Kootenai River Model Watershed Project
Species of Concern

- Burbot
- Grizzly Bear
- South Arm Kokanee
- Woodland Caribou
- Spalding’s Catchfly
- Ladie’s Tresses Orchid
- Westslope Cutthroat
- Redband Rainbow
- Bull Trout
- Canada Lynx
- Water Howellia
- Grey Wolf
- White Sturgeon
Tribal Approach to Fish and Wildlife Management

- Holistic – operate on a watershed scale
- Defensible science
- Collaborative effort
- Inclusive of social and economic issues
- Maintain local community support
- Encourage adaptive management
Tribal Fish and Wildlife Projects

- Kootenai River White Sturgeon and Burbot Conservation Aquaculture, Research and M&E
- Ecosystem Improvements – river and lake productivity
- River Habitat Restoration
- Operational Loss Assessment
- Feasibility of Reconnecting Sloughs and Side Channels
- Habitat Acquisition for Wildlife Mitigation
- Tributary Restoration – Kootenai River Model Watershed
About the Kootenai River Model Watershed Project

- 10-year MOU (with BEF) inclusive of 4 streams
- Goal: Rehabilitate tributaries to functioning condition
- Assess “what it takes”
- Equal consideration of social, cultural, and ecological components
Who is BEF??

- Bonneville Environmental Foundation -

Multi-year support for River Restoration

Catalyzing a Paradigm Shift Towards Long-Term, Scientific, and Adaptive River Restoration

Program Mission:

- Promote policy and management shifts in watershed restoration strategies
- Increase capacity of river restoration
- Encourage sustained efforts
Benefits of BEF Partnership

- Long-term and consistent commitment (i.e. 10-year MOU)
- Development of measurable objectives and scientific review
- Evaluation based on ecological improvement
- Promote learning based on measured results
Selection of Project Streams

✓ Tribal Significance
✓ Scale of ecological importance
✓ Current functioning condition (PFC)
✓ Workability (i.e. size, landowner interest)
Goals and Objectives Matrix Approach
**Initial:** Restore 1 Stream

**Current:** Restore 4 Streams

**Initial:** Reduce Sedimentation

**Current:** Rehabilitate Riparian Zone

**Initial:** Increase Community Awareness

**Current:** Engage Community

**Initial:** Assess Project Feasibility and Effects

**Current:** Document Trends in Specific Metrics (i.e. water temperature, biotic indices, nutrients, habitat availability, kokanee spawning and escapement)
Restoration/Rehabilitation Efforts

- **Meander Stabilization** => ↓Erosion and Sedimentation
- **Revegetation** => ↓Temperature, ↑Nutrients and Habitat Complexity
- **Grazing Management** => ↓Disturbance
- **Cattle Watering** => ↓Disturbance, ↑Production
- **Weirs and Riprap** => ↑Habitat and Catchment
Monitoring Program

- Track progress toward achieving project objectives
- Assess physical, biological, chemical and social response
- Identify statistically significant changes
- Comparisons with threshold values (i.e. water temperatures)
Indicators of Recovery

- Quarterly
- Annual
- 3-5 year
- 5-10 year
- Decadal

Resilience/Survival

Reproduction

Succession

Landowner Participation

Food Web Complexity
Questions to Answer

- Did biological component improve?
- Can we maintain landowner interest and commitment long-term?
- Has riparian protection become the norm?
- Have values and thought processes shifted?
Conservation, viewed in its entirety, is the slow and laborious unfolding of a new relationship between people and land

- Aldo Leopold, Wisconsin Wildlife Chronology (1940)
Lessons Learned

- Long-term Commitment and Landowner participation are critical components in watershed restoration

- One-shot monitoring and prescription are impractical

- Flexibility is key (Long-term adaptive management)

- Written contracts => tool to assure landowner commitment

- One size doesn’t fit all
Successes and Encouraging Results

- Lower reaches limited by instability, lack of complexity, and lack of riparian vegetation
- Positive changes becoming evident (i.e. improved habitat, returning kokanee)
- Land owner and manager participation have increased
- Project complimentary to full-scale Kootenai River watershed restoration program
How Has KTOI and BEF Non-Profit Leadership Influenced And Shaped This Project?

- Community Leadership and Commitment to the Resource
- Flexibility and Availability of Resources
- Non-Threatening Entity
- Long-term Commitment
Partnering

• Federal Government
  • BPA, USACOE, USFS, USFWS, NRCS, USEPA

• Idaho State
  • IDEQ, IDFG, NWPPC-Idaho, IDL, IDWR

• Interjurisdictional
  • MDFWP, BCMOE

• Local Government
  • Boundary County, County Conservation Districts

• Non-profit and Local Groups
  • BEF, KTOI, KVRI, KRN, TU, TNC

• Private Landowners and managers
  • Billy and Gayle Krause, George and Kari Shutes, Fred and Robyn Bowles, Roger Morter, Bucher Family, Chris Amoth, John Oxley, Anheuser-Busch