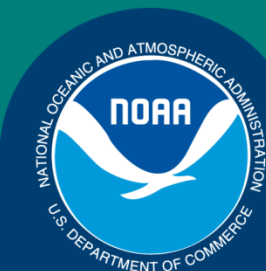


*Science, Service, Stewardship*



# The Importance of Stormwater Management for Conservation of Pacific Salmon

ACWA Stormwater Summit, Eugene  
June 4, 2013

Marc Liverman, NOAA Fisheries, NW Region

**NOAA  
FISHERIES  
SERVICE**

NOAA

# Outline

- NOAA, NMFS and ESA
- What is the ESA?
- Why does stormwater matter?
- Will Pacific salmon survive?

# Department of Commerce

“Promote Innovation & Economic Growth”

- Job creation
- Economic growth
- Sustainable development
- Improved standards of living for all Americans
- Partners with business, universities, communities and the nation’s workers

# **National Oceanic and Atmospheric Administration**

“Science, Service and Stewardship”

- Understand and predict changes in climate, weather, oceans and coasts
- Share that knowledge with others
- Conserve and manage coastal and marine ecosystems and resources

# **National Marine Fisheries Service**

**“Stewardship of living marine resources”**

- Manage fisheries resources within the EEZ
- Encourage marine aquaculture
- Protect threatened and endangered marine coral, fish, turtles, certain mammals
- Reduce and mitigate degradation and loss of marine habitats

# Endangered Species Act

- Passed 1973, last amended 1988
- “Aesthetic, ecological, educational, recreational, and scientific values”
- USFWS and NMFS
- Proposed, threatened or endangered
- All species eligible, except pest insects

# Endangered Species Act

- Section 2: Findings, Purposes and Policy
- Section 4: Listing, Critical Habitat, Recovery
- Section 7: Interagency Coordination
- Section 9: Prohibited Acts
- Section 11: Penalties

# What NMFS Must Do Under ESA

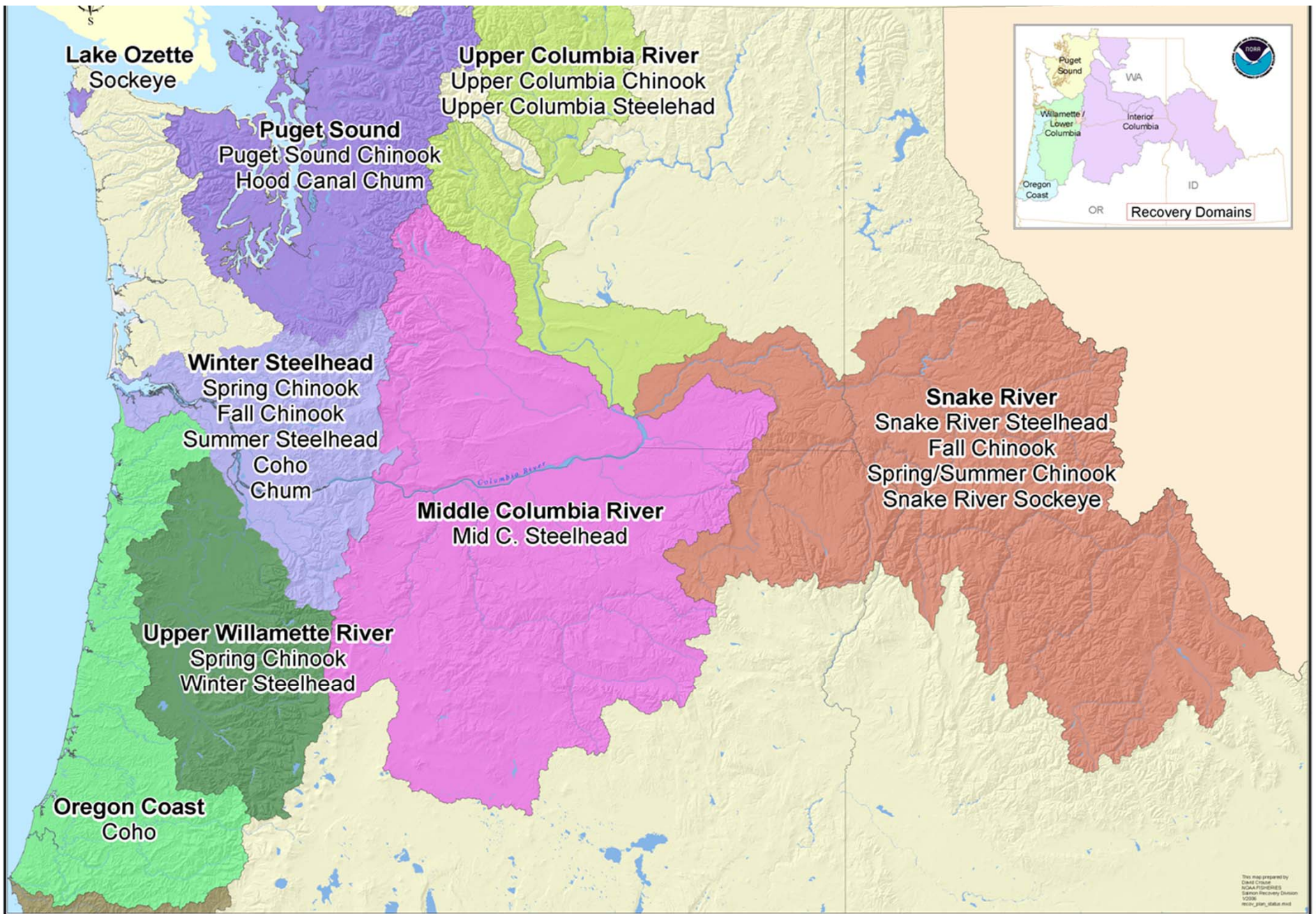
1. Review status of at-risk species
2. List T&E species, designate critical habitat
3. Apply protective regulations, “take”
4. Issue incidental take permits
5. Produce and carry out recovery plans
6. Delist species after recovery



# 1. Review Status

## Habitat-Related Concerns

- Habitat quantity
- Direct mortality
- Toxic contaminants
- Food
- Riparian Condition
- Peripheral and transitional habitats
- Channel structure and form
- Sediment conditions
- Water quality
- Water quantity



### 3. Apply Protective Regulations

- ESA, sec.3 – “Take” means *harm*, harass, pursue, hunt, shoot, wound, kill, etc.
- ESA, sec.9 – Except as provided, it is unlawful to take *endangered* species
- *Harm rule* (1999): Examples: Discharging pollutants, such as oil, toxic chemicals, nutrient-laden water, etc.
- Take prohibition (2000) – Take prohibitions for endangered species also apply to *threatened*

# Pollutant Dischargers

- Agriculture
- Construction
- Commercial
- Forestry
- Industrial
- Publicly owned treatment works
- Residential
- Transportation

# Stormwater Constituents

## “Traditional”

- Metals
- Nutrients
- Oil, grease, PAHs
- PCB
- Pesticides
- Suspended sediment

## “Emerging”

- Fire retardants
- Food additives
- Industrial chemicals
- Personal care products
- Pharmaceuticals

## 4. Issue Take Statements

- Sec.7(a)(2) – Federal actions only
  - BLM, Corps, FEMA FHWA, HUD, NRCS, USFS
  - CERCLA, NRDA
  - Very rarely EPA, and not for 1200C, 1200Z, MS4, NPDES, RFP
- Sec.10(a)(1)(A) – Scientific permits
- Sec.10(a)(1)(B) – HCPs

## 5. Produce and Carry Out Recovery Plans

- Willamette
- Middle Columbia
- Upper Columbia
- Snake
- Lower Columbia
- Oregon Coast
- SONCC

## What Do Recovery Plans Say?

- UC (2007) Actions that reduce *toxics* and predation in the estuary may translate into a relatively large survival benefit
- MCR (2009) The effects of *toxics* on fitness and survival are limited so as *not* to affect recovery
- LCR (draft 2012) Secondary limiting factors in the estuary that affect all populations are exposure to *toxic contaminants* from urban, industrial, and agricultural sources



# What Does NMFS Want From Stormwater Managers?

- NMFS can't easily regulate most stormwater sources under ESA, although citizens may try
- We strongly support
  - Low impact development
  - Consensus with regional manuals based on BMPs for new and redeveloped areas
  - Remediation of legacy problems

## 6. Delist Species After Recovery

- When can we delist?
  - “Objective and measurable criteria”
  - Viable salmonid population status
  - Threats criteria met – habitat, overuse, disease, inadequate regulation, other (e.g., hatcheries)
- Will salmon recover?

# QUESTIONS?



"Well, thank God we all made it out in time. ...  
'Course, now we're equally screwed."