AN OVERVIEW OF FLOODPLAIN POLICIES
(WITH CONSIDERATION FOR SALMON)

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ASFPM began more than 45 years ago as a grassroots organization of floodplain managers in the Midwest and now includes more than 16,000 members worldwide.

Our mission has always been to:

- help develop and implement national flood policy and programs that reduce damages, human suffering and taxpayer costs of flooding;
- mitigate the losses, costs, and human suffering caused by flooding;
- protect the natural and beneficial functions of floodplains.
Presentation Overview

- The U.S. National Flood Insurance Program (NFIP)
  - National level
  - Community level
  - Tribal level
- Related policies and legislation
- Flood management in Canada
- Flood risk and risk reduction
- No Adverse Impact (NAI)
- Natural and Beneficial Functions (NBF) of Floodplains
- Future floodplain policy considerations
The National Flood Insurance Act of 1968 established the NFIP, which has three components: 1) to provide flood insurance; 2) to improve floodplain management; and, 3) to develop maps of flood hazard zones. Subsequent legislation established several goals:

- Decrease the risk of future flood losses,
- Reduce the costs and adverse consequences of flooding,
- Reduce the demands and expectations for disaster assistance after floods, and
- Preserve and restore the natural and beneficial functions of floodplains.

How well is the NFIP working?
• Over 5.6 million flood insurance policies are in effect.
• Over $1.2 trillion in insurance coverage.
• Flood losses reached $10 billion annually by 2010; a 3-fold increase from early 1900s.
• Per capita damages increased by more than a factor of 2.5 in the previous century—in real dollar terms.
### Roles and Responsibilities in the NFIP

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• Participation in the NFIP is voluntary.
• FEMA provides a community with flood hazard information to guide their development of floodplain regulations.
• For insurance coverage, communities must adopt a floodplain management ordinance that meets or exceeds the minimum standards of the NFIP.
• Higher standards have been developed and many of these can be applied to protect the natural and beneficial functions (NBF) of floodplains and help conserve or protect salmon habitat.
The NFIP at the Tribal Level

• FEMA recognizes the government-to-government relationship between the U.S. government and federally recognized tribes.

• Indian tribes…are considered communities by the National Flood Insurance Program (NFIP) and can join the program.

• FEMA consults with tribes to ensure that FEMA policies and programs address tribal needs.

• An updated Tribal Policy [FP 305-111-1] will supersede the current FEMA Tribal Policy, issued in 2013, which expires on December 30, 2016. Tribal officials can submit comments on the FEMA Tribal Policy until October 28, 2016.
Executive Orders Influencing the NFIP

- A rule or order issued by the president and having the force of law.
- E.O. 11296 - Evaluation of Flood Hazard in Locating Federally Owned or Financed…Facilities (1966, pre-NFIP)
- E.O. 11988 – Floodplain Management (1977)
Where possible, an agency shall use natural systems, ecosystem processes, and nature-based approaches when developing alternatives for consideration.

The floodplain shall be established using one of the following approaches:
- An elevation using data and methods informed by best-available, actionable climate science;
- An elevation two feet above the 100-year (1%-annual-chance) flood elevation for standard projects, and three feet above for critical buildings like hospitals and evacuation centers; or
- The area based on the 500-year (0.2%-annual-chance) flood elevation.

ASFPM is concerned that FEMA’s rules to implement the standard do not emphasize the avoidance of flood hazard areas (10/3/16).
• NMFS issued Biological Opinions on the impact of the NFIP on listed species, including salmon, in WA (2008) and OR (2016).

• Guidance available for local communities to implement the NFIP and be compliant with the ESA.
NFIP Programmatic Environmental Impact Statement (PEIS)

• NEPA requires Federal agencies to evaluate potential environmental impacts as part of their planning process.
• Work on the PEIS began in 2012 and the purpose is to reduce unsound development in the floodplain and protect environmentally sensitive areas.
• FEMA intends to implement modifications to the NFIP.
• A range of reasonable alternatives will be considered for modifying the primary elements of the NFIP; i.e., floodplain management, mapping, and insurance.
1968 - In passing the National Flood Insurance Act, Congress intended the NFIP to be continually re-appraised for its effects on land use.


1983 - Presidential Task Force on Regulatory Relief concluded standard ok.

1999 – FEMA initiated effort for first comprehensive evaluation of the NFIP.

2006 – Final reports published.
NFIP Evaluation Findings Related to Natural and Beneficial Functions of Floodplains

- About 9,000 square miles of flood-prone lands are delineated as floodways and protected from future development (2002).
- The conveyance function of floodplains is protected (e.g., the floodway), most others are not.
- The map revision process (e.g., LOMR-Fs) and other NFIP criteria indirectly promote the filling and channeling of the floodplain.
- The NFIP has not emphasized the protection of NBF and has few tools to help restore them, once they are impaired.
• Revise NFIP flood hazard mapping criteria to identify natural functions worthy of preservation.

• Account for the environmental impacts and cumulative effects of fill from LOMR-Fs on floodplain NBFs.

• Develop a map product that allows delineation of floodplains associated with more frequent flooding and having a higher ecological value.

• Evaluate shortcomings of the regulatory floodway; e.g., reliance on existing land use, steady flow assumption.

• Incorporate the economic value of floodplains into current benefit-cost analyses.
Recent Flood Insurance Legislation

- **The Biggert-Waters Flood Insurance Reform Act of 2012 (BW-12)**
  - Authorized and funded the national mapping program and certain rate increases transitioning the program from subsidized rates (i.e., artificially low rates) to offer full actuarial rates

- **The Consolidated Appropriations Act of 2014**
  - *Repealed certain parts of BW-12*

- **Homeowner Flood Insurance Affordability Act of 2014**
  - *Repealed certain parts of BW-12*
  - Exempts mapping fees for flood map changes due to habitat restoration projects
  - Requires FEMA to consider the effects of non-structural flood control features, such as dunes, and beach and wetland restoration when it maps the special flood hazard area
The NFIP is set to expire on 9/30/2017 unless a bill to continue the program is passed through both the House and Senate.

The NFIP has accumulated significant debt in recent years; as of 2015, NFIP owed the U.S. Treasury $23 billion. Due to this, some Members of Congress have suggested eliminating the program in its entirety and moving toward private insurers as the sole source for flood insurance.
Flood Management in British Columbia
Policies that Contribute to Increased Flood Risk

Federal Policies
- NFIP & the 100-Year Standard
- Emphasis on structural approaches
- Disaster relief environment

States & Communities
- Control land use for short-term benefits
- Perceive flooding to be a federal problem
- Externalize the costs & consequences

Public
- Unaware of – or unwilling to accept - residual risk
- Misplaced concern about having to obtain flood insurance
How to Reduce Flood Risk

- Avoid development of high risk areas
  - Through planning and wise land use.
  - Retreat from highest risk areas, elevate or protect in lower risk areas.
  - Use high risk areas for open space, which can pay for itself with increased value.

- Apply higher NFIP standards
  - Map future floods, not Yesterday’s flood.
  - Avoid cumulative flood rise—no floodway development.
  - Increase freeboard for new buildings above flood level.
  - Critical Facilities—must be accessible and operable during the 500 year flood event.

- Use natural systems to reduce flood risks
- Implement No Adverse Impact (NAI) principles
• No Adverse Impact (NAI) is a development approach that ensures that the action of any community or property owner, public or private, does not adversely impact the property and rights of others.

• The true strength of the NAI approach is that it encourages local decision making to ensure that future development impacts will be identified, considered on a watershed-wide basis and mitigated.

• NAI is built on and is a further extension of the philosophy of the NFIP.
How to Implement NAI?

• Adopt higher NFIP standards tied to public safety and tailored to community and ecological needs.
• Identify ALL the impacts of a proposed development anywhere in watershed.
• Notify potentially impacted property owners and communities of the impacts of any proposed development.
• Mitigate impacts before developing.
• Provide points for FEMA Community Rating System (CRS) Program, to reduce flood insurance premiums.
NAI Benefits

• Guides the actions of communities and property owners to not adversely impact other properties or ecosystem resources.
• Incorporates multi-objective-management and watershed planning principles.
• Reduces future flood damages and the community’s liability and legal challenges.
• Provides for more sustainable and resilient community.
• Protects natural and beneficial functions of the floodplain.
The National Flood Insurance Reform Act of 1994 defines the term ‘natural and beneficial functions’ (NBF) as:

- (A) the functions associated with the natural or relatively undisturbed floodplain that (i) moderate flooding, retain flood waters, reduce erosion and sedimentation, and mitigate the effects of waves and storm surge from storms, and (ii) reduce flood related damage; and
- (B) ancillary beneficial functions, including maintenance of water quality and recharge of groundwater, that reduce flood related damage.
Natural and Beneficial Floodplain Functions – Ecosystem Services

- “...floodplains were the second ranked ecosystem type, behind only estuaries, in terms of their per-hectare value to society.
- Despite representing <2% of Earth's terrestrial land surface area, floodplains provide approximately 25% of all terrestrial ecosystem service benefits."

Coalition of Columbia Basin Tribes (2013) - Since time immemorial, the rivers of the Columbia Basin have been, and continue to be, the lifeblood of the Columbia Basin tribes. A restored, resilient and healthy watershed will include ecosystem-based function such as:

- Increased spring and summer flows resulting in a more natural hydrograph.
- Restoring and maintaining fish passage to historical habitats.
- Higher river flows during dry years.
- Lower late summer water temperature.
- Reconnected floodplains throughout the river.
- An adaptive and flexible suite of river operations responsive to a great variety of changing environmental conditions, such as climate change.
Development should only be permitted in Zone 3 when there is no non-flood vulnerable site available, and the benefits of such development outweigh the flood risk.

Flood insurance is not offered within the 10-year (10% annual chance) floodplain in Germany.
Consider Economic Trends to Guide Future Policies

- We tried to control flooding.
- Human flood losses are increasing.
- Investments in flood control infrastructure is decreasing.
- O&M costs of flood control infrastructure is increasing.
- Perhaps it is time to prioritize a “principle of action” to protect and restore the natural and beneficial functions of floodplains...for the benefit of all species.

Dr. Gilbert White (1942)
“The father of floodplain management”

Please visit the ASFPM website for more floodplain policy information
www.floods.org