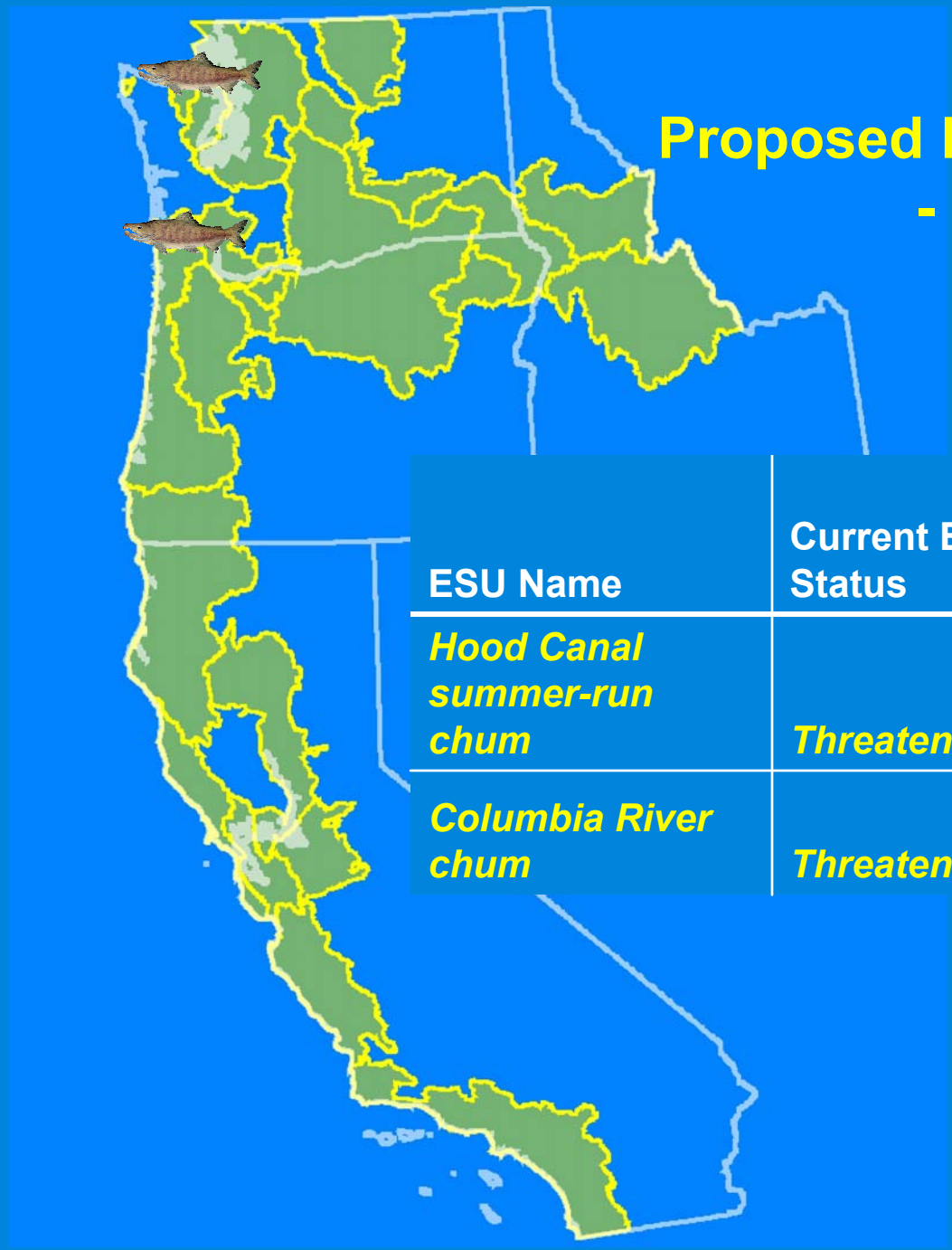
ESU Name	Current ESA Status	Proposed Listing Determination	# of ESU Hatchery Programs
Snake River sockeye	*Endangered*	*Endangered*	*1*
Ozette Lake sockeye	*Threatened*	*Threatened*	*2*

Proposed Listing Determinations - chinook ESUs -

ESU Name	Current ESA Status	Proposed Listing Determination	# of ESU Hatchery Programs
Snake River spring/summer-run chinook	*Threatened*	*Threatened*	*15*
Snake River fall-run chinook	*Threatened*	*Threatened*	*4*
Puget Sound chinook	*Threatened*	*Threatened*	*22*
Upper Columbia River spring-run chinook	*Endangered*	*Endangered*	*6*
Lower Columbia River chinook	*Threatened*	*Threatened*	*17*
Upper Willamette River chinook	*Threatened*	*Threatened*	*7*
California Coastal chinook	*Threatened*	*Threatened*	*7*
Central Valley spring-run chinook	*Threatened*	*Threatened*	*0*
Sacramento River winter-run chinook	*Endangered*	*Threatened*	*2*

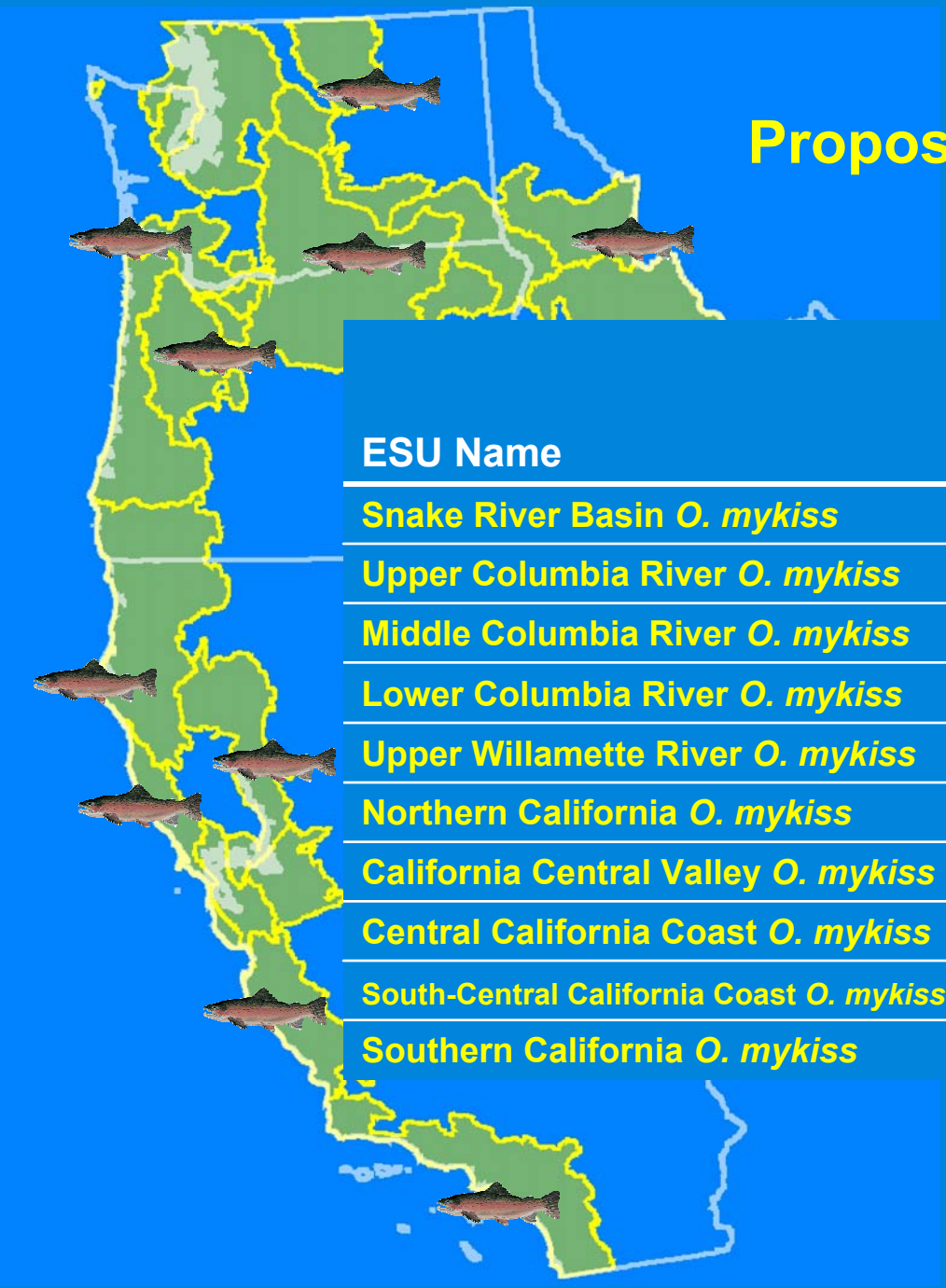
Proposed Listing Determinations - coho ESUs -

ESU Name	Current ESA Status	Proposed Listing Determination	# of ESU Hatchery Programs
Lower Columbia River coho	*Candidate*	*Threatened*	*21*
Oregon Coast coho	*Threatened*	*Threatened*	*5*
Southern Oregon/Northern California Coast coho	*Threatened*	*Threatened*	*3*
Central California Coast coho	*Threatened*	*Endangered*	*4*



Proposed Listing Determinations - chum ESUs -

ESU Name	Current ESA Status	Proposed Listing Determination	# of ESU Hatchery Programs
Hood Canal summer-run chum	*Threatened*	*Threatened*	*8*
Columbia River chum	*Threatened*	*Threatened*	*3*



Proposed Listing Determinations - steelhead ESUs -

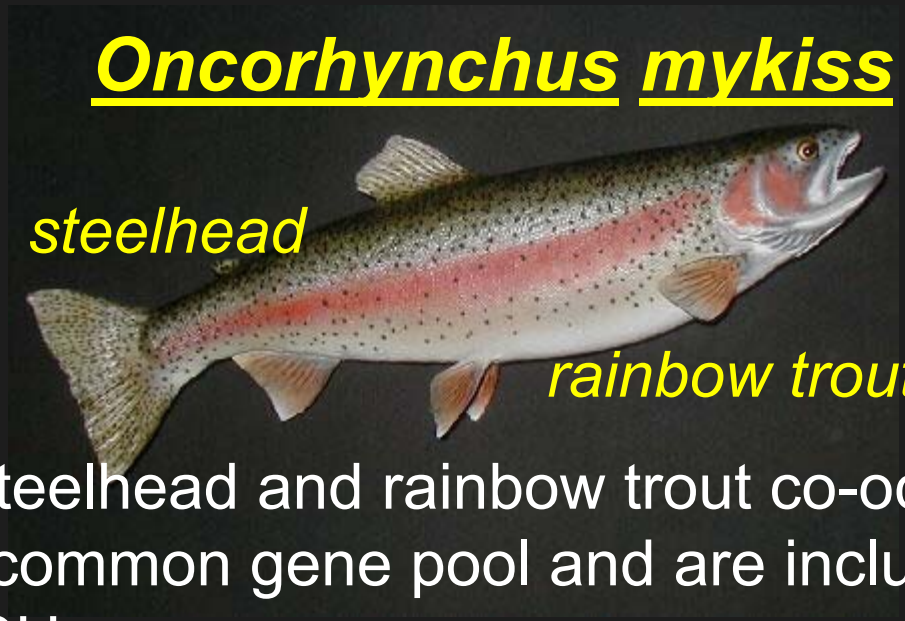
ESU Name	Current ESA Status	Proposed Listing Determination	# of ESU Hatchery Programs
Snake River Basin *O. mykiss*	*Threatened*	*Threatened*	*6*
Upper Columbia River *O. mykiss*	*Endangered*	*Threatened*	*6*
Middle Columbia River *O. mykiss*	*Threatened*	*Threatened*	*7*
Lower Columbia River *O. mykiss*	*Threatened*	*Threatened*	*10*
Upper Willamette River *O. mykiss*	*Threatened*	*Threatened*	*0*
Northern California *O. mykiss*	*Threatened*	*Threatened*	*2*
California Central Valley *O. mykiss*	*Threatened*	*Threatened*	*2*
Central California Coast *O. mykiss*	*Threatened*	*Threatened*	*2*
South-Central California Coast *O. mykiss*	*Threatened*	*Threatened*	*0*
Southern California *O. mykiss*	*Endangered*	*Endangered*	*0*

Oncorhynchus mykiss

- Resident *O. mykiss* can produce anadromous offspring
- Anadromous O. mykiss can produce resident offspring
- Where the two life forms co-occur, they interbreed

- Genetic differences between the two life-history forms in the same area are smaller than between the same life-history form in different geographical areas.
- Where they co-occur, no suite of morphological or genetic characteristics can consistently distinguish between the two life-history forms

Oncorhynchus mykiss



- Where steelhead and rainbow trout co-occur, they share a common gene pool and are included in the same ESU
- Resident *O. mykiss* above long-standing natural barriers are not included in the same ESU as *O. mykiss* below barriers
- The status of resident *O. mykiss* above recent man-made impassable barriers must be evaluated on a case by case basis.

- The practical impact of listing below-barrier rainbow trout is relatively minor

Proposed Protective Regulations for Threatened ESUs of Salmon and Steelhead

- NOAA Fisheries prohibits the take of threatened fish, except under certain circumstances, through a 4(d) rule.
- In the case of hatchery fish, NOAA Fisheries is proposing amending that rule so that take will be allowed, if the fish's adipose fin has been clipped.
- NOAA Fisheries is proposing to amend the rule so that take of rainbow trout is allowed.
- NOAA Fisheries is also proposing simplifying and clarifying changes to the protective regulations by applying the same 4(d) rule to all threatened ESUs.

Proposed Protective Regulations for Threatened ESUs of Salmon and Steelhead

Proposed Simplifying Amendments

- **NOAA Fisheries proposes bringing the following ESUs under the 4(d) rule:**
  - *Snake River fall-run chinook*
  - *Snake River spring/summer-run chinook*
  - *Southern Oregon/Northern California Coast coho*
  - *Central Valley spring-run chinook*
  - *California Coastal chinook*
  - *Central California Coast coho*
  - *Northern California O. mykiss*
- **NOAA Fisheries also proposes to extend the 4(d) protections to the two ESUs currently listed as "endangered" but being proposed for "threatened" status:**
  - *Sacramento River winter-run chinook*
  - *Upper Columbia River O. mykiss*
- **NOAA Fisheries also proposes to apply the 4(d) protections to the Lower Columbia River coho ESU, currently a candidate species, being proposed for "threatened" status**

Several documents are currently available for review and comment, including:

Federal Register Notices:

- Proposed Hatchery Listing Policy
- Proposed Listing Determinations

Supporting Documents

- Hatchery Inventory and Effects Evaluation Report
- Artificial Propagation Evaluation Workshop Report
- Final Biological Review Team Report

To access these and other related documents on the Internet, and for more information, visit:

http://www.nwr.noaa.gov/1srd