

Natural Floodplain Functions Alliance Webinar Series Presents:

Square Peg, Round Hole – Maximizing Conservation in a Flood-Insurance Construct

**Presented by:
Bonnie Shorin, Program Analyst
National Marine Fisheries Service
NOAA**

Hosted by the Association of State Wetland Managers

Welcome!

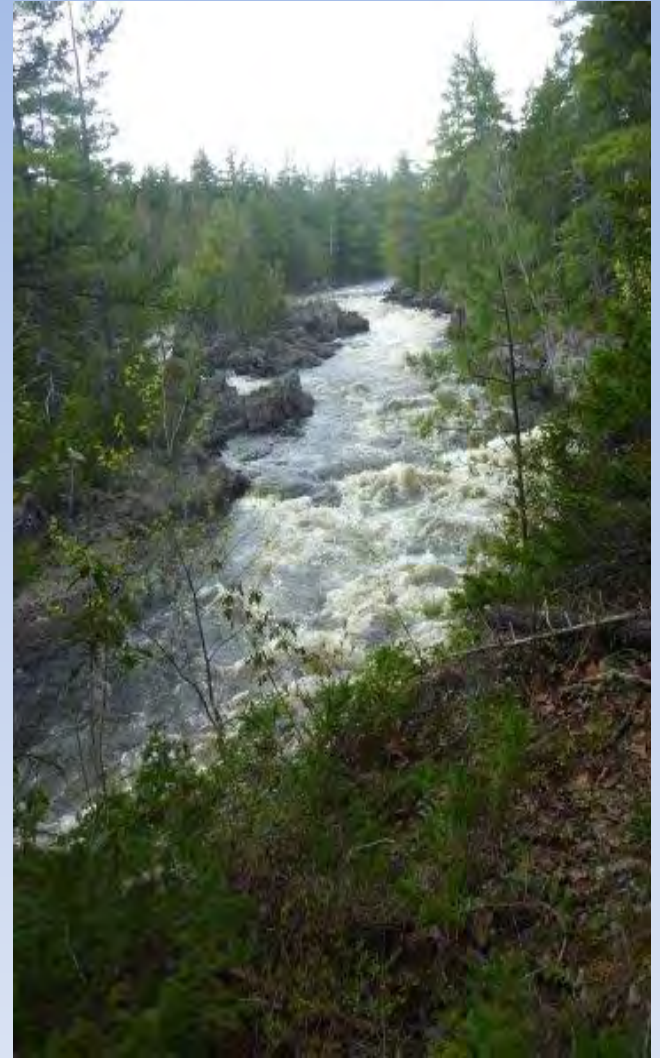
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a question in the webinar question box or call Laura at (207) 892-3399.

Agenda

1. Welcome and Introductions
(5 minutes)
2. Square Peg, Round Hole –
Maximizing Conservation in a
Flood-Insurance Construct
(40 minutes)
3. Question and Answer
(15 minutes)
4. Wrap-up (5 minutes)



Today's Presenter

Bonnie Shorin
Program Analyst

National Marine Fisheries Service
NOAA



NFFA Webinar Series Moderator



Marla Stelk

Policy Analyst

Association of State
Wetland Managers

Webinar Schedule/Recordings

Association of State Wetland Managers - Protecting the Nation's Wetlands.



What's New:

- Less Than Half of Americans Make Anthropogenic Connection
- Clean Water Act 2.0: Rights of Waterways
- Virginia Coastal Partners Workshop: Save the Date
- FGCU appoints director for new Everglades Wetland Research Park
- LA: Expanded Louisiana Coastal Zone Boundary Approved
- Wetland Breaking News - Current Issue

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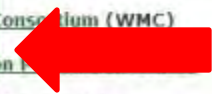
Conference Schedule

State Wetland Managers holds webinars on topics of which relate to a specific project and work ASWAM holds webinars as part of its members' topics of interest to members. Please click on name below for more details about individual webinars, if you have any questions about a webinar, please contact Laura at [email address]. If you are a member, and you missed a webinar, please post the recordings of the webinars going on.



A presentation given during a webinar.

- Series
- Function Alliance (NFFA) [Future](#) [Past](#)
- Consensus Forum (WMC)
- Wetland Program Plans Project
- Stream Identification/Delineation/Mitigation Project



Webinar Schedule/Recordings

Association of State Wetland Managers - Protecting the Nation's Wetlands.



In the News:

- Great Barrier Reef's 'unprecedented' threat from dredging, dumping
- EPA Awards \$880K to Comm. for Climate Change
- European seafloor survey reveals depth of marine litter problem
- 100th anniversary of passenger pigeon's extinction reveals lessons
- "Alien" Plant Species Are Fighting Toxic Waste At Liberty State Park
- Wetland Breaking News - Current Issue

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Hot Topics

- Ag News
- MS River & Wetlands
- Gulf Oil Spill
- Sea Level Rise Tools

ASWM Webinars/Conference Schedule

The Association of State Wetland Managers holds webinars on various topics, most of which relate to a specific project and work group. In addition, ASWM holds webinars as part of its members' webinar series on topics of interest to members. Please click on the webinar group name below for more details about individual webinars. In all cases, if you have any questions about registering for a webinar, please contact Laura at laura@aswm.org. If you are a member, and you missed a webinar that was part of the members' webinar series, please contact us. We will post the recordings of the webinars going ahead.



A presentation given during a webinar.

Special ASWM Webinars

Future:

Special ASWM American Wetlands Month Webinar - May 29, 2014 - 3:00pm EDT

Past:

Special ASWM Webinar: Options for Financing Environmental Enhancement at the Local Level in Oregon - January 23, 2014 - To view Webinar, [click here](#).

Special ASWM Webinar: Wetland Link International North America - October 29, 2013 - To view Webinar, [click here](#).

Special ASWM Webinar - Koontz v. St. Johns River Water Management District: What Happened and Where Do We Go From Here - Wednesday, July 17, 2013 - 3:00 p.m. ET - To view Webinar and PowerPoint Presentations, [click here](#).

Members' Wetland Webinar Series

[Future](#) [Past: Members Only](#) [Past: Nonmembers](#)

Natural Floodplain Functions Alliance (NFFA)

[Future](#) [Past](#)

Wetland Mapping Consortium (WMC)

[Future](#) [Past](#)

OTHER ASWM WEBINAR SERIES:





- Wetland Mapping Consortium
- Improving Wetland Restoration Success
- ASWM Members' Webinars

Latest NFFA Webinar Posted

From March 3, 2015

“EPA Adaptation Workbook: Lessons Learned in San Juan Bay, Puerto Rico”

- Michael Craghan, Climate Ready Estuaries Program, U.S. EPA

	
Part 1: Introduction: Marla, Stelk, ASWM Presenter: Michael Craghan, Climate Ready Estuaries Program, U.S. EPA	Part 2: Presenter: Michael Craghan, Climate Ready Estuaries Program, U.S. EPA
	
Part 3: Presenter: Michael Craghan, Climate Ready Estuaries Program, U.S. EPA Questions/Answers	Part 4: Questions/Answers

Future Schedule

- **May 31 - June 5, 2015**
 - ASFPM Annual National Conference in Atlanta, GA
 - NFFA Meeting: 4:00pm – 5:30pm
Wednesday, June 3rd
(No conference call or webinar)
- **Tuesday, July 21 at 3:00pm ET:**
 - Webinar: “Managing Water Where It Falls: Green Infrastructure in Milwaukee, Wisconsin” – Kevin L. Shafer, MMSD Executive Director
- **Tuesday, August 4 at 3:00 p.m. ET:**
 - conference call



Currently conference calls and webinars are usually held on alternating months on the second Tuesday of the month at 3:00 p.m. eastern, 2:00 central, 1:00 mountain, and 12:00 pacific.

Interested in Receiving CEUs?

Who can get CEUs?

- You must be a participant during the live webinar presentation.
- We are able to track webinar participation by registrants using our GoToWebinar software.
- **Documentation will state that you were a participant for X hours of a specific ASWM webinar.**

Receiving Documentation

*If you need CEUs for your participation in today's webinar, you **must request** documentation from ASWM.*

*Please note that we will send the documentation to you **for you to forward** to the accrediting organization.*

Please contact **Laura Burchill**

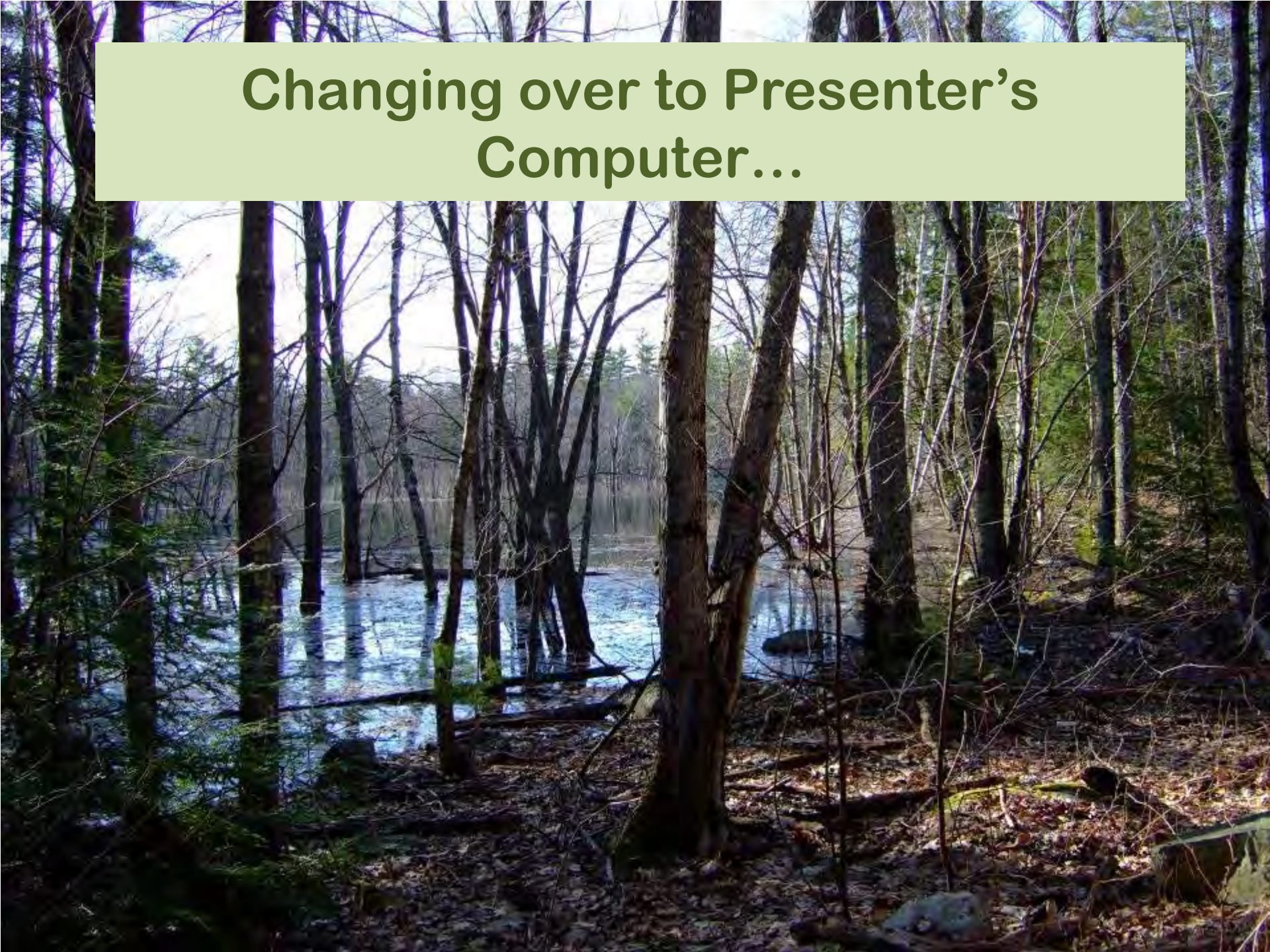
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Provide:

- Your full name (as registered)
- Webinar date and Title

Changing over to Presenter's Computer...



Square peg



Trying to fit conservation values into a hazards insurance paradigm

Conservation Context

Endangered Species Act

Florida – Key deer, Key Largo Cotton mouse, Key Largo Woodrat, Key tree cactus, Lower Keys marsh rabbit; Schaus' swallowtail butterfly, silver rice rat, Stock Island tree snail



Conservation Context - ESA

Washington (Puget Sound) – Puget Sound Chinook, Puget Sound steelhead, Hood Canal Summer Run Chum, Southern Resident Killer Whale (SRKW)



Conservation Context - ESA

Oregon – 17 species of anadromous fish, & SRKW



So far, 29 Species Jeopardized by the FEMA's NFIP (!)

“Here, *FEMA has the authority* in its administration of the NFIP, as discussed above, *to prevent the indirect effects* of its issuance of flood insurance *by, for example, tailoring the eligibility criteria* that it develops *to prevent jeopardy to listed species*. Therefore, its administration of the NFIP is a relevant cause of jeopardy to the listed species.”

Key Deer v Paulison, 11th Circuit Court of Appeals, 2008

What do the fish species need from the floodplain?

- Soils that percolate water
 - To recharge streams with cool water into the summer and fall
 - Carrying with it insect prey base
- Inundated land
 - To provide slow and shallow refuge
 - Rich with insect prey/abundant foodbase
- Dynamic habitat
 - Eroding banks recruiting gravels, cobbles, wood, overhanging banks, shallow edges
 - Avulsion and sediment deposition patterns that create channel complexity and off-channel habitat

Juvenile Chinook
mainstem rearing

Juvenile Chinook
floodplain rearing



Fig. 7 Comparison of a single enclosure of fish reared in intertidal river habitat below floodplain (*left*) and a single enclosure of fish reared in the floodplain vegetation (*right*) after 54 days in respective habitats at the end of the second year of the study

Photo from "Ephemeral floodplain habitats provide best growth conditions for juvenile Chinook salmon in a California river" Jeffres et al 2008

Yolo Basin, CA



Puyallup River, WA



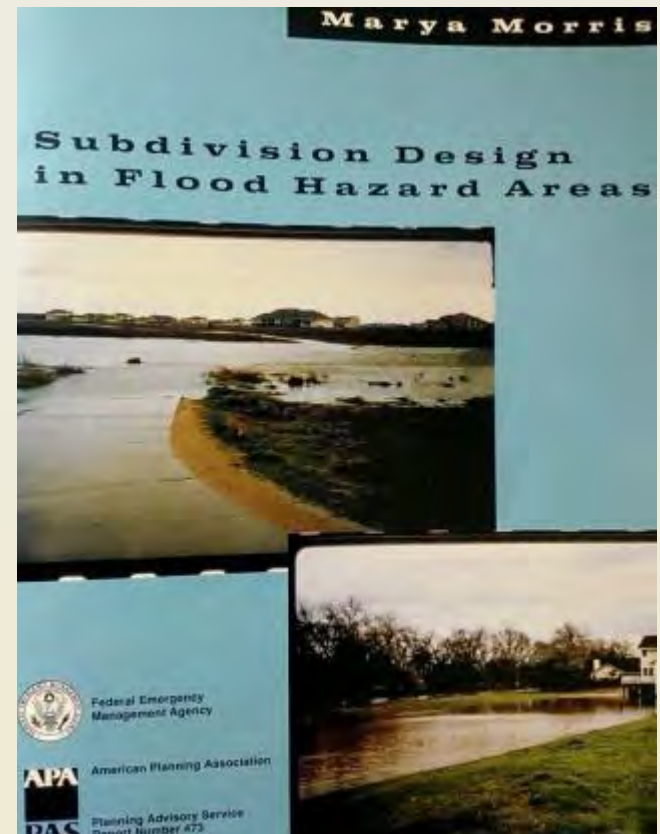
Agricultural floodplains can be pretty good habitat

Industrial floodplains are pretty bad habitat

Natural and Beneficial Values

EO 11988 Section 1. *Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to **restore and preserve the natural and beneficial values served by floodplains** in carrying out its responsibilities for*

- (1) acquiring, managing, and disposing of Federal lands, and facilities;
- (2) providing Federally undertaken, financed, or assisted construction and improvements; and
- (3) *conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.*



Natural and Beneficial Values

42 USC 4121(a)(12) the term “natural and beneficial floodplain functions” means (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 effect 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 Values

44 CFR 9.4 Natural Values of Floodplains and Wetlands means the qualities of or functions served by floodplains and wetlands which include but are not limited to:

- (a) Water resource values (natural moderation of floods, water quality maintenance, groundwater recharge);
- *(b) living resource values (fish, wildlife, plant resources and habitats);*
- (c) cultural resource values (open space, natural beauty, scientific study, outdoor education, archeological and historic sites, recreation); and
- (d) cultivated resource values (agriculture, aquaculture, forestry)

The Natural & Beneficial Functions Of Floodplains

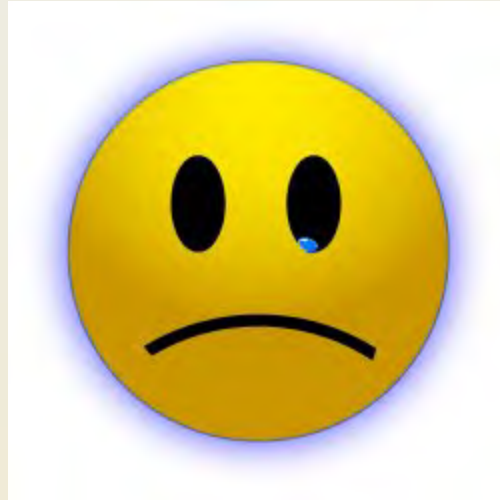
Reducing Flood Losses By Protecting And Restoring The Floodplain Environment



June 2002

A Report For Congress By The Task Force On The Natural And Beneficial Functions Of The Floodplain

FEMA's has stated that EO11988 and 44 CFR Part 9 do not apply to the NFIP because the program is not considered an "action"



So how do we get the square peg of conservation into the round hole of the NFIP?



Under ESA, when a Federal action Jeopardizes listed species, or Destroys or Adversely Modifies habitat designated as critical for that listed species, the Service provides its recommended **Reasonable and Prudent Alternative** to that action.

A Reasonable and Prudent Alternative

- Must avoid jeopardy and adverse modification of critical habitat.
- Must be within the action agency's authorities
- Must meet the purpose and need of the action agency
- Must be feasible

Florida RPA (per 2010 settlement)

- Monroe County, revised its permitting code, each land use project is reviewed against habitat assessment guides to ascertain areas of potential effect, and LAA projects are sent to USFWS for review.



- HCP for Key deer, marsh rabbit, and indigo snake in 2 of the Keys.

Washington RPA



12 counties, plus communities therein = 122 total participating jurisdictions

Oregon Draft RPA





31 Counties, plus communities therein = 260 participating jurisdictions

Washington RPA & Oregon Draft RPA are substantively VERY similar:

- Use more accurate mapping methods; Add listed species presence to mapping priority
- Limited uses/effects in floodway and channel migration zones
- All effects of development in the floodplain must be mitigated
- Zero Rise/Balanced Cut and Fill
- 5 acre lot size; use of LID
- CLOMRs for levees & fill trigger section 7 consultation
- Floodplain development tracking & annual reporting of floodplain development & effects

Oregon RPA's unique features that are currently included

- Map watersheds of $\frac{1}{4}$ square mile and bigger;
- Map areas of 6" depth and greater; depict full conveyance floodway **or** 1' rise floodway plus areas of 3' depth and 3' per second velocity;
- Map CMZs as E-zones; Depict LiMWA on maps, identify both on maps as High Hazard Areas
- Development restrictions and mitigation requirements must be included as minimum criteria

More accurately mapped floodplains
+
more restrictions on use of floodplains/erosion
areas
+
mitigation for impacts on floodplains
=
 Avoids Jeopardy 

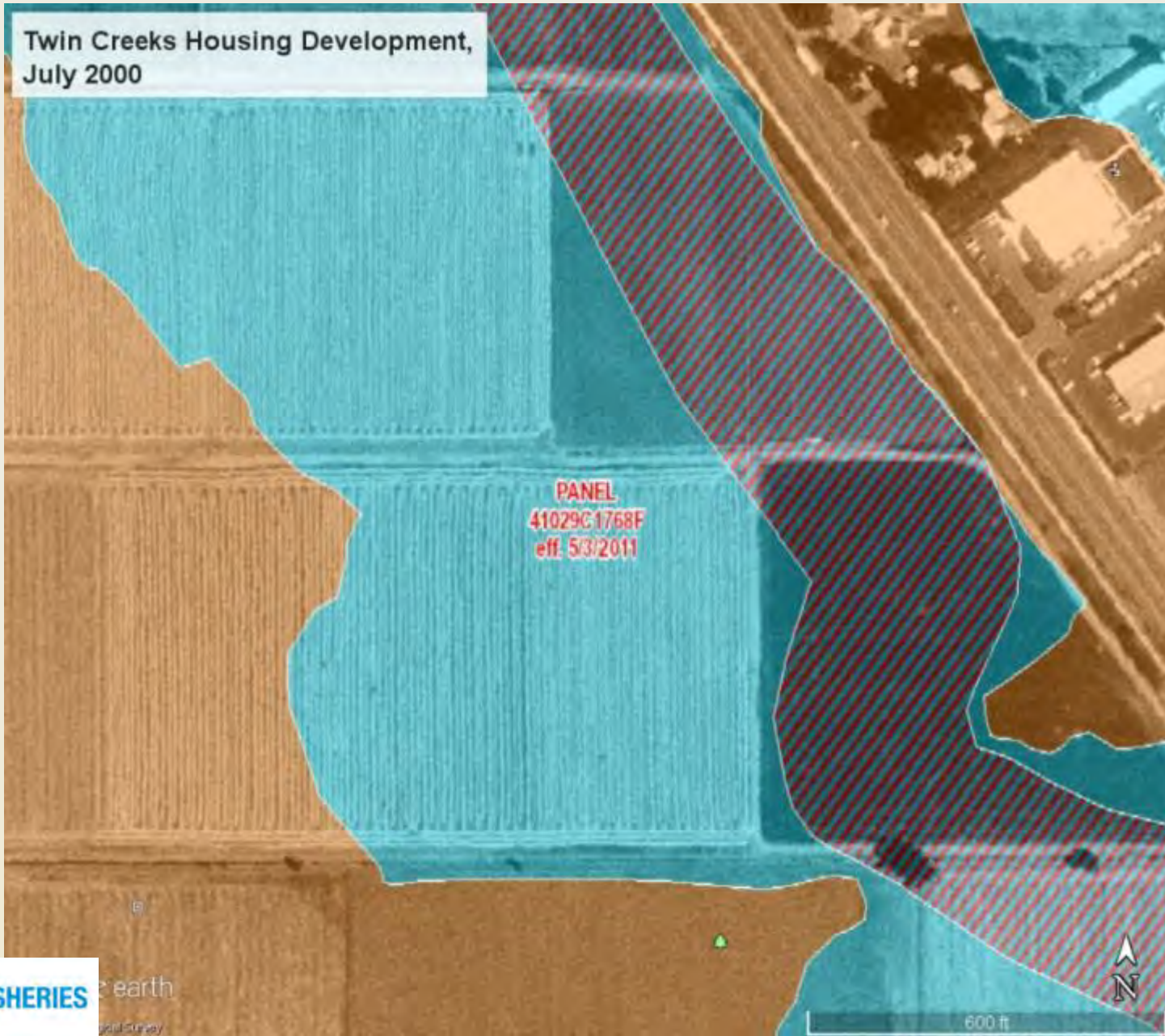
But is greater restriction of use of floodplains in
FEMA's Authorities?

FEMA's (land use) Authorities

“ Congress knew this was not a sound actuarial program but agreed to take that risk *only because we could get land use.*”
Statement of Mr. Bernstein, p 36 “We are encouraged that the administration proposal continues a firm position with respect to adequate and responsive *land use control measures.* *We consider such requirements to be absolutely essential to the long-range success of the flood insurance program.* Without such provisions to control future development of flood-prone area, continuance of a viable flood insurance program could very well be in jeopardy.”

Statement of Robertson Mackay, Chairman, National Flood Insurers Association. Excerpted from Hearings on the Expansion of the National Flood Insurance Program, May, 1973.

Central Point, Oregon



Twin Creeks Housing Development,
July 2014



FEMA's (land use) Authorities

42 USC 4001(e) the further purpose of this chapter to (1) encourage State and local governments to *make appropriate land use adjustments to constrict the development of land which is exposed to flood damage...*(2) *guide the development of proposed future construction, where practicable away from locations threatened by flood hazards*

FEMA's (land use) Authorities

42 USC 4002(a)(1) annual losses throughout the nation from floods and mudslides are increasing at an alarming rate, *largely as a result of the accelerating development of and concentration of population in area of flood and mudslide hazards* ..(b) *the purpose of this act is therefore to require* States or local communities, as a condition of future Federal financial assistance to participate in the flood insurance program and to adopt *adequate flood plain ordinances with effective enforcement provisions...to reduce or avoid future flood losses.*

FEMA's (land use) Authorities

42 USC 4022. State and local *land use controls* (a) Requirement for participation in flood insurance program (1) In general After December 31, 1971, no new flood insurance coverage shall be provided under this chapter in any area (or subdivision thereof) unless an appropriate public body shall have adopted adequate *land use and control measures* (with effective enforcement provisions) which the Director finds are consistent with the comprehensive criteria for land management and use under section 4102 of this title.

Applying the NFIP criteria does not appear to reduce or avoid future flood losses



FEMA's (land use) Authorities

42 USC 4023. Properties in violation of State and local law No new flood insurance coverage shall be provided under this chapter for any property which the Director finds has been declared by a duly constituted State or local zoning authority, or other authorized public body, to be in violation of State or local laws, regulations, or ordinances which are *intended to discourage or otherwise restrict land development or occupancy in floodprone areas*.

FEMA's (mapping) Authorities

42 USC 4101(a)(1) identify and publish information with respect to all flood plain areas...(b) The director is directed to accelerate the identification *of risk zones within flood-prone and mudslide-prone areas*



FEMA's (mapping) Authorities

- 42 USC 4101(b)(1)(C) the administrator shall include any relevant information on land subsidence...and **other flood-related hazards**



FEMA's (land use) Authorities

42 USC 4102(c) ...*develop comprehensive criteria designed to encourage, where necessary, the adoption of adequate state and local measures which, to the maximum extent feasible, will*" (1) *constrict the development of land* which is exposed to flood damage where appropriate, (2) *guide the development of proposed construction away from locations which are threatened by flood hazards*

FEMA's Authorities

42 USC 4121(c) the term “flood” shall also include the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels...



...and all the provisions of this chapter shall apply with respect to such collapse or subsidence in the same manner and to the same extent as with respect to floods described ...in this section, subject to, and in accordance with such regulations, modifying the provision of this chapter including the provisions relating to land management and use) to the extent necessary to insure that they can be effectively so applied ...to achieve (with respect to such collapse or subsidence) the purposes of this chapter and the objectives of this program.”



FEMA's Authorities

44 CFR 60.1(b) these [local floodplain management regulations] “must apply to all privately and publicly owned land within flood-prone, mudslide or **flood-related erosion areas**”

44 CFR 60.5 Flood plain management criteria for flood-related erosion-prone areas

Do we meet the 4 part test of the RPA?

- The RPA avoids Jeopardy ✓
- It's looks like it's within FEMA's ✓ Authorities
- It meets the purpose, ✓ which is to develop criteria that reduce and avoid future flood damages
- And it's feasible, ✓ because rule revisions are always within reach for an agency, and these revisions will avoid future insurance payouts by avoiding development in harm's way

Turns out, ESA may be a pretty good tool to fit the square conservation peg into FEMA's hazard insurance paradigm



What Happens Next?

FEMA and NMFS are in active discussion about this RPA – and we may agree to disagree on several points.

FEMA's obligation is to have a program that avoids jeopardy to species and the destruction or adverse modification of designated critical habitat for those species, and our RPA is NMFS' best advice on how to do that.

Ultimately, FEMA decides whether to adopt the RPA we provide, or to develop their own alternative to meet the ESA standard.

Questions?

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510 Desmond Drive, Lacey WA 98503. (360)753-9578.



*Thank you for your
participation!*



www.aswm.org