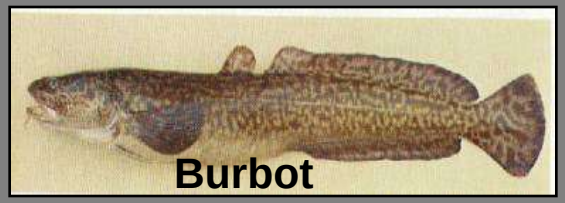
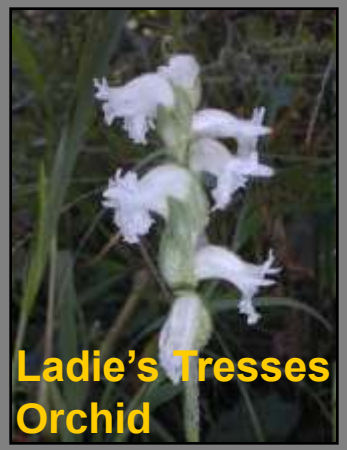
Kootenai River Model Watershed Project

Species of Concern


Burbot

Westslope Cutthroat

Woodland Caribou


Ladie's Tresses Orchid

Canada Lynx

Redband Rainbow

Spalding's Catchfly

Bull Trout

Water Howellia

Grey Wolf

White Sturgeon

South Arm Kokanee

Grizzly Bear

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

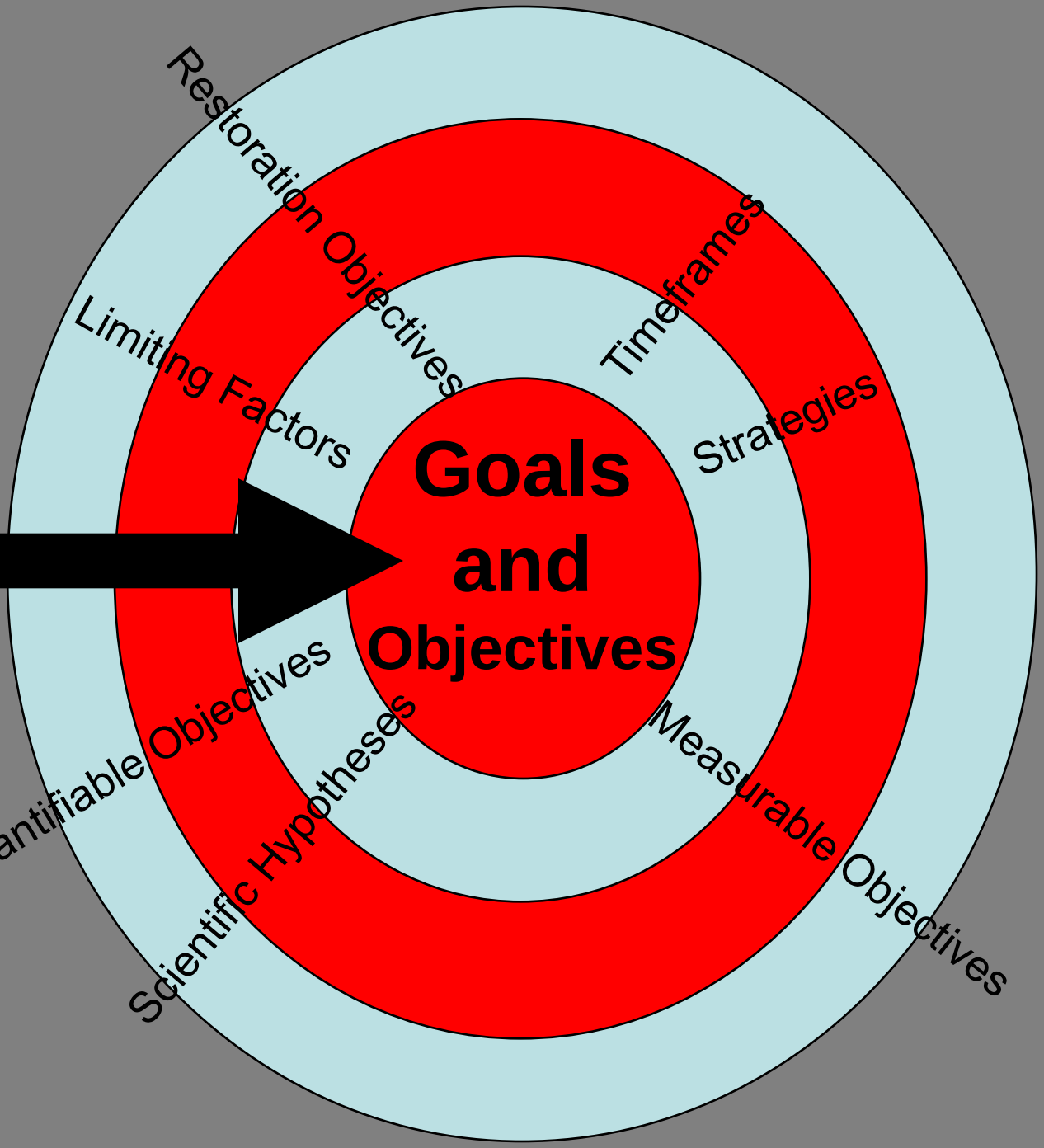
Benefits of BEF Partnership

- 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)

Matrix Approach



Initial:
Restore 1 Stream

Restore 5 Streams

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

Landowner Participation

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

Reproduction

Food Web Complexity

Resiliance/ Survival

Succession

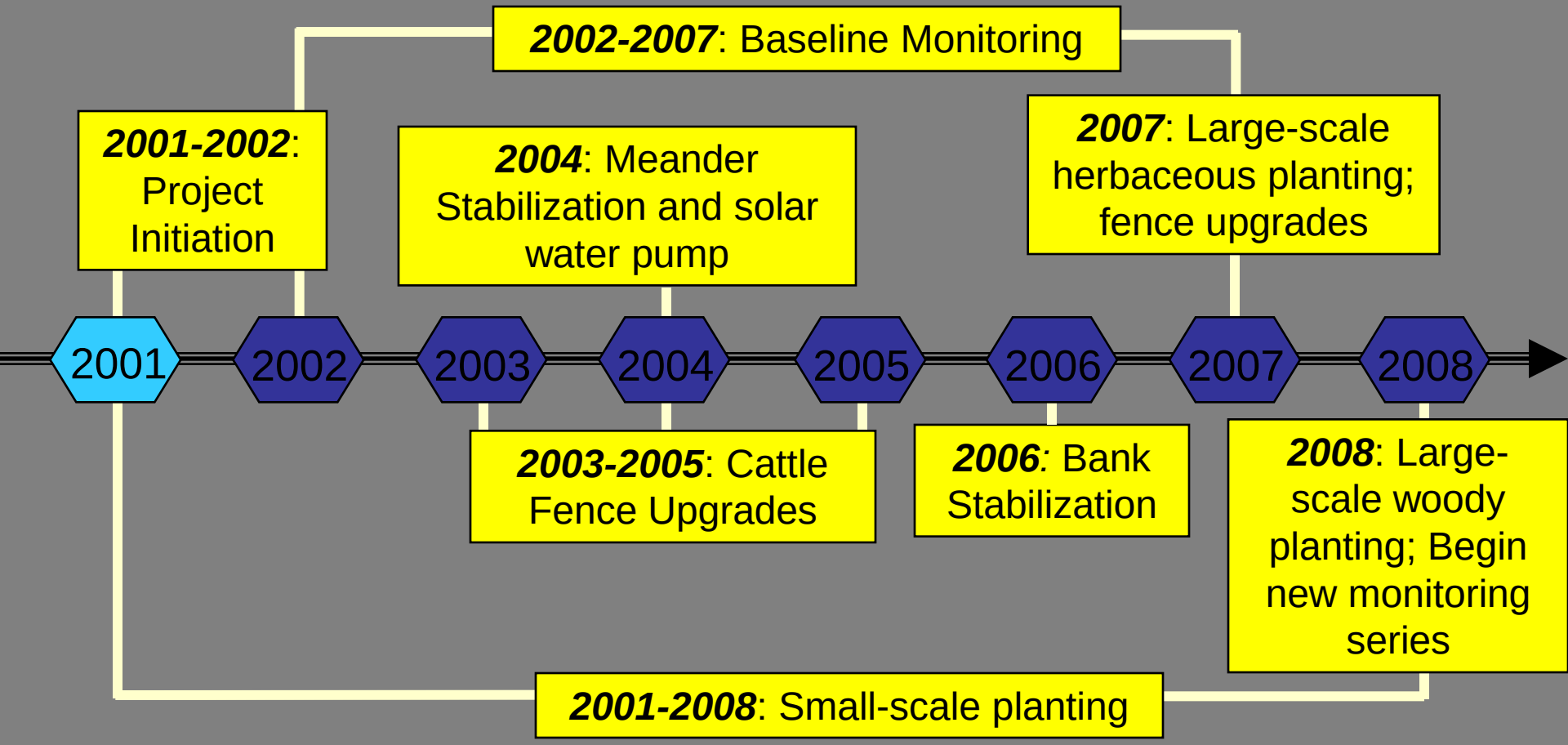
September 2001

September 2008

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?

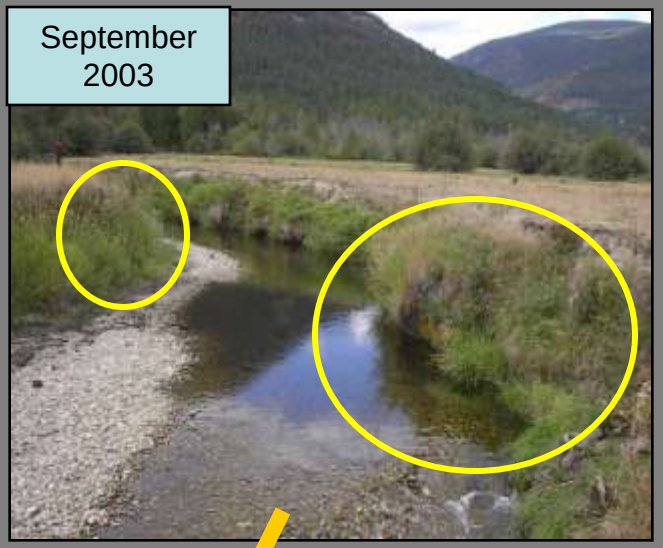
Current Project Status



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)

Visual Indicators



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