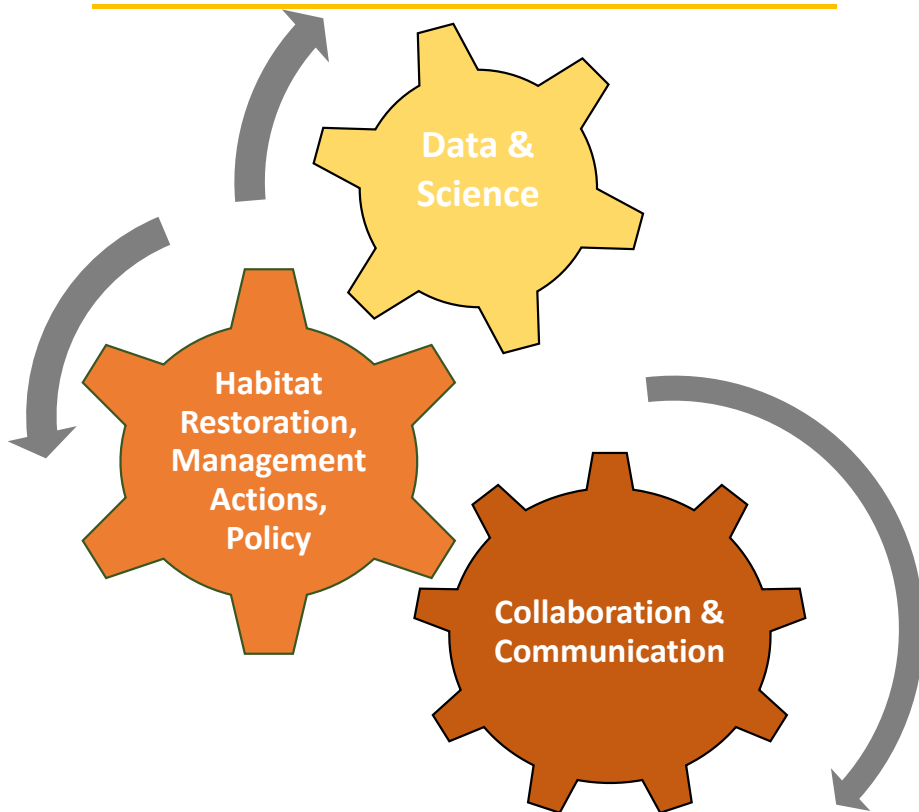


# Advancing Beaver Habitat & Beaver Modified Landscapes



# Beaver Habitat & Stream Restoration



## **ODFW stream restoration programs**

- Western Oregon Stream Restoration Program
- BPA East Region Fish Habitat Restoration Programs
- Extensive collaboration with Watershed Councils, Soil and Water Conservation Districts, private landowners, state and federal land managers

Additional capacity added with regional habitat biologists, PFA stream & beaver biologists  
Tracking beaver-related habitat project metrics

# Beaver Habitat & Stream Restoration

- Salmonid-focused projects with beaver habitat creation as an explicit objective or indirect benefit
- Hydrological restoration: channel meanders, slow backwater, beaver dam analogs
- Vegetation restoration/recovery through fencing
- Documented increases in beaver use post-restoration
- Funding from Oregon Watershed Enhancement Board, Bonneville Power Authority

Anticipating additional funding opportunities through Private Forest Accord Mitigation Fund and federal Good Neighbor Authority





# Beaver Habitat & Land Management

- “Starting the discussion” about how to encourage habitat that beaver need
- Riparian management has focused on larger, older trees for water quality and fish habitat
- However, beaver prefer the “younger” *early seral* forest succession stage for food and floodplain connection
- How to reconcile both important needs?
- At this point, recommending a non-prescriptive, process-based, disturbance-mimicking approach in appropriate, limited locations

New considerations and adjusting the approach to riparian management



# Beaver Habitat: Additional Needs

## Practitioner's Guidance to Developing Habitat for Beaver

- Refine the standards of practice
  - Field site assessment – what attracts beaver?
    - Vegetation composition and structure
    - Topographic variability in bank structure
    - Disturbance regimes
    - Water flow and depth
  - Cross-walking stream restoration methods with beaver habitat improvement
  - Restoration permitting guidance
  - Funding opportunities

Guidance can facilitate planning,  
funding, permitting, and restoration  
Seeking funding support from OCFR





# Data & Research

## Ongoing

- ODFW is primary source for monitoring beaver activity with established projects and data/science resources (e.g., harvest, conflict response, PFA components, Aquatic Inventories Program - AQI, relocation guidelines, USFS aquatic inventories, etc.)
- Direct new projects and information sources

## Needed

- Build and validate predictive models of beaver habitat quality
- Baseline beaver activity habitat surveys; data management across partners
- Limiting factors
- Refined spatial analysis from harvest data

Informs beaver management and  
habitat restoration priorities  
Seeking funding support from OCRF



# Coexistence & Sustainable Harvest Management

- Staff guidance on resolving human-wildlife conflict
- Monitoring and evaluating harvest; new requirements for harvest reporting
- Adaptive opportunities through rules and regulations to meet goals and objectives

Efforts supported with new staff provided through PFA (beaver biologists)



## Landowner Incentives and Tolerances for Managing Beaver Impacts in Oregon

Final Report

Mark D. Needham, Ph.D.  
and  
Anita T. Morzillo, Ph.D.

Department of Forest Ecosystems and Society  
Oregon State University

Conducted for and in cooperation with:  
Oregon Department of Fish and Wildlife  
Oregon Watershed Enhancement Board  
Bonneville Power Administration

2011



# Managing Policy & Legal Compliance

- Implementing and developing user-friendly guidance (fish passage):
  - Low-impact, process-based restoration structures
  - Exclusion devices
  - Water surface control structures
- Implementing adaptive updates to beaver relocation guidelines
- Emphasis on non-lethal solutions and retention of dams



*Low-impact, process-based restoration may not be either.*



*Beaver exclusion devices can be lethal to fish.*



# Collaboration & Communication

- *"Applying the beaver lens"*
- Implement plans, other direction
- Engage with federal and state agencies and other partners
- Help direct projects and funding
- Update documents and enhance online outreach materials



# Communication & Engagement

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- Six-month check-in with Beaver Work Group
- 1-year implementation update with Fish & Wildlife Commission
- Private Forest Accord Annual Report to Oregon Legislature
- Ongoing engagement with stakeholder groups, PFA authors

