Puget Sound NFIP BiOp: Benefits for Public Safety and the Environment

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Northwest Regional Floodplain Managers Association
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Why Does National **Wildlife** Federation Care about Floodplains?
National Wildlife Federation

• Mission:
  – Inspire Americans to protect wildlife for our children’s future

• Members:
  – 4 million members; 48 affiliates
  – Hunters; anglers; gardeners; outdoor enthusiasts
  – Republicans and Democrats

• Strengths:
  – Science, policy, education, grassroots mobilization, litigation
NWF’s Focus

• Drivers:
  – Confront global warming (mitigation)
  – Safeguard wildlife from the impacts of climate change (adaptation)
  – Connect people with nature

• Climate Change is the most urgent threat to fish, wildlife, and the natural resources they need to survive
Floodplains = Habitat

ESA Listed Species:
• Puget Sound: Salmon, steelhead and Orca
• Florida: Key Deer
• Oregon: Salmon
• California: Delta smelt, salmon, steelhead
• Atlantic coast: sea turtles
• Arizona: jaguar; southwestern willow flycatcher; razorback sucker
• Hawaii: Shorebirds, turtles, monk seal
Climate Change is Already Affecting Us

Temperature has risen 1.5º since 1900

Temperature will rise 2º to 11.5ºF

Changes are relative to the 1960-1979 average

Annual Flood Damages are Increasing

Source: National Weather Service Hydrologic Information Center (2009)
Heaviest 5% of Precipitation Events are Increasing

Projected changes in precipitation falling in the heaviest 5 percent of daily events.

Changes are relative to the 1960-1979 average.

Sea Level Rise will Cause Drastic Habitat Loss in Pacific NW

Scenario: 27.3 inches by 2100

- 65% loss of estuarine beaches
- 44% decline in tidal flats
- 13% loss of inland fresh marsh
- 25% loss of tidal fresh marsh
- 12% loss of swamp
- 52% loss of brackish marsh
- Loss of 1.5 million acres of undeveloped dry land

Source: Glick, NWF, 2007
Projected Sea Level Rise around San Francisco Airport (SFO)

**Light Blue**: Area Vulnerable to an approx. 16 in sea level rise by mid century

**Dark Blue**: Area Vulnerable to an approx. 55 inch sea level rise by end of century

**Source**: 2009 California Climate Adaptation Strategy Discussion Draft
Federal Climate Change Policy

• **Bush Years**: Don’t acknowledge it; Don’t integrate it into plans.

• **Now**: Plans are not credible if climate isn’t addressed; Must plan for impacts.

• Climate Change is about risk
National Flood Insurance Program

Purposes:

• Make flood insurance available on nationwide basis

• Guide development away from flood hazard areas
  • State and local regs

• Reduce Federal expenditures for disaster assistance and flood control.
How NFIP Works

- Provide flood insurance at reasonable rates to communities that choose to participate
  - Quid Pro Quo for insurance: sound floodplain management; landuse controls – reduce flood risk
- FEMA sets minimum criteria for NFIP participation
  - 90% of PS communities meet only minimum criteria
- NFIP actually subsidizes and encourages development in Floodplains
  - Most development in coasts and floodplains dependent on NFIP insurance
- Result has been massive development of coasts and floodplains; increased flooding and costs
  - NFIP debt is $19 Billion and climbing
Flooding / NFIP Facts

• 11 flood disaster declarations in King Co. since 1990
  – January 2009 Floods: 23 PS rivers flooded; 4 record floods
• Interstate 5 closed twice in 2 years
  – Dec. 2007: I-5 closed 4 days; $62 mil. Road repair; $47 mil freight impacts
• 10.3 Sq. miles of floodplain lost every year in Puget Sound
• King Co. is a CRS Class 2
  – Highest Rated County in Nation
Puget Sound
Cedar River East of Renton Floodplain History
1969 USACE Original Maps
Cedar River East of Renton Floodplain History
1969 USACE
Cedar River East of Renton Floodplain History
2006 FEMA
Cedar River East of Renton Floodplain History
2006 FEMA and 2006 NRCS NAIP Orthophoto
Cedar River East of Renton Floodplain History
1969 USACE, 2006 FEMA, and 2006 Orthophoto

Floodplain History
- 1969 Only
- 1969 and 2006
- 2006 Only
- Lakes

August 31, 2009
Data: King County
CLC: WSDOT, USGS

Feet
Reforming the National Flood Insurance Program

• Decades of complaints that NFIP encourages development in flood-prone areas

• NFIP subsidy fueling harmful development of coastal and floodplain habitats

• Inability to obtain NFIP insurance would effectively stop development in flood hazard areas
  – Good for wildlife, communities, public safety, & taxpayers.
NFIP Evaluations

• 1998 NWF Report: Higher Ground
  – 2% of properties were generating nearly 40% of NFIP losses
  – 20% of repetitive losses occur outside floodplains

• 2006 Major Evaluation of NFIP, Led by American Institutes for Research. Findings:
  – Risky development continues due to lack of provisions to discourage development
  – Maps don’t delineate some types of hazards and many floodplain areas

• 2009 Homeland Security Inspector General Report
  – Repetitive losses increasing; outpacing FEMA mitigation efforts 10 to 1
  – Florida, Louisiana and Texas are worst offenders
Repetitive Loss Properties

U.S. Properties with Repetitive Loss Claims Paid by the National Flood Insurance Program
1978 - 1995

KEY:
All properties with at least two paid claims of $1,000 for building and contents during any
10-year period from 1978 to 1995. Properties are plotted at the 5 digit zipcode centroid.
This map has been prepared using different sized dots (exponentially scaled) to represent
the range in the number of repetitive loss properties located within any given zipcode area.

Scale:

1 10 54 99 1839

Compiled by Martha Stout, National Wildlife Federation, and mapped by
the National Center for Resource Innovations, Chesapeake Inc.
Data supplied by the Federal Emergency Management Agency.

Data from FEMA; Compiled by NWF
NFIP v. ESA

• 1994: Florida Key Deer ESA Lawsuit
  – Moratorium on development;
  – still in court

• 2004: Puget Sound ESA Lawsuit
  – FEMA must consult with NMFS re: potential impacts of NFIP on listed salmon in PS
ESA Legal Claim

• ESA Sec. 7: Federal agencies must ensure their actions do not:
  – Jeopardize listed species
  – Adversely modify critical habitat

• If discretionary agency action *might* cause harm, must consult

• Courts found FEMA has discretion over:
  – Floodplain mapping
  – Minimum floodplain management criteria (for community inclusion in program)
  – Community rating system

• Therefore, FEMA must consult

• Sec. 7 Consultation results in Biological Opinion
Sept. 2008 Biological Opinion
National Marine Fisheries Service Found:

- NFIP jeopardizes existence of
  - 3 salmonid populations
    - PS Chinook salmon
    - PS steelhead
    - Hood Canal summer-run chum salmon
  - Southern Resident killer whale population

- Adversely modifies critical habitat for:
  - PS Chinook salmon
  - Hood Canal summer-run chum salmon
  - Southern Resident killer whale
Reasonable and Prudent Alternatives (RPAs)

1. Notify participating PS communities- Temporary moratorium
   - Done
2. Update Floodplain maps; change modeling methods
   - Implement changes by March 09
3. Modify Floodplain management criteria
   - Tier 1: 1 year; Tier 2: 2 years; All: 3 years
4. Community Rating System
   - Make changes by June 09
5. Levee Vegetation Maintenance and construction
   - Sept. 2010
6. Floodplain mitigation activities
   - Now till full implementation of elements 2, 3, 5.
7. Monitoring and adaptive management
   - Annual reports to NMFS on progress, timelines, on-the-ground NFIP effects
NWF Position

• Protecting floodplain habitat is consistent with reducing flood risk.

• FEMA has a national responsibility to minimize harm to all ESA species everywhere
  – Not just Puget Sound
Floodplains = Habitat
ESA Listed Species:

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- NM, TX, etc. etc.
Why Does FEMA Resist Addressing ESA Issues Nationally?

• Pandora’s Box?

Maybe…

• … But so are the lawsuits
  – And the Federal Regs are likely to be revised anyway.

• Isn’t One Pandora’s Box better than 50?
Recap

- Climate Change is about risk
  - Incorporate the risk of increasingly extreme storms & sea level rise into maps, NFIP minimum criteria, CRS, and rates

- Protecting floodplain habitat is good for public safety, taxpayers, communities, and the environment

- FEMA has a national responsibility to minimize harm to all ESA species everywhere
...And Finally

- Lawsuits are wasteful
  - Resources would be better applied to fixing the problems
Questions???
Cost of Flooding

Replacement value of buildings and contents vulnerable to a 100 year coastal flood with 1.4 meters of sea level rise:

$98 Billion

http://www.pacinst.org/reports/sea_level_rise/maps/