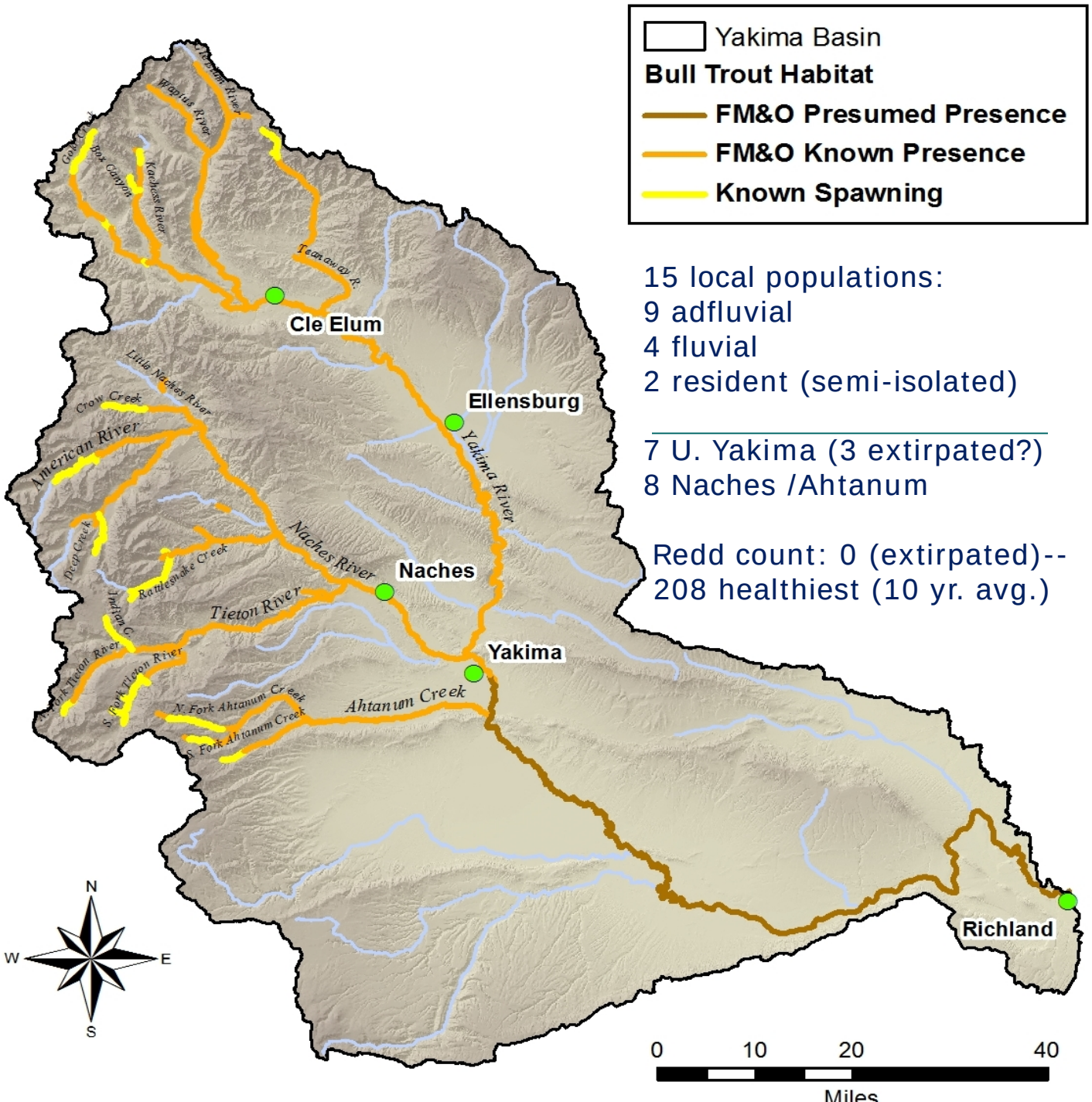
Yakima Bull Trout Status & Recovery

Eric Anderson – WDFW, Judy Neibauer - USFWS

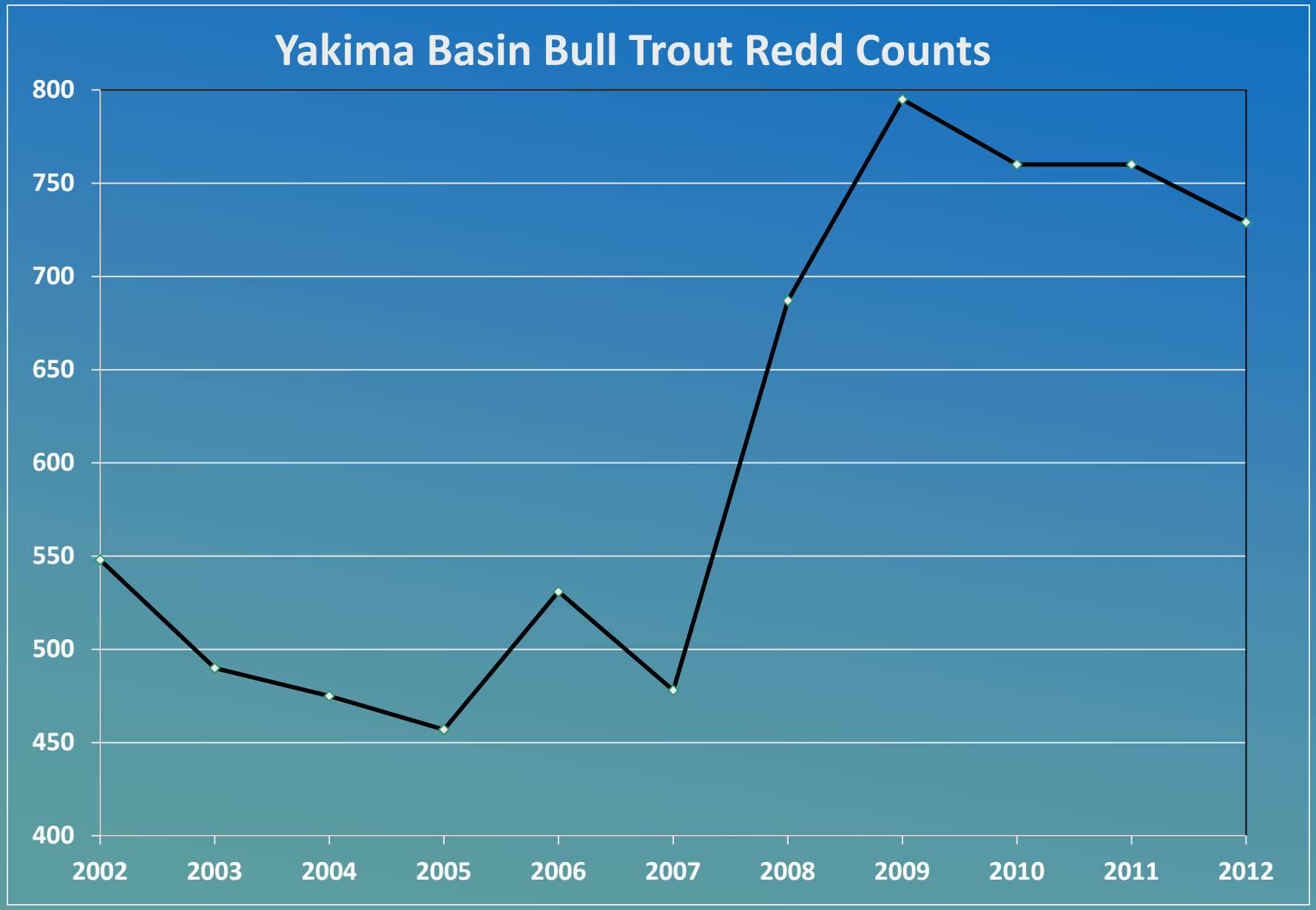

Yakima Basin
Bull Trout Habitat
FM&O Presumed Presence
FM&O Known Presence
Known Spawning
15 local populations:
9 adfluvial
4 fluvial
2 resident (semi-isolated)
7 U. Yakima (3 extirpated?)
8 Naches /Ahtanum
Redd count: 0 (extirpated)--
208 healthiest (10 yr. avg.)
Cle Elum
Ellensburg
Naches
Yakima
Richland
Teanaway R.
Wapatus River
Box Canyon
Kachess River
Little Naches River
Crow Creek
American River
Deep Creek
Rattlesnake Creek
Naches River
Tieton River
Indian C.
N. Fork Tieton River
S. Fork Tieton River
N. Fork Ahtanum Creek
S. Fork Ahtanum Creek
Ahtanum Creek
Yakima River
N
S
E
W
0
10
20
40
Miles

Naches Populations (Redds) -- 10 year avg.

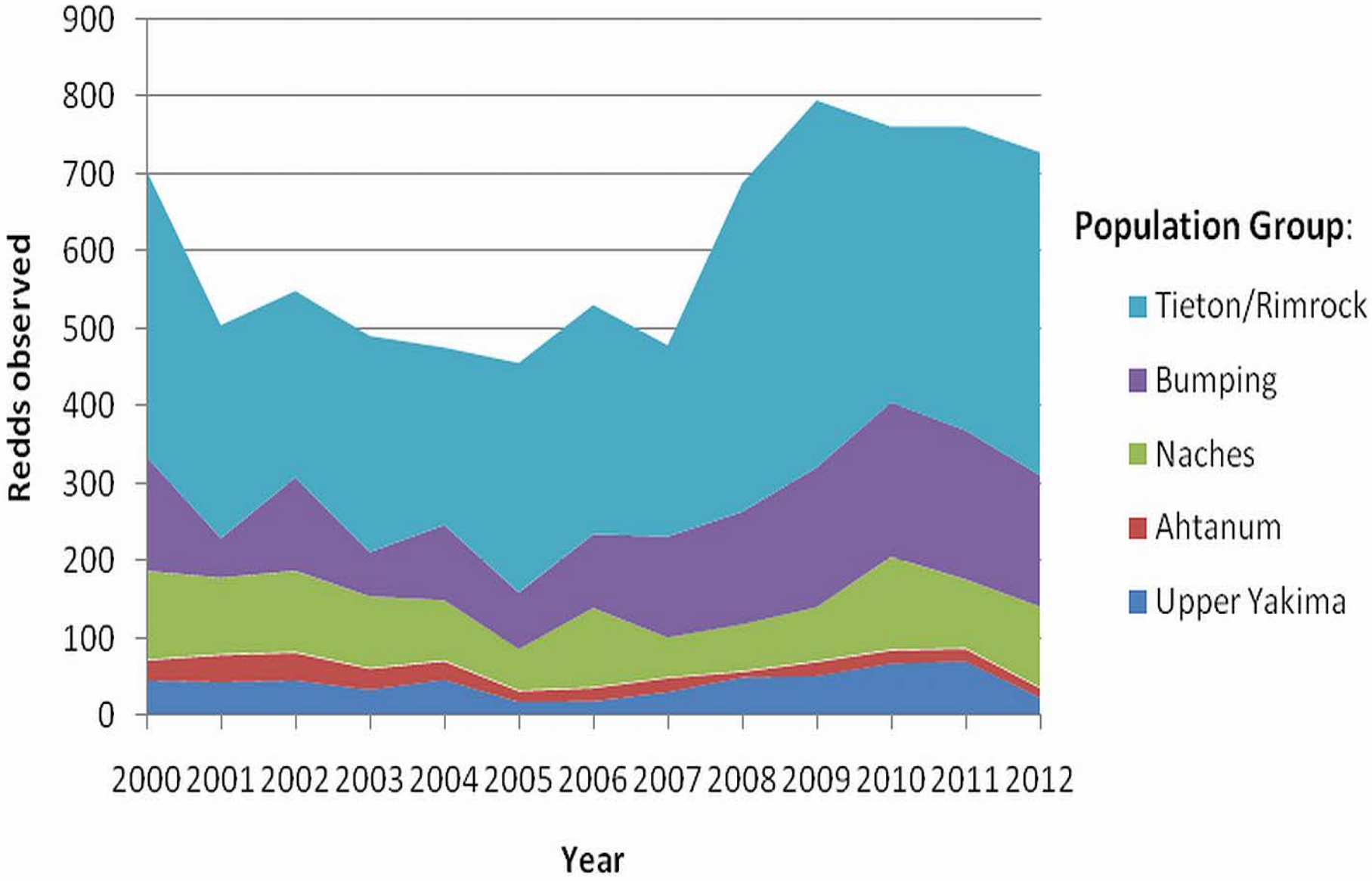
- Ahtanum Creek (R) – Ahtanum (17)
- Naches River (F) – Rattlesnake (38), Crow (6), American (38)
- Rimrock Lake (Ad) – Indian (120), SF Tieton (208), NF Tieton (21 – 6 yr avg.)
- Bumping Lake (Ad) – Deep (133)

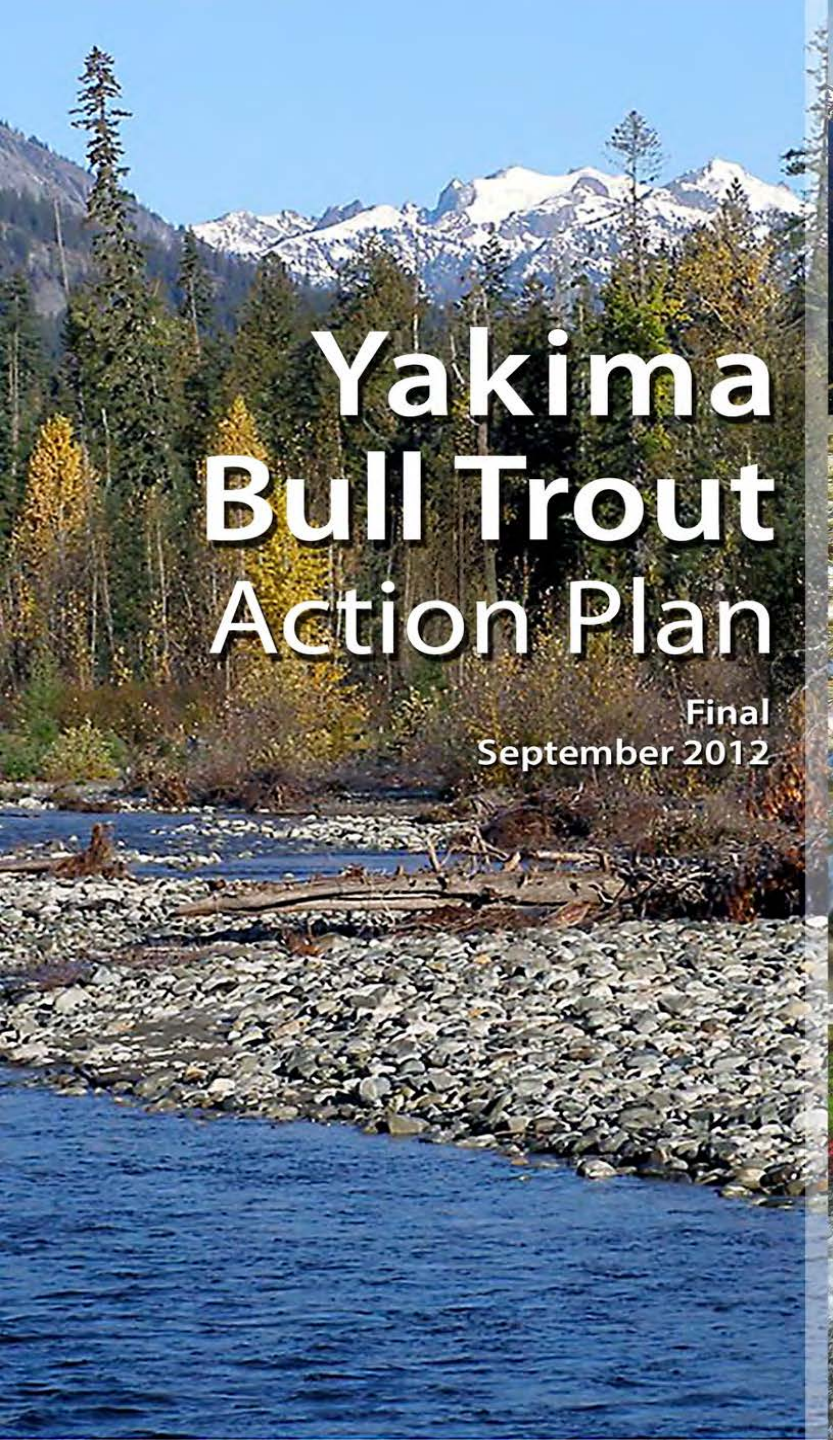
Upper Yakima Populations (Redds) -- 10 year avg.

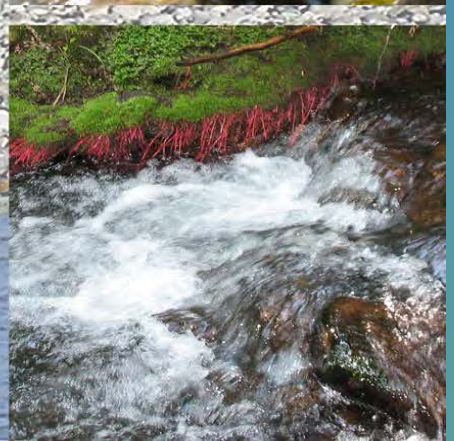
- Kachess Lake (Ad) – Box Canyon (14), Kachess (11)
- Keechelus Lake (Ad) – Gold (16)
- Cle Elum & Waptus Lakes (Ad) (No confirmed redds), potentially extirpated?
- Teanaway River (F/R) – N.F. Teanaway (1 redd last 6 years), potentially extirpated?
- Yakima River (F) – Up. Yakima (5 in 10 yr.)


Yakima Basin Bull Trout Redd Counts
800
750
700
650
600
550
500
450
400
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

Yakima Basin Bull Trout Redd Counts







Yuki Reiss (YBFWRB)
Jeff Thomas (USFWS)
Eric Anderson (WDFW)
Jim Cummins (WDFW)

Input from Yakima Bull Trout Core Area Technical Team

Local Consensus on Prioritized Actions

Goal – ID specific actions that benefit bull trout in the basin

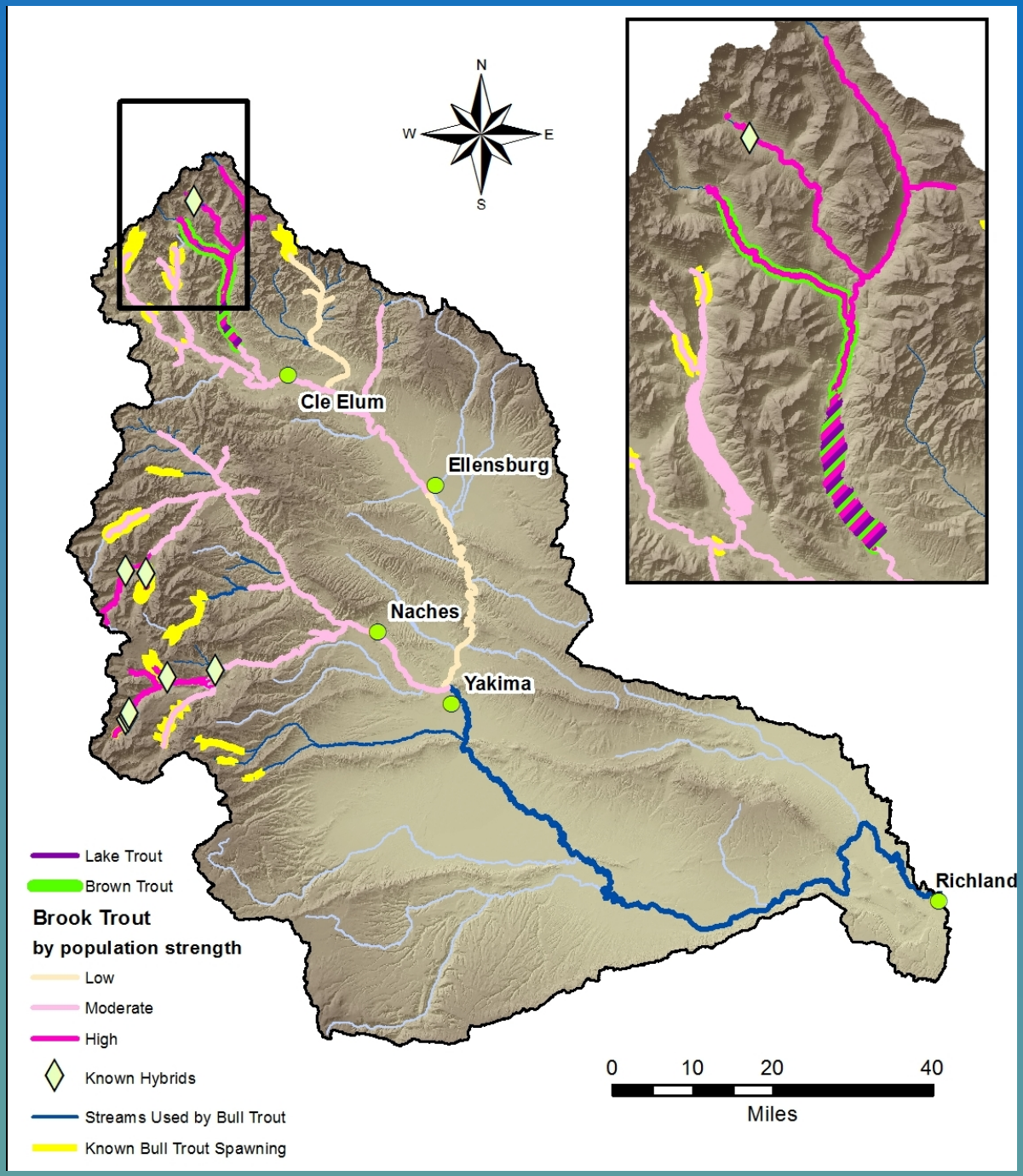
Coordinated with Judy Neibauer, USFWS

www.ybfwrb.org

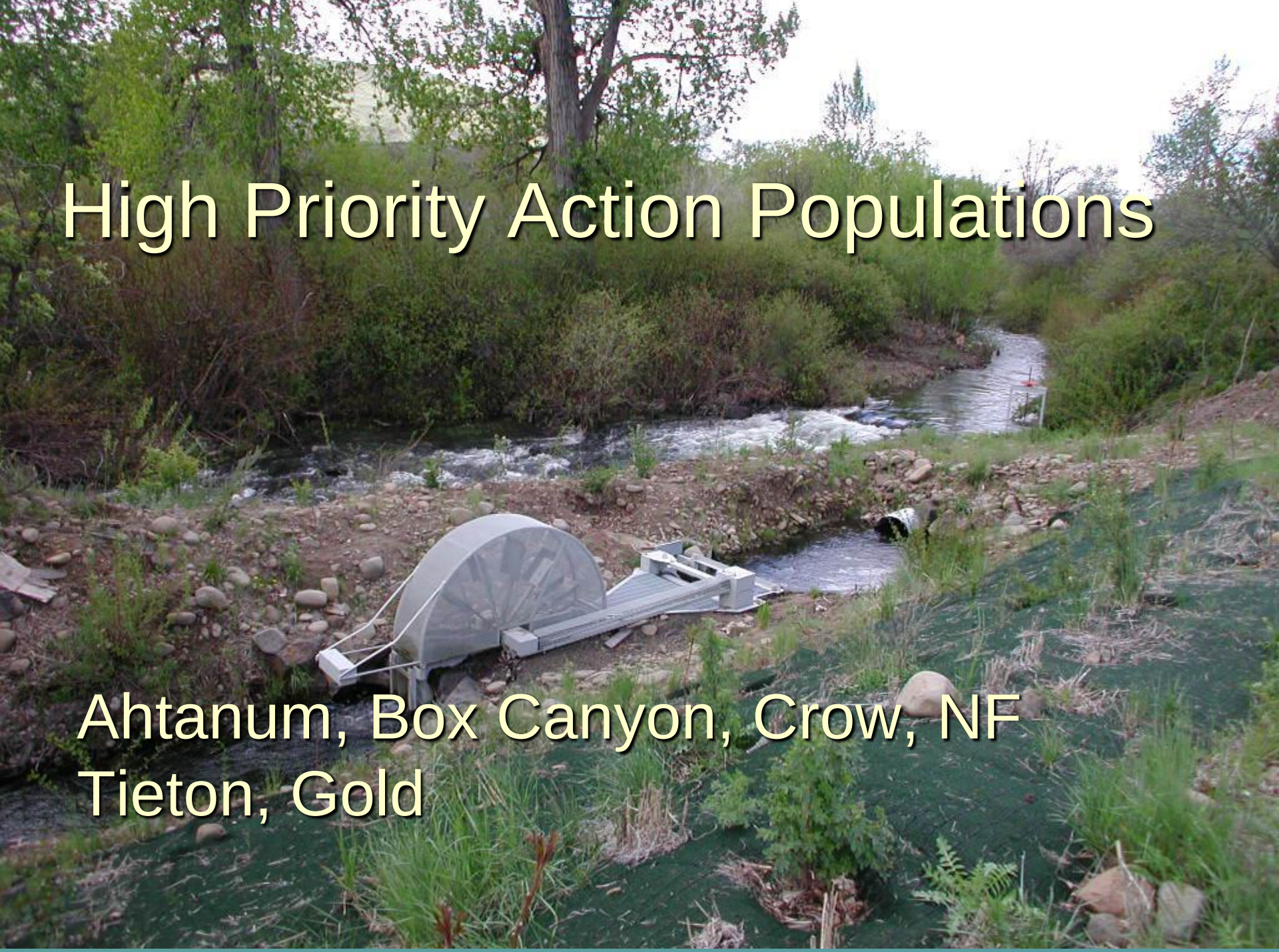
Individual Population Information

- Life history, connectivity, genetics, population monitoring history, redd count data, radio telemetry
- Habitat overview, habitat monitoring history, threats analysis, maps
- Prioritized population actions
- Extensive Bibliography

J. Satore


N
W
E
S
Cle Elum
Ellensburg
Naches
Yakima
Richland
Lake Trout
Brown Trout
Brook Trout
by population strength
Low
Moderate
High
Known Hybrids
Streams Used by Bull Trout
Known Bull Trout Spawning
0
10
20
40
Miles

High Priority Action Populations



Ahtanum, Box Canyon, Crow, NF Tieton, Gold

All Populations

- Monitor - redd counts, temp. brook trout introgression, etc.
- Protect – spawning, rearing, FMO
- Educate the public - BTTF

<u>Future ?</u>

- Potential supplementation or transplantation for kick starting weak or extirpated populations, mitigation tool.

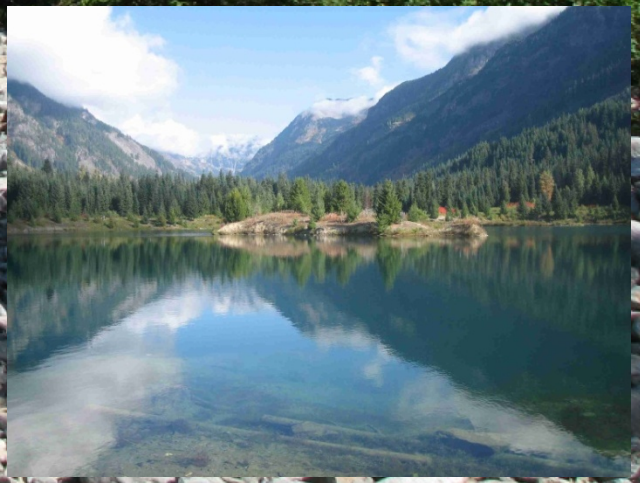
Gold Creek Habitat Assessment

Issues involving stream dewatering, habitat degradation, development, causing bull trout passage problems / mortality.

- managed by Kittitas Conservation Trust

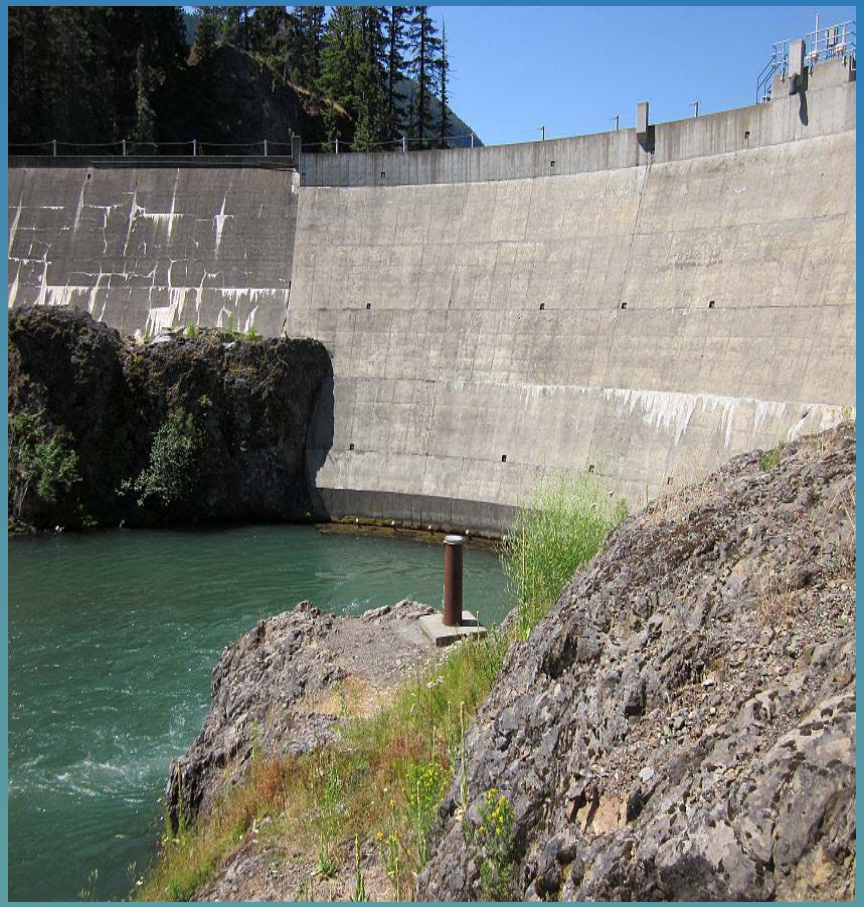
- contract with Natural Systems Design

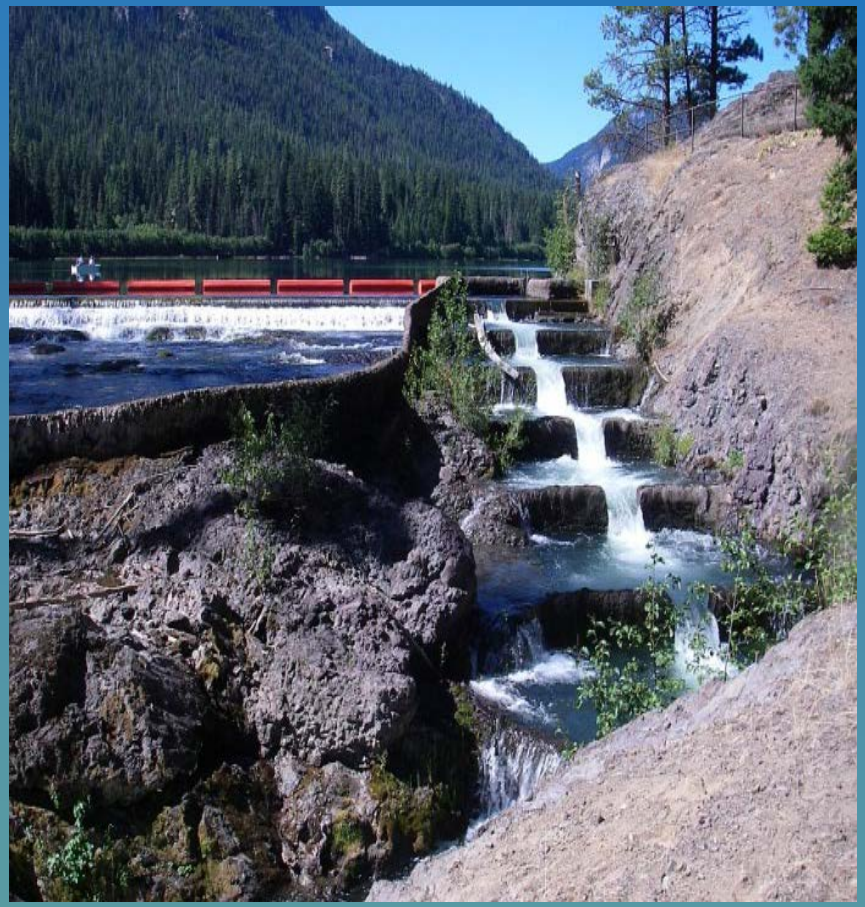
- Surfboard Funded Project



Clear Lake Dam Fish Passage Assessment

-- funded by USBR





N.F. Tieton Weir & Box Trap

- capture & pit tag post spawned bull trout and monitor up / downstream movement

USFWS lead, USBR, WDFW, BTTF

- 3 year study

N.F. Tieton Picket Weir & Trap

- 1st year 10 adults tagged, late Sept. 2012

- processing station

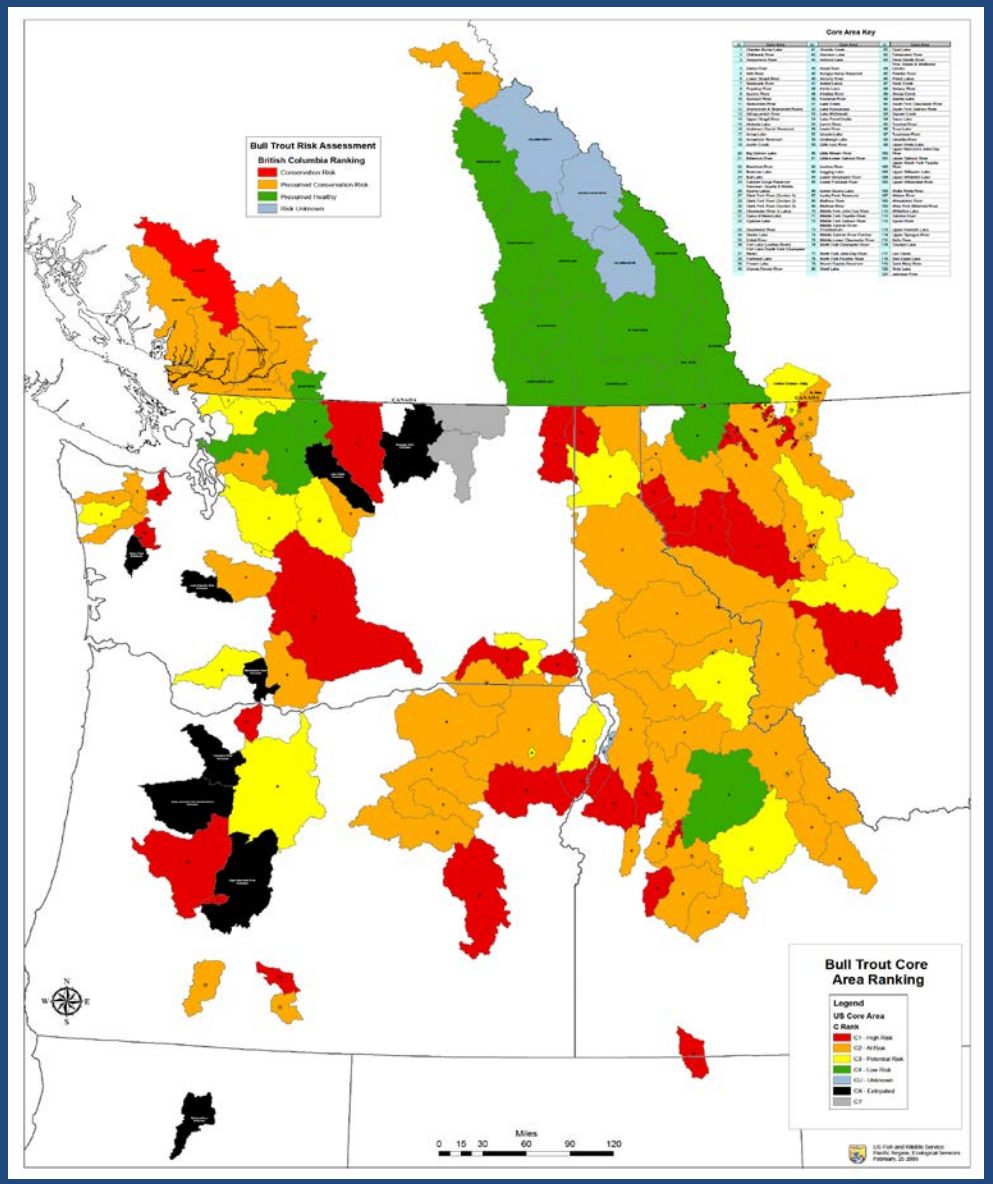
- 82 cm bull trout

Bull Trout ESA History

- **1994-96:** Listing is warranted but precluded
- **1998 & 1999:** Listed as threatened (multiple DPSs then Coterminous DPS)
- **2002-2004:** Draft recovery plan published (26+ RUs/MUs); Court directed Proposed and Final Critical Habitat (CH) Rule
- **2004-2005:** CH challenged in U.S. District Court (Oregon) and new CH final rule
- **2006-2008:** CH challenged in court; 5-year status review completed; not status change: bull trout remain listed rangewide; Science showed we needed new RUs?
- **July 2009-2010:** CH challenged and court directs new proposed CH rule by Dec 09; Critical habitat finalized 2010; and 6 new draft RUs identified w/Justification document

2008 5-Year Review

- 2008 Nature Serve Model used to rank core areas.
- Listing status did not change.
- 2013/14 new 5-Year listing status review.



Recovery Plan Timeline

1. **Sept 2011 – Aug 2012: Initiate/develop new draft Recovery plan**
   - **Change in BT Coordinators**
   - **Recovery Strategy submitted to Boise Office**
2. **Sept 2013: Boise Office submits draft Plan to Regional Office**
3. **Jan 2014: Publish draft Recovery Plan**
4. **2009-2014: Develop Action Plans**
   - **Sept 2012: Yakima**
   - **2014: Upper Columbia**

Bull Trout (*Salvelinus confluentus*) and
Mountain Whitefish (*Prosopium williamsoni*)

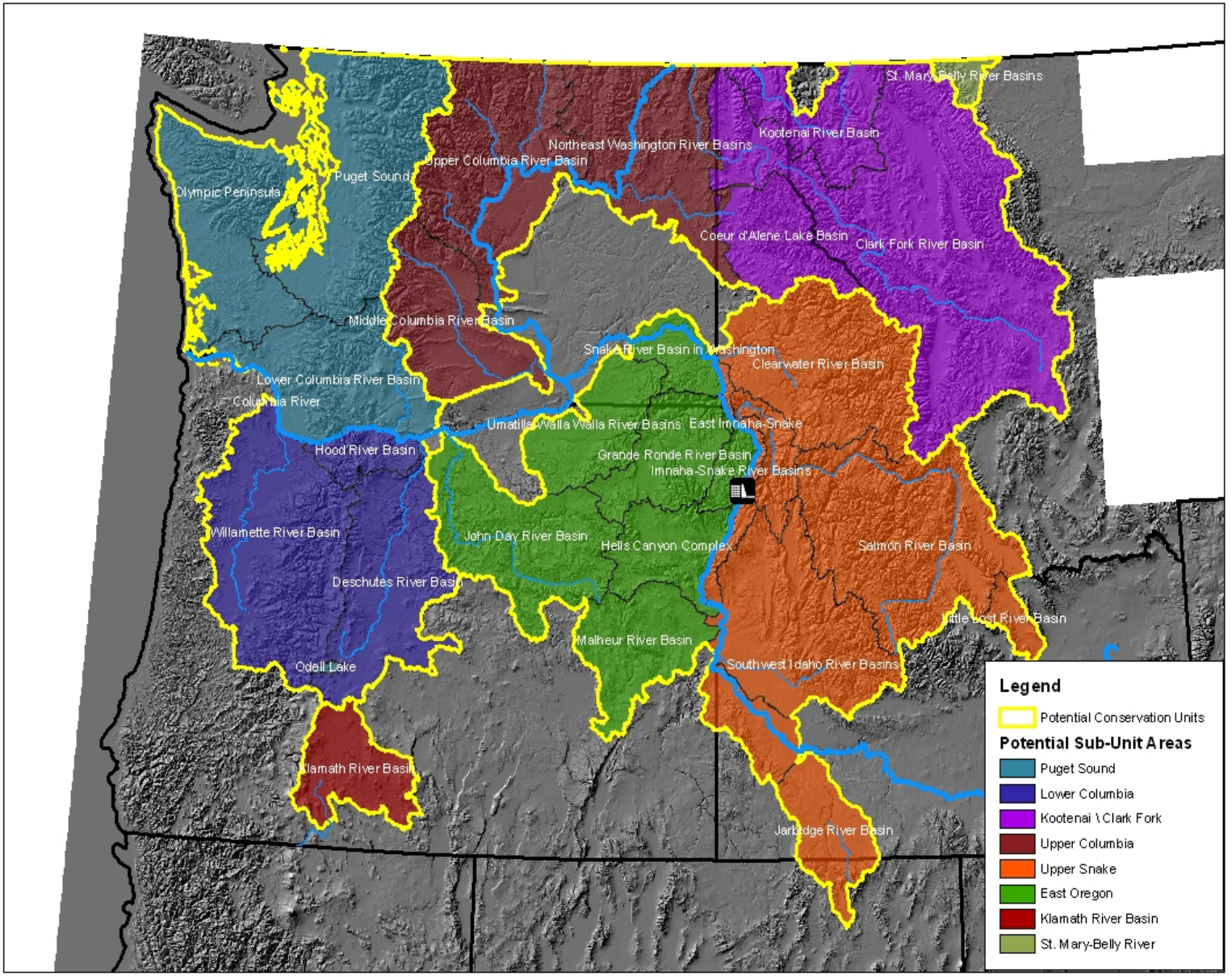
Bull Trout (*Salvelinus confluentus*) and
Rainbow Trout/Steelhead(*Oncorhynchus mykiss*)

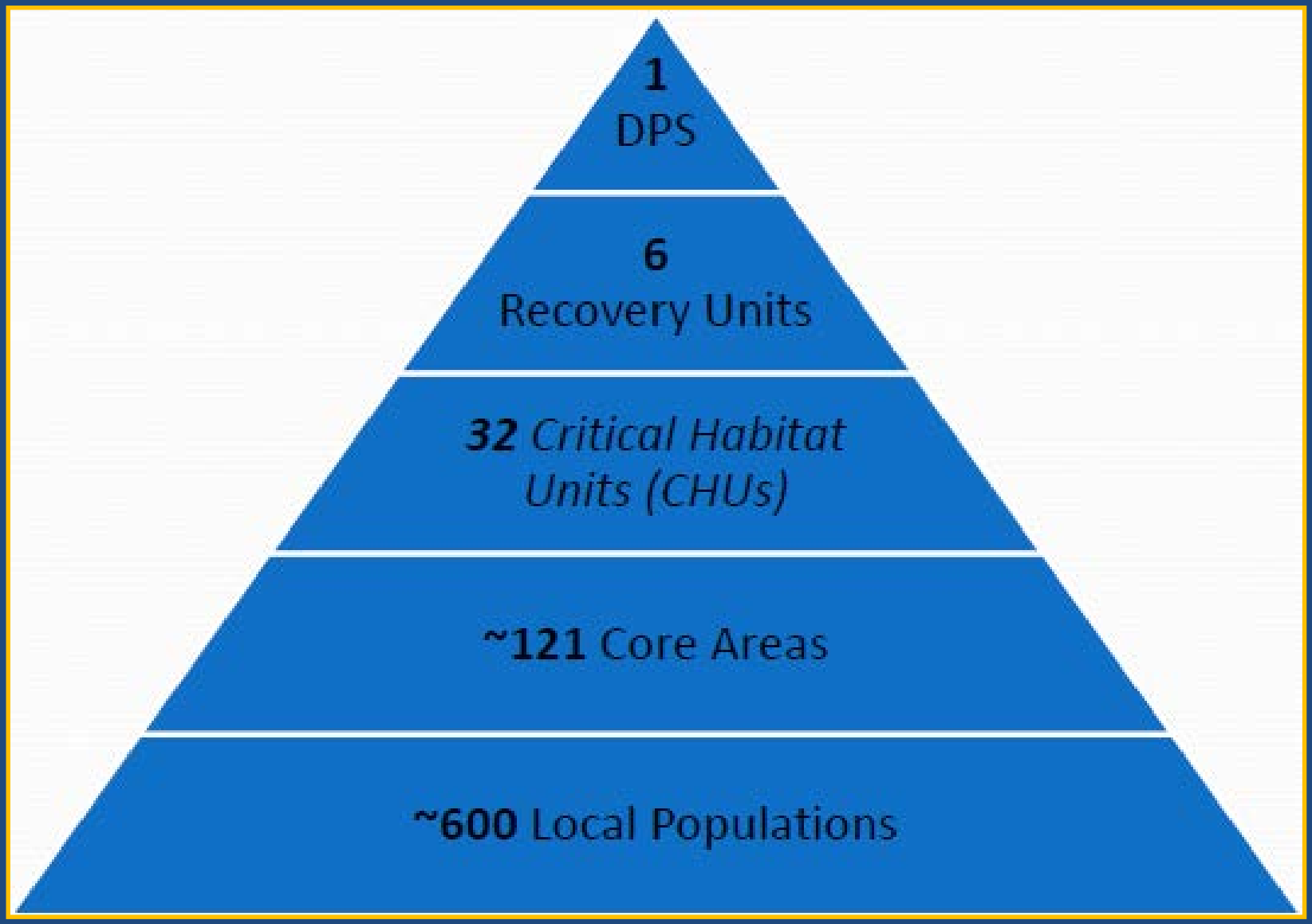
Recovery Unit: Geographic Area

- Yakima Core Area - 15 local populations: Ahtanum, N.Fork Tieton, S.Fork Tieton, Indian, Rattlesnake, American, Deep/UBumping (1), Crow, Teanaway, CleElum, Waptus Kachess, Box, Gold, U. Yakima.
  - 2 PLPs: Taneum, Little Naches
  - Three >100 avg redds (SF Tieton, Indian, Deep); Only two others avg 30 -40 redds
  - Remainder = only a handful up to 20 redds
  - Large Scale connectivity issues and High risk for climate change
- Wenatchee Core Area – 7 local populations: Peshastin, Icicle, Chiwaukum, Chiwawa, Nason, White, Little Wenatchee.
  - Only one of seven >300 redds or 600 spawning adults; One other 30-50 redds; Remainder are <10 redds.
  - Lake Wenatchee
  - ~12% use the Columbia River
- Entiat Core Area – 2 local populations: Mad, Entiat mainstem
  - Only two local populations < 10-20 redds or up to 20-40 spawning adults
  - ~90+% adults/subadults use the Columbia River
- Methow Core Area – 10 local populations: Gold, Beaver, Twisp, Wolf, Early Winters, Goat, Chewuch, Lake, West Fork Methow, Lost
  - Only one > 50 redds or up to 100 spawning adults; Remainder range from a handful to 25 redds.
  - `Lost R and Black Lake
  - ~12% use the Columbia River
  - Glaciers

**Historic Habitat & Foraging,Mig,Overwintering - Chelan, Okanogan R, Columbia River, NE WA above Cheif Joseph and Grand Coulee Dams

New Six Draft Recovery Units




1
DPS
6
Recovery Units
32 Critical Habitat Units (CHUs)
~121 Core Areas
~600 Local Populations

Seven Guiding Principles
(building blocks for RUs)

1. Conserve diverse life-history
2. Conserve genetic diversity
3. Ensure species distribution across habitats
4. Ensure connectivity among populations
5. Ensure sufficient habitat for viable populations
6. Consider threats (e.g., barriers, climate change)
7. Ensure multiple, redundant populations

Biological Significance and The 3 Rs

We evaluate biological significance based on the principles of conservation biology using the concepts of redundancy, resiliency, and representation (Schaffer and Stein 2000).

These concepts also can be expressed in terms of the four viability characteristics used more commonly by NMFS:

1. Abundance
2. Spatial distribution
3. Productivity (trends)
4. Diversity of the species (connectivity, life history, genetics)

Redundancy, resiliency, and representation are not independent of each other, and some characteristic of a species or area may contribute to all three

DRAFT Recovery Planning Structure and Strategy for Bull Trout

DPS Recovery Plan: Identifies plan structure, strategy, overall recovery criteria, general actions, global topics, etc.

Six Recovery Unit (RU) Plans: Contains recovery criteria and unit strategy for recovery, general tasks, general information about the unit, and priorities.

1. **Coastal**
2. **Mid-Columbia / Snake**
3. **Upper Snake**
4. **Columbia Headwaters**
5. **St. Mary**
6. **Klamath**

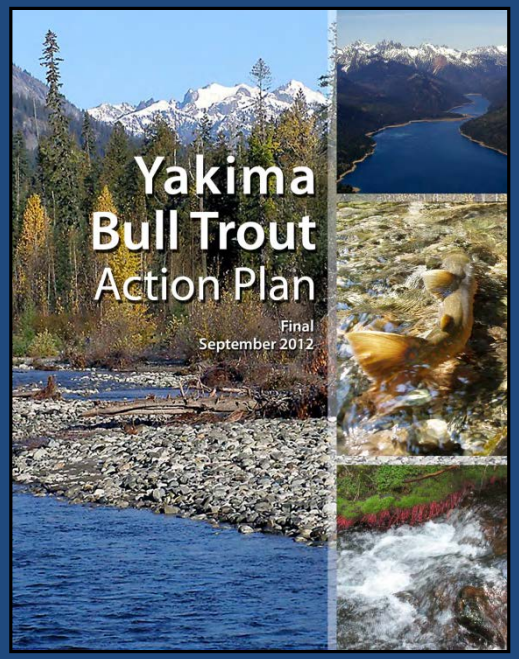
RU's make up the Recovery Plan

Implementation Plans:

- Utilize old Recovery/ Management Plans until they are updated.
- Will be at or close to old RU/MU scale and utilize plan info as much as possible.
- Contain goals that fit into the RU criteria and the specific recovery tasks.
- Integrate actions with existing salmon and steelhead recovery plans where appropriate.
- Living documents.
- Action Plans

Core Areas (CAs): Roll up into RUs. Need to be based on the most recent biology and can be modified as new information is available.
Local populations are described within the Core Areas.

Action Plan: A Tool for Implementation



- Goals and objectives
- Population Information:
  - Distribution, Abundance, Trends
- Threats Analysis:
  - Used USFWS threats categories
- Actions: Linked to Threats
  - Categorized, Prioritized
- Annual Updates

Questions/Comments?

Photo by Joel Sartore, National Geographic and Wade Fredenberg, USFWS)

Resiliency, Redundancy, Representation

Resiliency (abundance, spatial distribution, productivity) describes the characteristics of a species that allow it to recover from periodic disturbance.

- *Redundancy* (having multiple populations distributed across the landscape; abundance, spatial distribution) may be needed to provide a margin of safety for the species to withstand catastrophic events.

- *Representation* (the range of variation found in a species; spatial distribution, diversity) ensures that the species' adaptive capabilities are conserved.