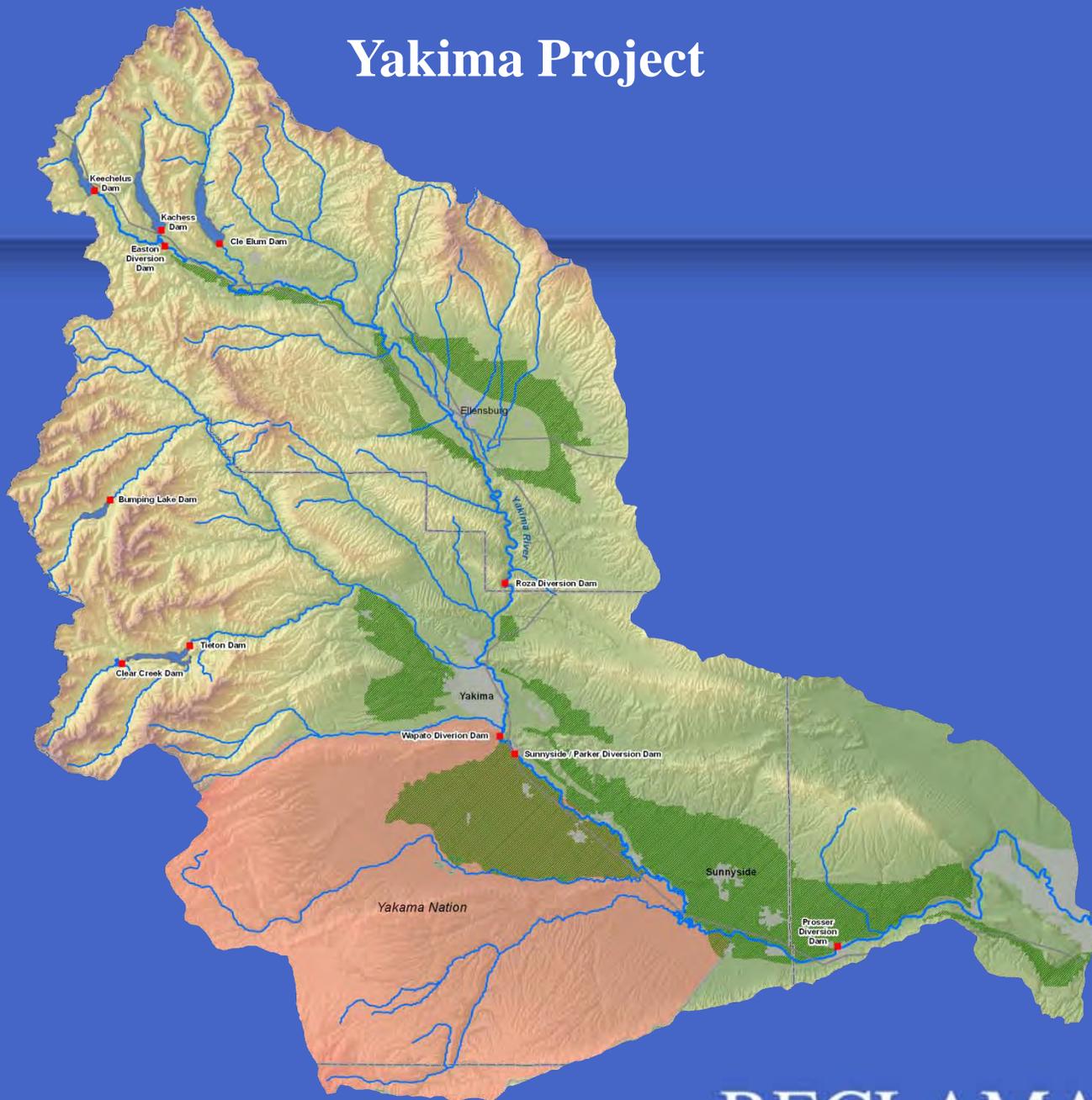


Yakima River Basin Water Enhancement Project Phase II

Yakima Project



RECLAMATION

Yakima River Basin Water Enhancement Project

- **YRBWEP Legislative History**

- P.L. 96-162 Feasibility Study, December 28, 1979
- P.L. 98-381 Section 109 of Hoover Power Plant Act of 1984, August 17, 1984
- P.L. 103-434 Title XII Yakima River Basin Water Enhancement Project, October 31, 1994, as amended by P.L. 105-62, October 13, 1997, and P.L. 106-372, October 27, 2000

- **YRBWEP Phase II Authorized 1994**

- To protect, mitigate, and enhance fish and wildlife through improved water management, instream flows, and water quality; to protect, create and enhance wetlands; and other habitat improvements
- To improve the reliability of water supply for irrigation
- To authorize a Yakima River Basin water conservation program
- To provide for implementation by the Yakama Nation of an irrigation demonstration project, Wapato Irrigation Project improvements and a Toppenish Creek Corridor enhancement project

RECLAMATION

YRBWEP Accomplishments

- Water Conservation Plan
- Land and Habitat Restoration
- Tributary Enhancement
- Yakama Nation Planning

Yakima River Basin Water Conservation Plan

- Implementation:
 - SDBOC Phase I – Sunnyside Canal Improvement Project
 - SDBOC Phase I Diversion Reduction Agreement
 - Benton Irrigation District Pressurized Piping System
 - SDBOC Phase IIA (ARRA) – Enclosed Lateral Improvement Projects
 - SDBOC Phase II B
- Cost Share – BOR 65%; State 17.5%; District 17.5%
- Conserved Water: District retains 1/3; BOR 2/3

SVID Phase I

Sunnyside Canal Improvement Project

- @ \$28.5M, FY04-FY12 – (Total Project \$44M)
Construction will be completed in FY13
- 33 automated check structures
- 3 re-regulation reservoirs
- Supervisory Control and Data Acquisition System (SCADA)
- Retains 19,450 acre feet (54 cfs) conserved water in the Yakima River over Parker
- 17,078 acre-feet available in the 2012

Sunnyside – Old Check Structure



Sunnyside – New, Automated Check Structure





SVID 59.29 Re-regulation Reservoir



RECLAMATION

37.10 Re-reg Lining



SVID 23.70 Re-regulation Reservoir



Phase I - Diversion Reduction Agreement

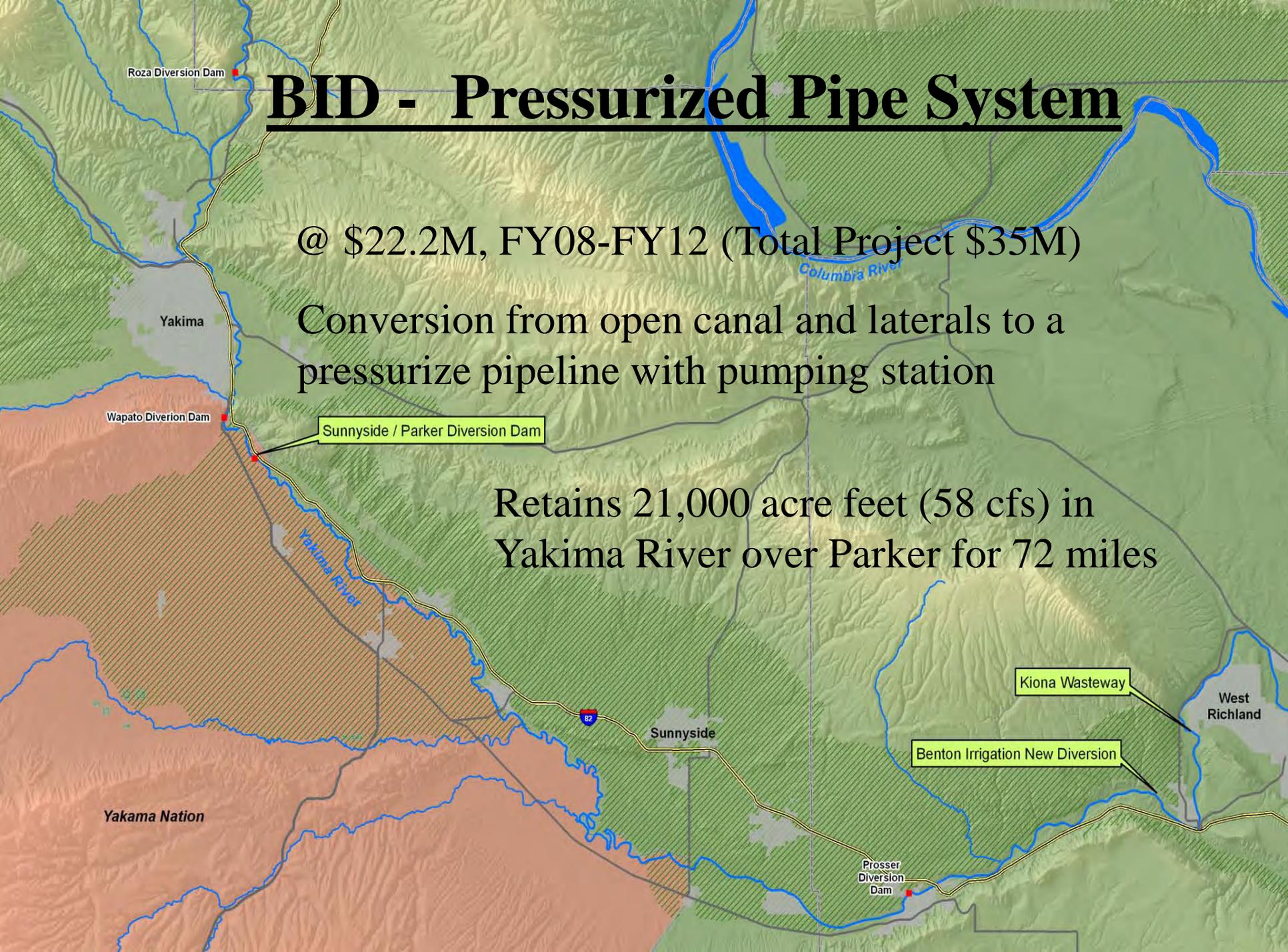
- @ \$8.0 million in YRBWEP funds FY10-FY13 (\$1.77 M to pay)
- Gives Reclamation control of 9,712 acre-feet (27cfs) to enhance Yakima River instream flows.
- 7,563 acre-feet of this water is applied to target flows in the 2012 irrigation season.

BID - Pressurized Pipe System

@ \$22.2M, FY08-FY12 (Total Project \$35M)

Conversion from open canal and laterals to a
pressurize pipeline with pumping station

Retains 21,000 acre feet (58 cfs) in
Yakima River over Parker for 72 miles



Benton Pump Site



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BID Pump Station



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SDBOC Phase IIA (ARRA)

Enclosed Lateral Improvement Projects

- @ \$21.4M American Recovery and Reinvestment Act (ARRA) funds (FY09-FY12). (Total Project \$35.5M)
- Convert 49 miles of open lateral to a closed piped system serving 11,800 acres;
- Reduce diversions by over 3,810 acre-feet (11cfs) in the Yakima River



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Managing Water in the West



Sunnyside Division
Board of Control
YRBWEP
Sunnyside
Conduit



KOMATSU

SCARSELLA

PC100LC

KOMATSU



M4
P-1032

M3
P-1076











48.00 MILE





No. 824/630

FM03



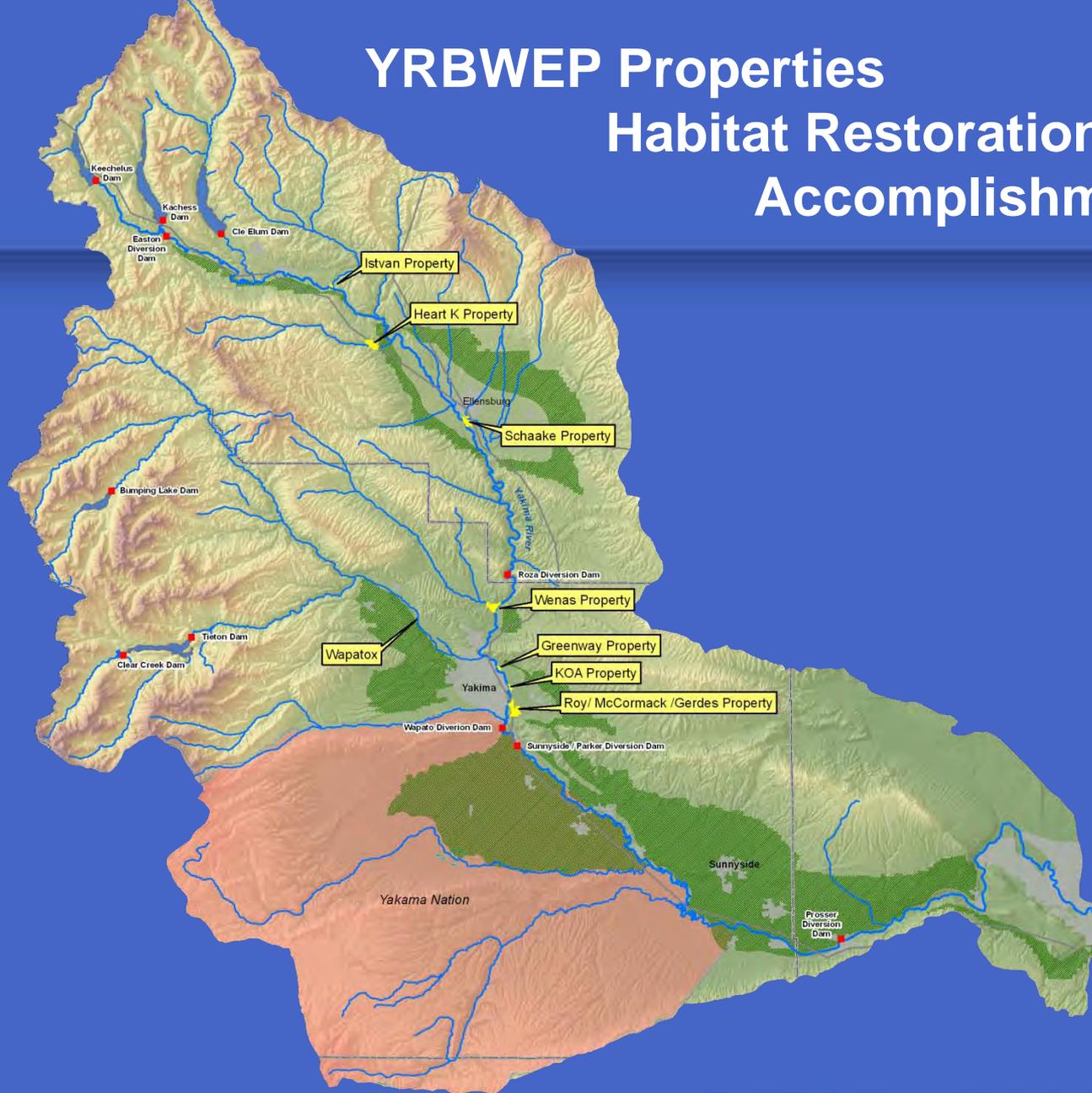
Instream Flows at Parker

YRBWEP Legislation – 300 cfs base flow

Additional Flows Due to Conservation

- FY 2010 – 32 cfs
- FY 2012 – 117 cfs
- Potential – 238 cfs (20 years)

YRBWEP Properties Habitat Restoration Accomplishments



RECLAMATION

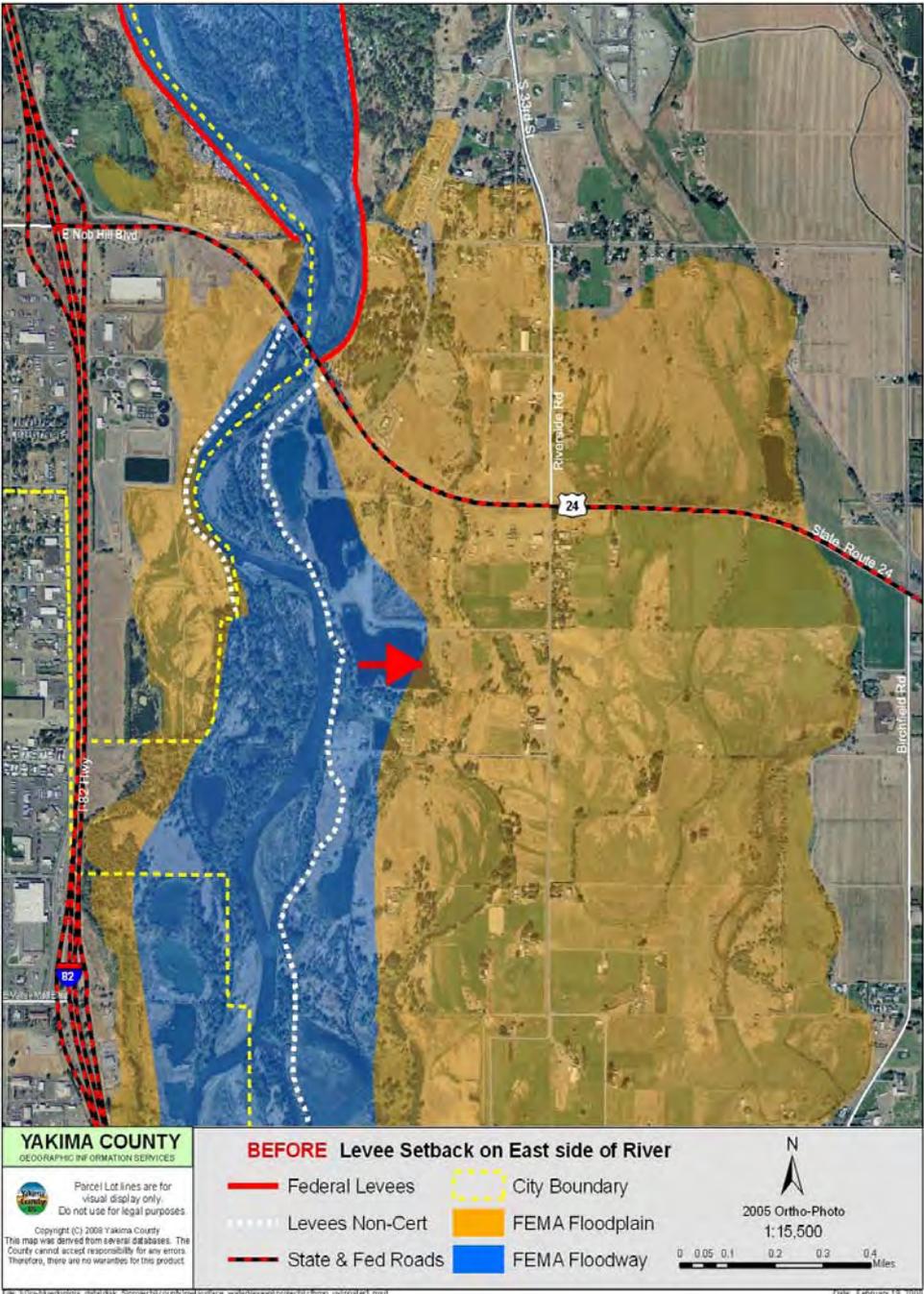
Gap to Gap Properties and Levee Relocation: Relocation Partners

- Yakama Nation
- Diking District #1
- Reclamation
- WDFW
- WSDOT
- Yakima Basin Fish and Wildlife Board
- Yakima Basin Water Resources Agency
- Ecology
- NOAA/NMFS
- USFWS
- Washington State Senator Curtis King

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Before Proposed Levee Setback on East Side of River

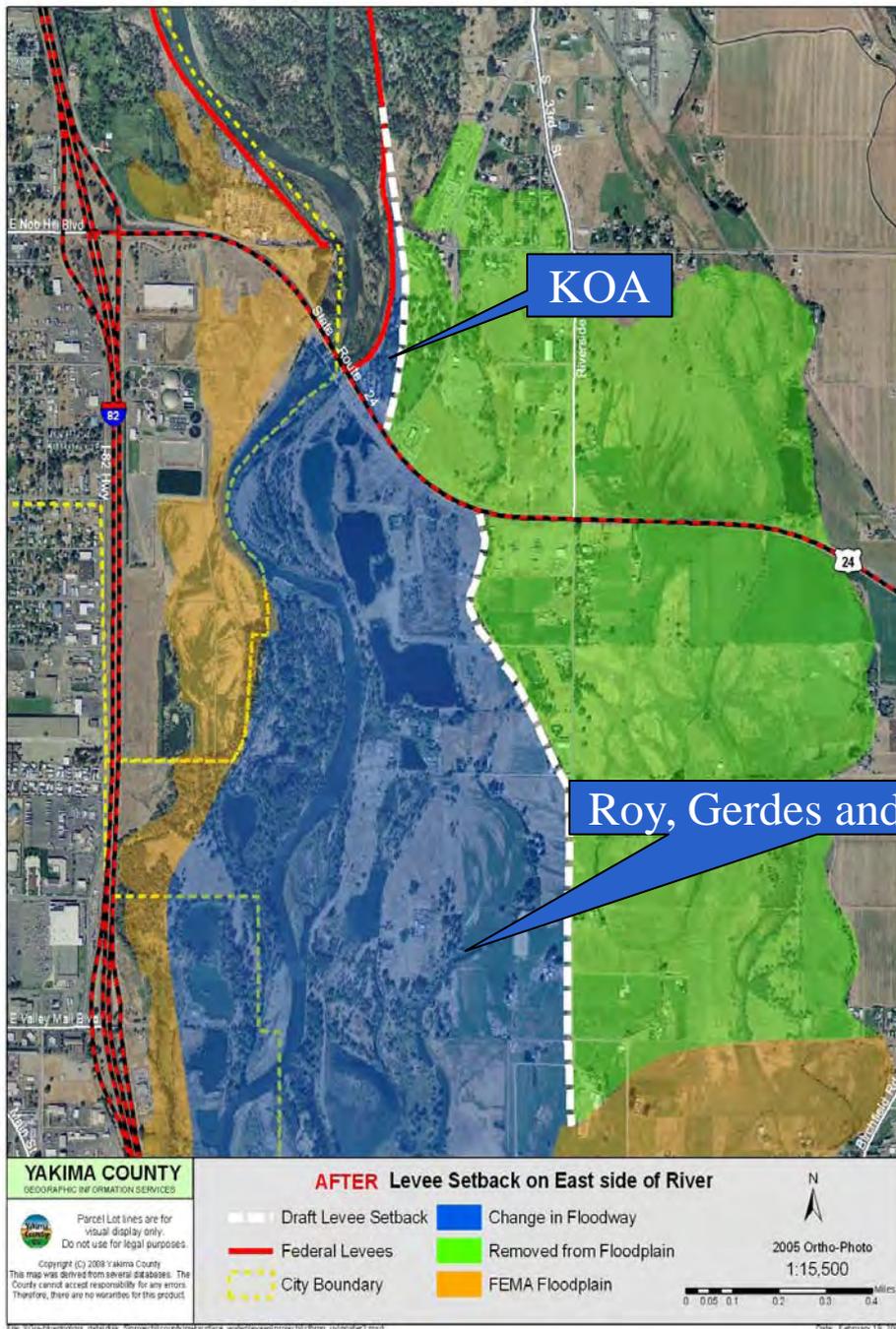
- Existing FEMA Flood Map



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YRBWEP Acquisitions

After Proposed
Levee Setback on
East Side of River



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KOA Acquisition – FY08

Acres – 20 On both sides of the Yakima River
Water – 2.8 cfs from Blue Slough, year-round

Key acquisition for levee setbacks north and south
of Hwy 24 Bridge

Ties into the new, expanded Hwy 24 Bridge that cost
DOT \$9 million +.

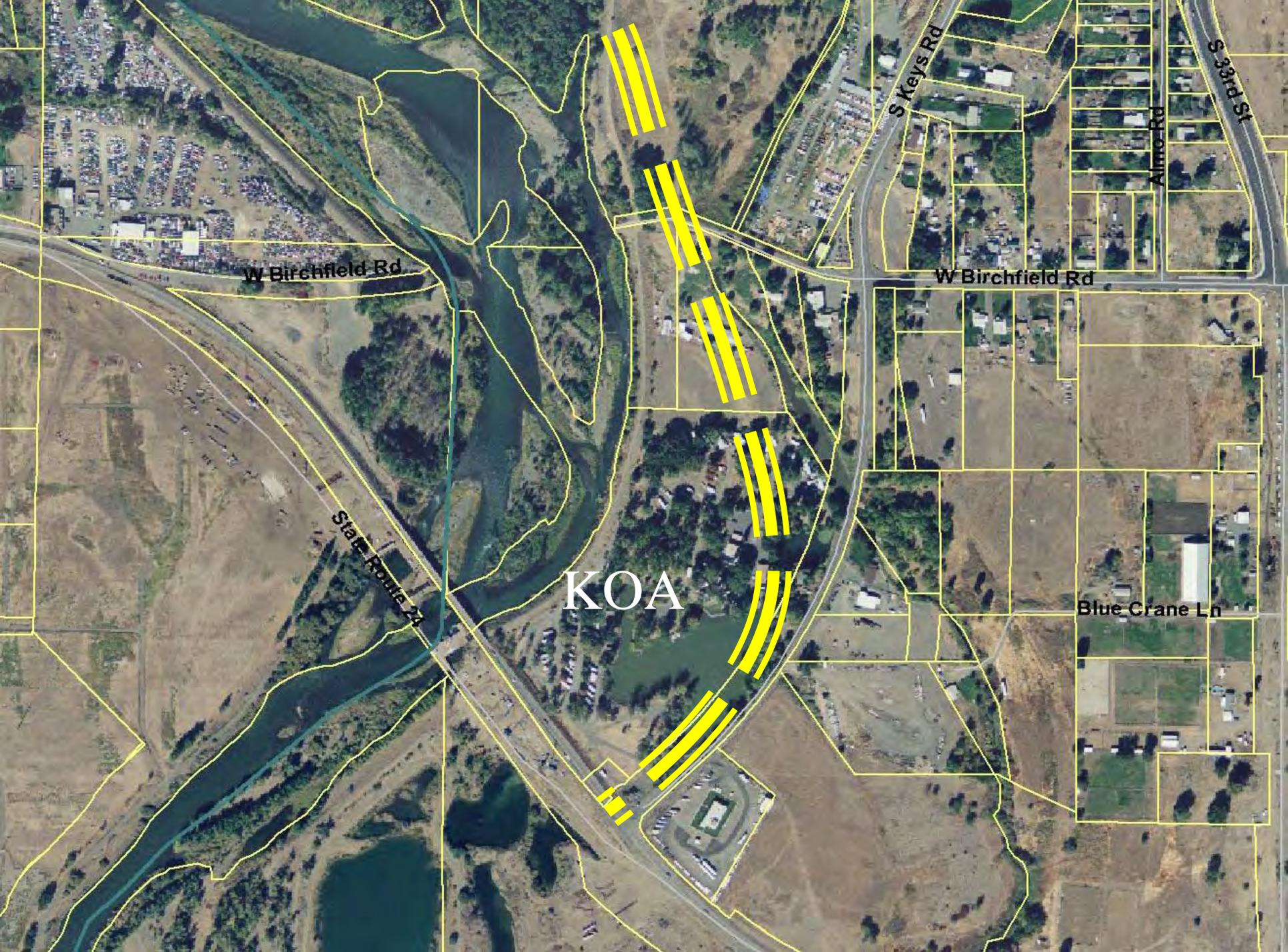
KOA CLEAN-UP – Job Corps Crew



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January 2011 High Water Event





W Birchfield Rd

S Keys Rd

S 33rd St

Almo Rd

W Birchfield Rd

State Route 24

KOA

Blue Crane Ln

View North From Hwy 24 Bridge - Before





View From Hwy 24 Bridge - After



Roy Property

- Acres - 434
- Water – 169 Ac. Ft., Ecology – 363.35 Ac. Ft.

McCormack Property

- Acres – 145.93
- Water – 60 Ac. Ft.

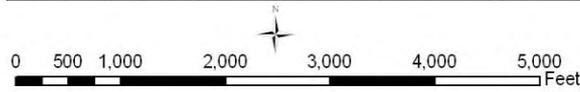
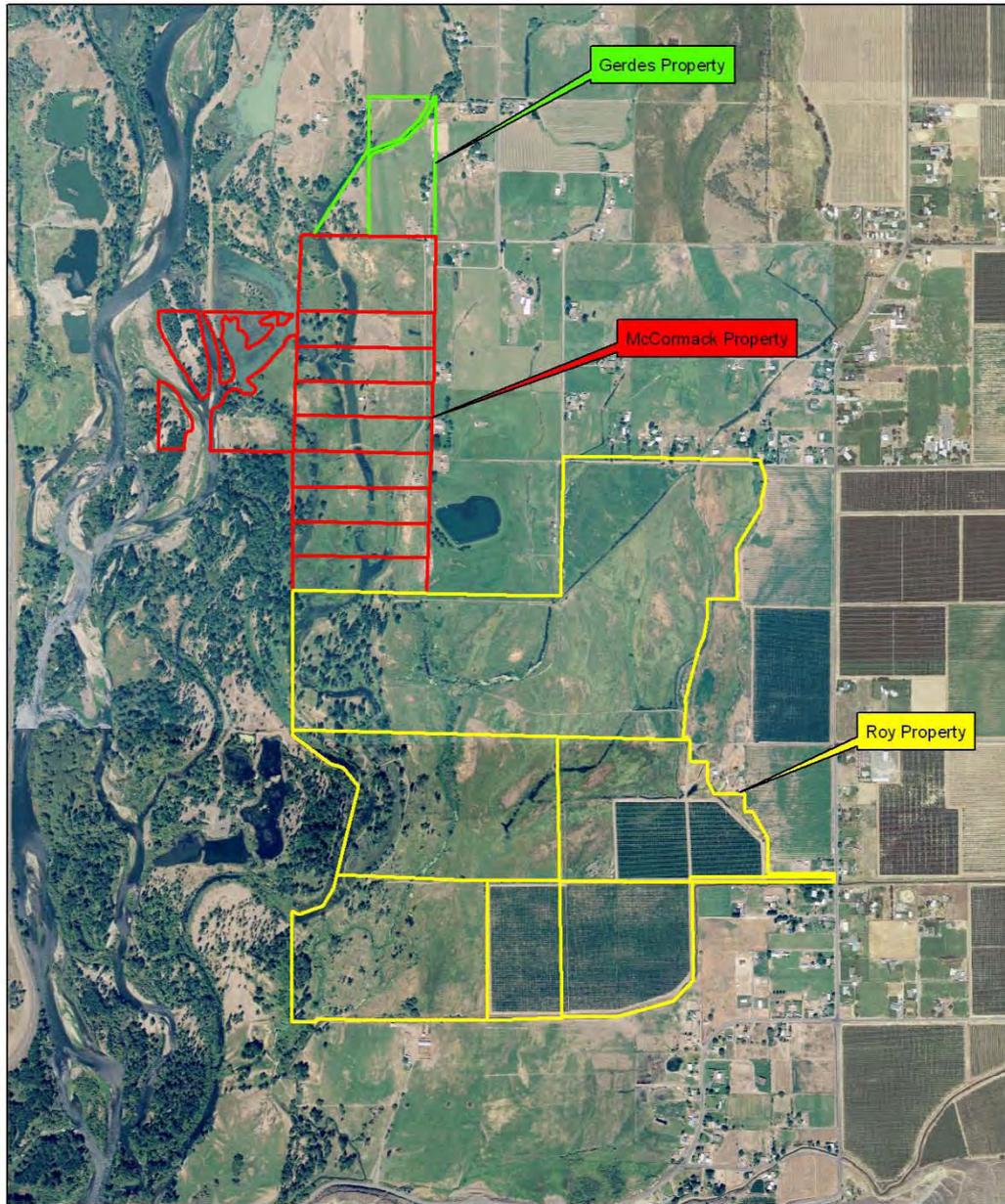
Gerdes Property

- Acres – 25
- Water – None – coordinated a sale to a private party, changed the point of diversion to approx. 100 miles down stream

Available for future levee setbacks, side channel establishment and reconnecting floodplain

Ongoing work includes weed control and establishment of native grasses, forbs, trees and shrubs.

Union Gap Property - General Reference

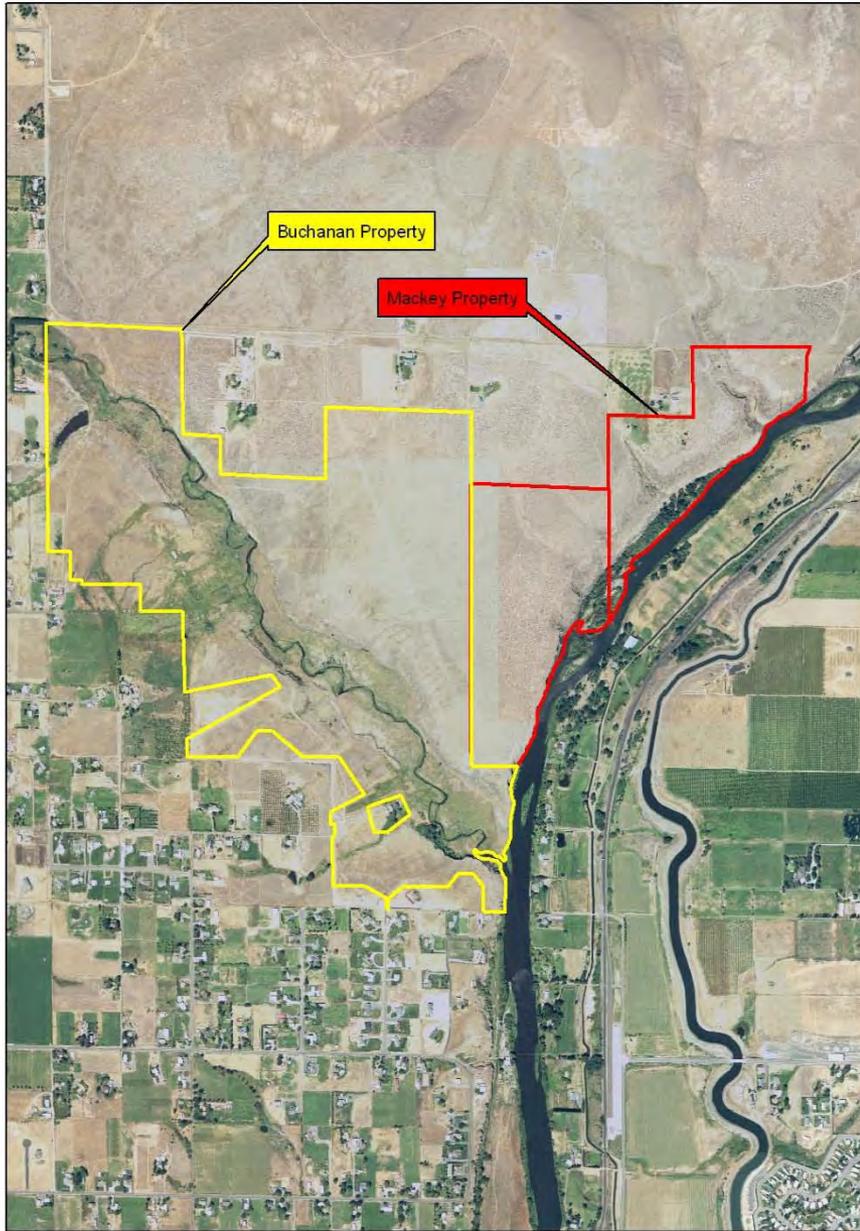


 Approximate Property Boundary









Wenas Property

Acres – 429

Water – 888.1 Acre Feet

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Schaake Property

Acres – 285

Water – 625.8 Acre Feet

Planning:

Initial modeling completed by Rob Hildale, Bureau of Reclamation, Denver, Co. Developed alternatives for enhancing fish habitat.

Land Profile Inc. completed an initial study of the soil and water quality

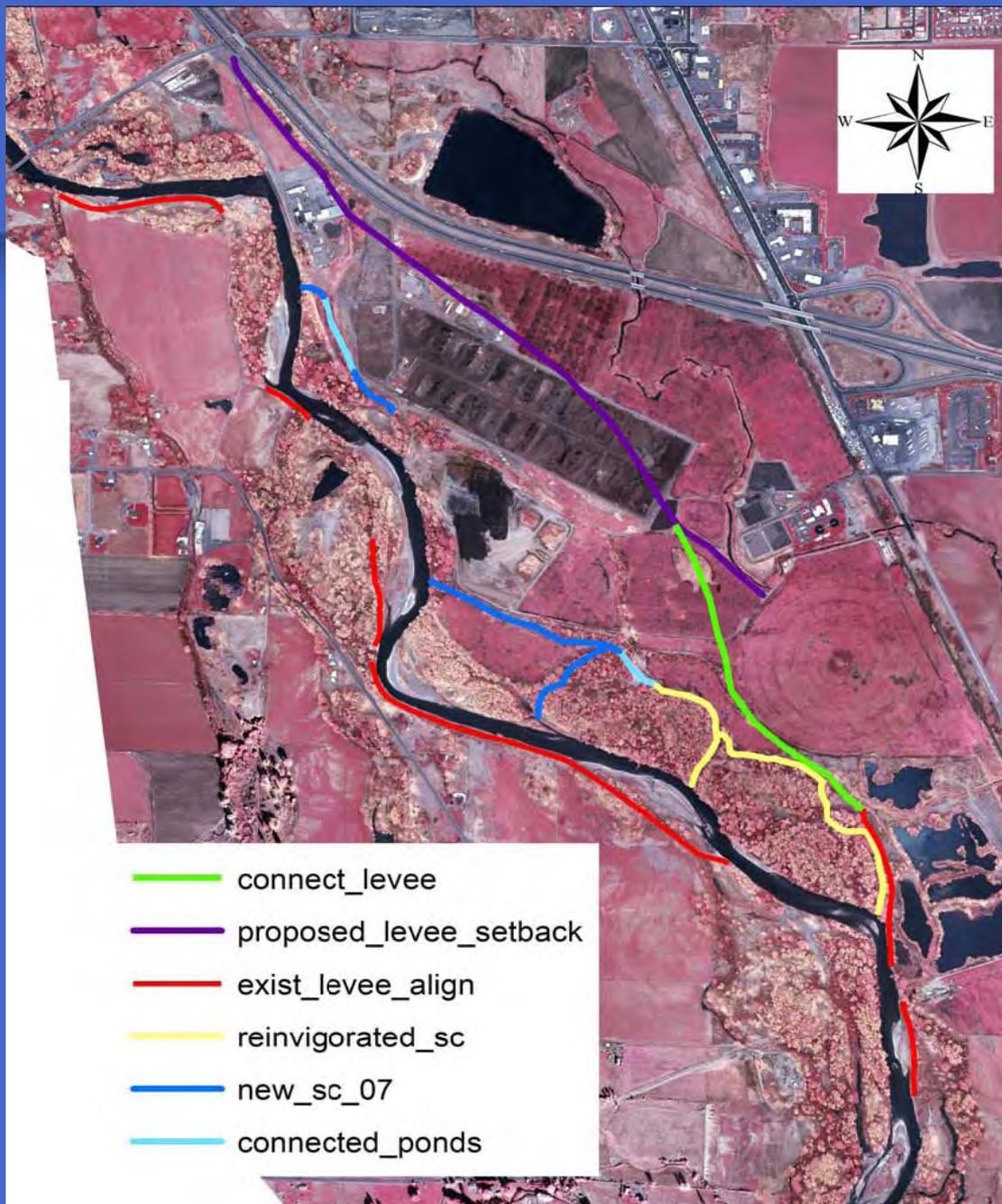
Phase I Schaake Property Habitat Improvement Designs completed by CH2MHILL – June 2011

**REG. RED ANGUS.
YRLING BULLS
4-SALE 509 925 4176
CELL 899 3246**

UNITED STATES
GOVERNMENT
BUREAU OF RECLAMATION
NO
TRESPASSING
NO
HUNTING







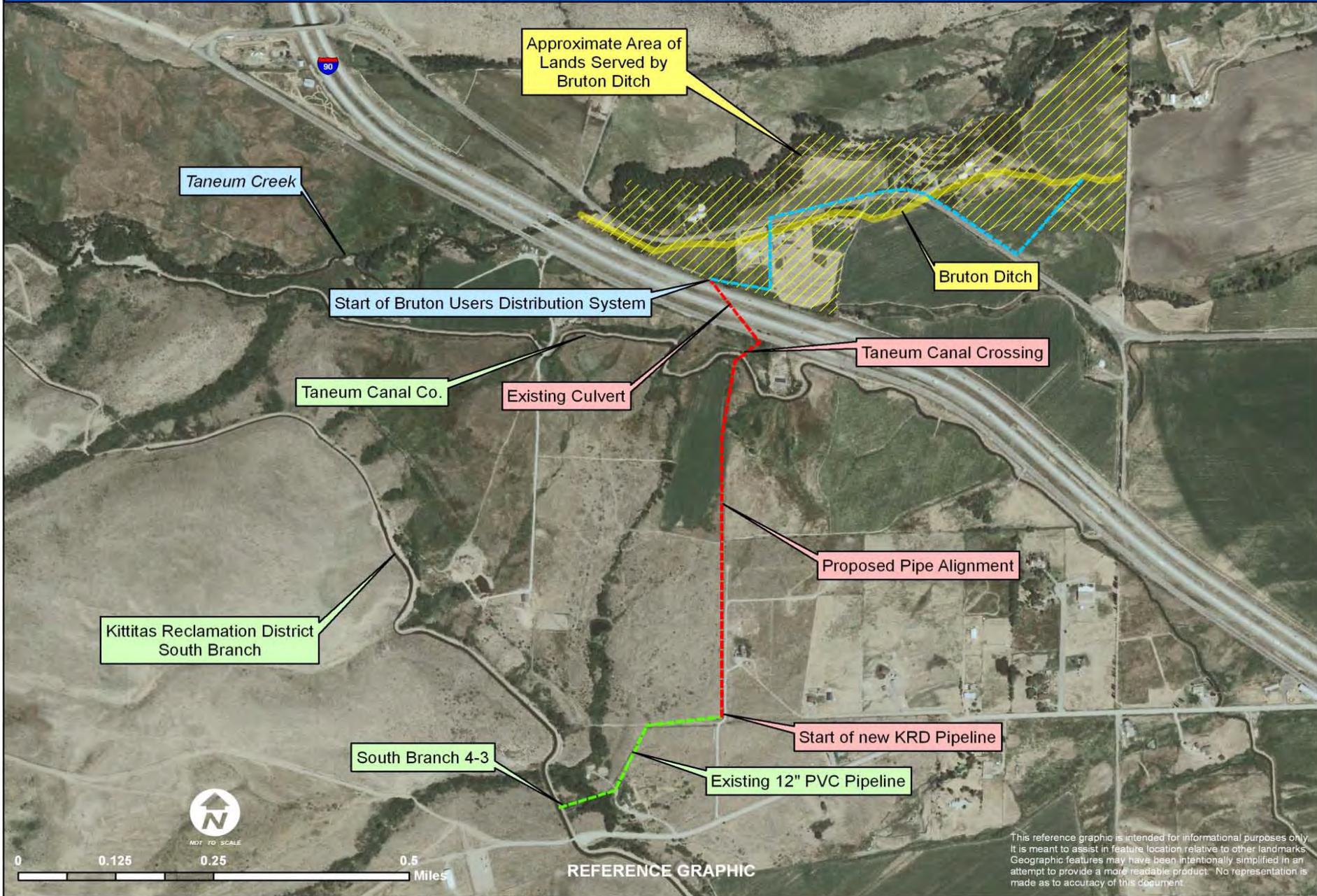
- Schaake proposed levee setback and side channel restoration from Phase I Design Report

- Phase II Design beginning in FY12 Restoration work to begin in FY14 subject to available funding

Tributary Enhancements: Taneum Creek

Multi-partnership effort to increase flows and improve fish passage in Taneum Creek

- KRD-Bruton Lateral pipeline constructed (\$500K FY09) Taneum Creek rights in trust.
- Bruton diversion dam removed (\$250K FY09)
- Taneum Canal Co. diversion reconstructed with roughened channel fish by-pass (FY11)
- Opened up 30 miles of critical habitat for steelhead

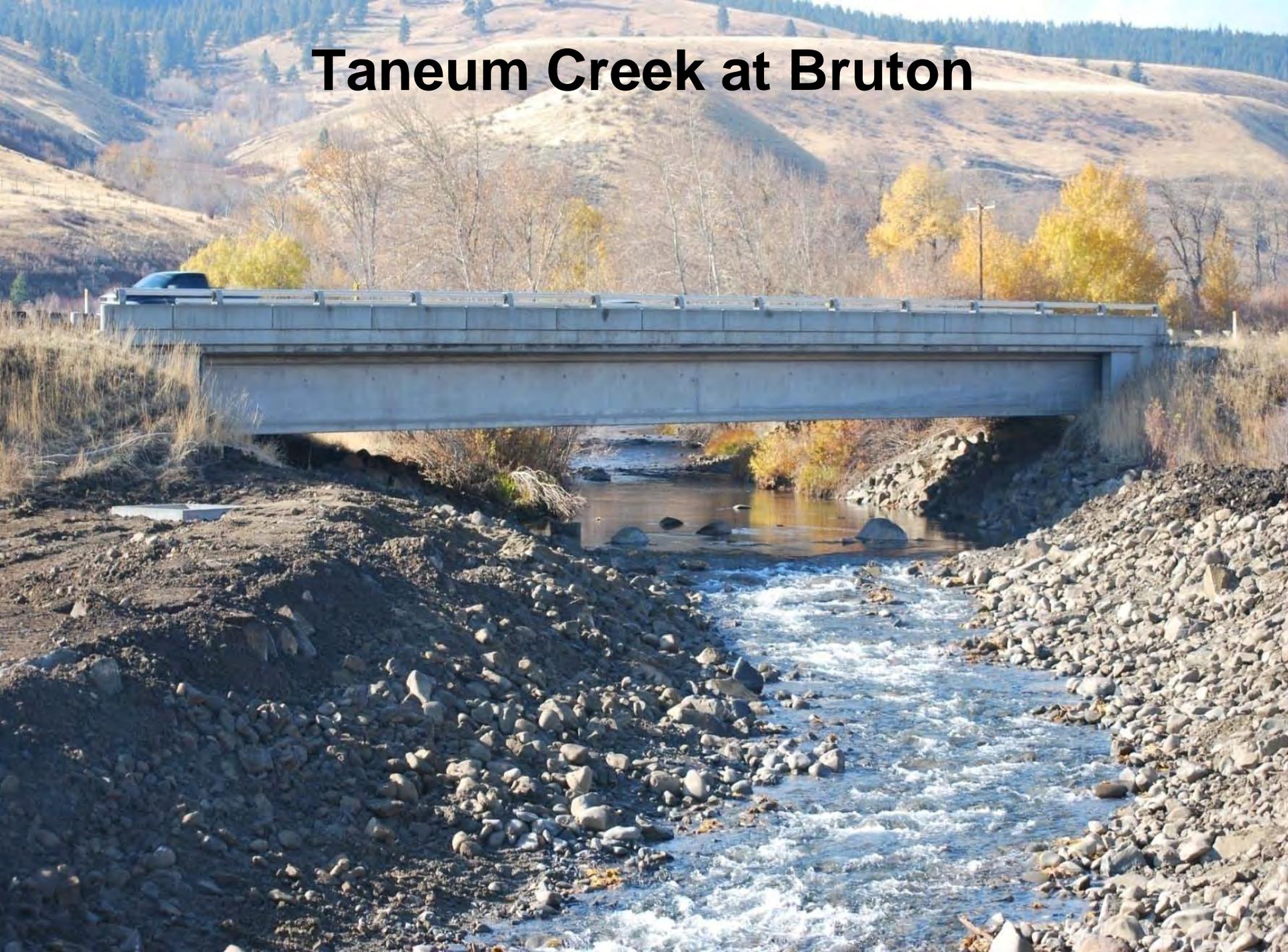


Taneum Creek at Bruton Diversion



09/22/2008

Taneum Creek at Bruton



Old Taneum Canal Diversion Dam



New Taneum Canal Dam Structure



New Diversion With Fish By Pass



PIT Tag Antenna in Place



Yakama Nation YRBWEP

- Wapato Irrigation Project Plan (@\$6.1M)
 - Installation of Ramp Flume and Measuring Devices
 - Identification of Implementation Measures
 - Satus Pump Station and improvements
 - Irrigation Demonstration Project
- Toppenish Creek Enhancement Plan (@\$815K)
 - Final Draft 3/30/2012

YRBWEP FY2012

SDBOC Phase I -	\$ 300,000
SDBOC Diversion Reduction Agreement -	\$ 650,000
Benton Irrigation District -	\$ 4,000,000
SDBOC Phase IIB -	\$ 1,500,000
Habitat Restoration -	\$ 950,000
Tributaries Enhancement -	\$ 200,000
Wapatox	\$ 500,000
YRBWEP Administration	<u>\$ 1,700,000</u>
	\$ 9,800,000

RECLAMATION

Potential YRBWEP Outyears FY2013 thru FY2014

- Yakama Nation Projects
 - Site study and design for Satus pumping plant
 - 50 cfs in critical reach of the Yakima River
 - Toppenish Creek Corridor Enhancement implementation
- Wapatox Restoration
 - Address Priority items - convert open main canal to enclosed pipe
 - Reduced O&M and 30 cfs in the Naches River
- Schaake construction
 - Flood plain restoration and levee setback
- Tributary enhancement planning/implementation
 - Manastash, Naneum and Wilson Creeks, and Cowiche Watersheds
- Roza Irrigation District
 - Re-regulation reservoir
 - 26 cfs in critical reach of the Yakima River

RECLAMATION

Integrated Plan Projects Authorized under Title XII YRBWEP Phase II

- Cle Elum Fish Passage
- Additional Storage Capacity at Cle Elum
- Wapatox Efficiency Improvements
- Habitat Protection and Enhancement

Thank You

Tim McCoy
YRBWEP Manager
Bureau of Reclamation
Office – (509) 575-5848, ext 209
tmccoy@usbr.gov

RECLAMATION