Floodplain Mitigation Banking: Oregon Dips Its Toe in the Water

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Local Floodplain Management Context

- Environmental complexity
- Climate variability and change
- Planning challenges
- Shifting regulatory context

Photo credit: River Partners
Upland and Everywhere: Manage Stormwater

- ESA habitat?
- Green infrastructure
  Improve water quality
- Safer Areas
  Plan for new development
- River Corridors
  Conserve and Avoid Development
- Vulnerable Settlements
  Protect People, Buildings and Facilities

Slow it, Spread it, Sink it

Offset impacts

Preparing for Future Flooding

U.S. EPA - Smart Growth Implementation Assistance

April 2013
Local Floodplain Management Context

- Increasing costs
- Increasing risk

Photo credit: River Partners
Increases in Number of Days with Very Heavy Precipitation (1958 to 2007)

Source: Global Climate Change Impacts in the United States, 2009
The number of repeatedly flooded properties has been increasing by an estimated 5,000 each year.

Source: Pew Charitable Trusts
2016
The cost of flood insurance is a drop in the bucket compared to the cost of flood damage.

- $700/year average flood insurance policy
- $39,000 average flood insurance claim

FEMA
Floodplain Managers’ Toolkit in Oregon

- Integrated plans - **ID** high hazard & high value areas for avoidance
- Standardized tools to quantify and value floodplain functions
  - Incentives for multi-credit mitigation banking for floodplain function
- Watershed-scale **analysis** to target site level restoration
- **Model communities** for OR, WA and others
- Demonstrate avoidance & minimization
- Mitigate loss of flood storage, hyporheic function, water quality, hydrologic process, vegetation and habitat forming processes
- Benefit same species and populations
- Occur prior to or concurrent with loss of habitat function
- In-kind and on-site mitigation preferred
- Use of an NMFS-approved conservation bank or in-lieu fee program as alternative
Mitigation Banking

- Avoidance & minimization standards
- Net benefit standard
- Incentives for investment in restoration
- “Valuation” of floodplain functions
Ingredients of Success

Best available science
Delivers verifiable & durable conservation outcomes
Meets regulatory requirements
Viable incentive structure/business model
Model for OR, WA and others
Tools for Quantifying Floodplain Functions

Flood storage & attenuation
Water quality
✓ ESA listed species
✓ Stormwater management
✓ CWA Section 404
Credit-debit methodologies
Cosumnes Floodplain Mitigation Bank

472-acre site approved to provide:
- Essential fish habitat mitigation credits
- Wetland mitigation credits
- Riparian forest & shrub scrub habitat credits
Challenges

Policy: multi-credit/joint banking

Scale & landscape position: site level restoration linked to watershed effects

Business case: incentives for advanced mitigation

Effectiveness: connection to salmon recovery & other ecosystem services
Questions?

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