

Intake Diversion Dam Modification Project

Missouri River Association of States and Tribes

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Lead Planner

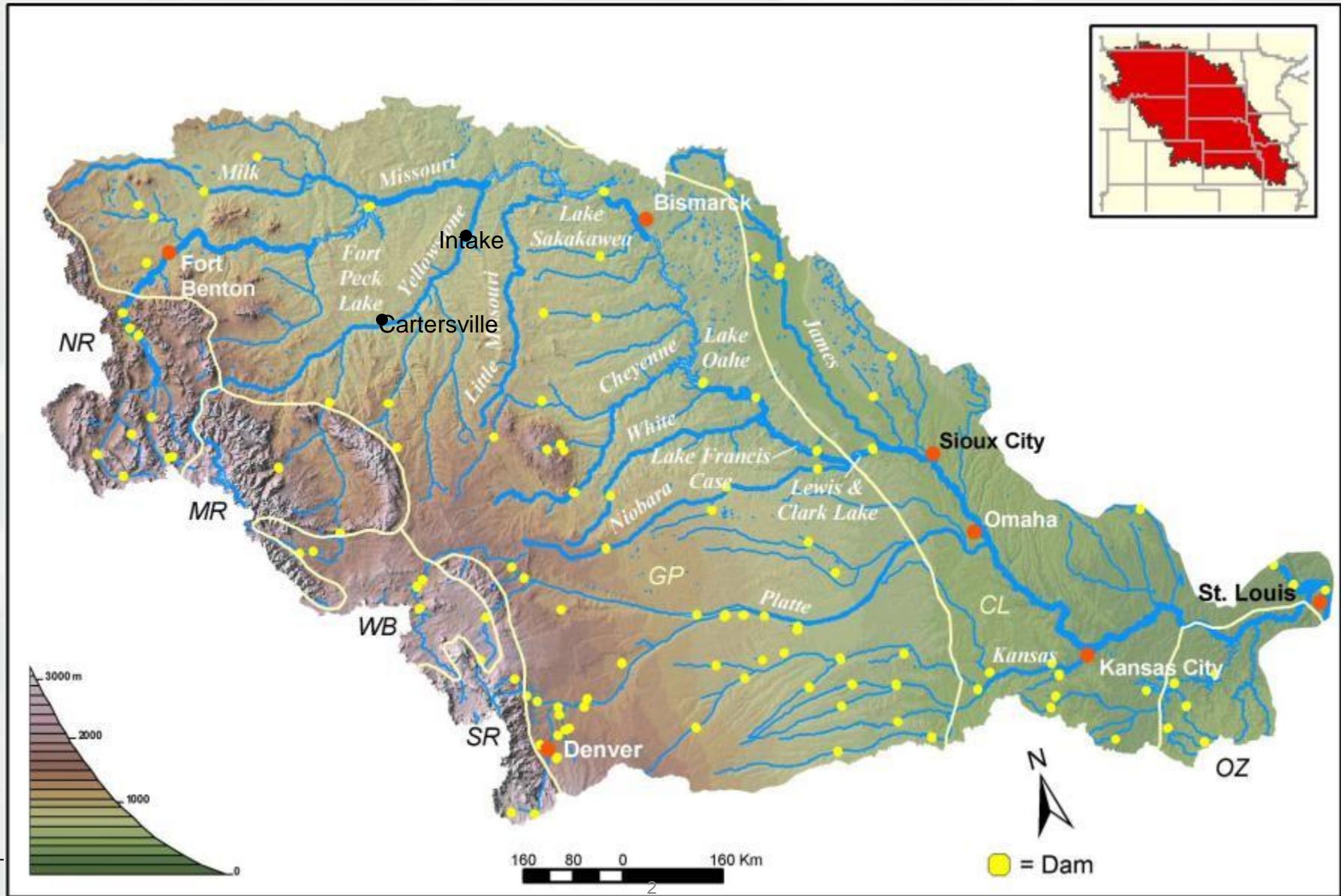
6 March 2014



US Army Corps of Engineers
BUILDING STRONG®



Basin Map



History of the LY Project

Authorization:

- Reclamation Act of 1902

Construction:

- 1905-08 by Reclamation
- First water delivered 1909

Facilities:

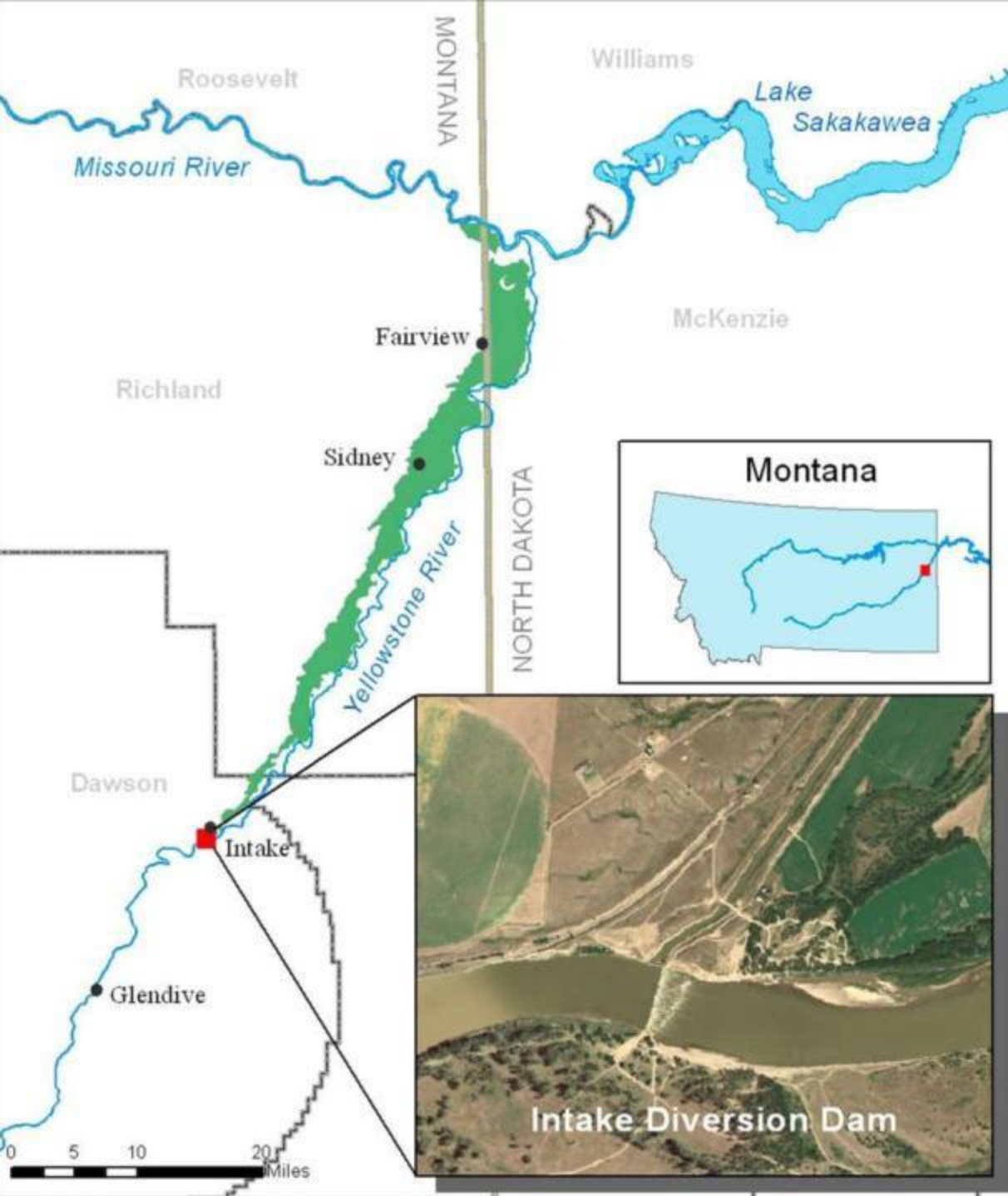
- 12-foot high diversion dam
- 72-mile main canal
- 225-miles of laterals

Operations:

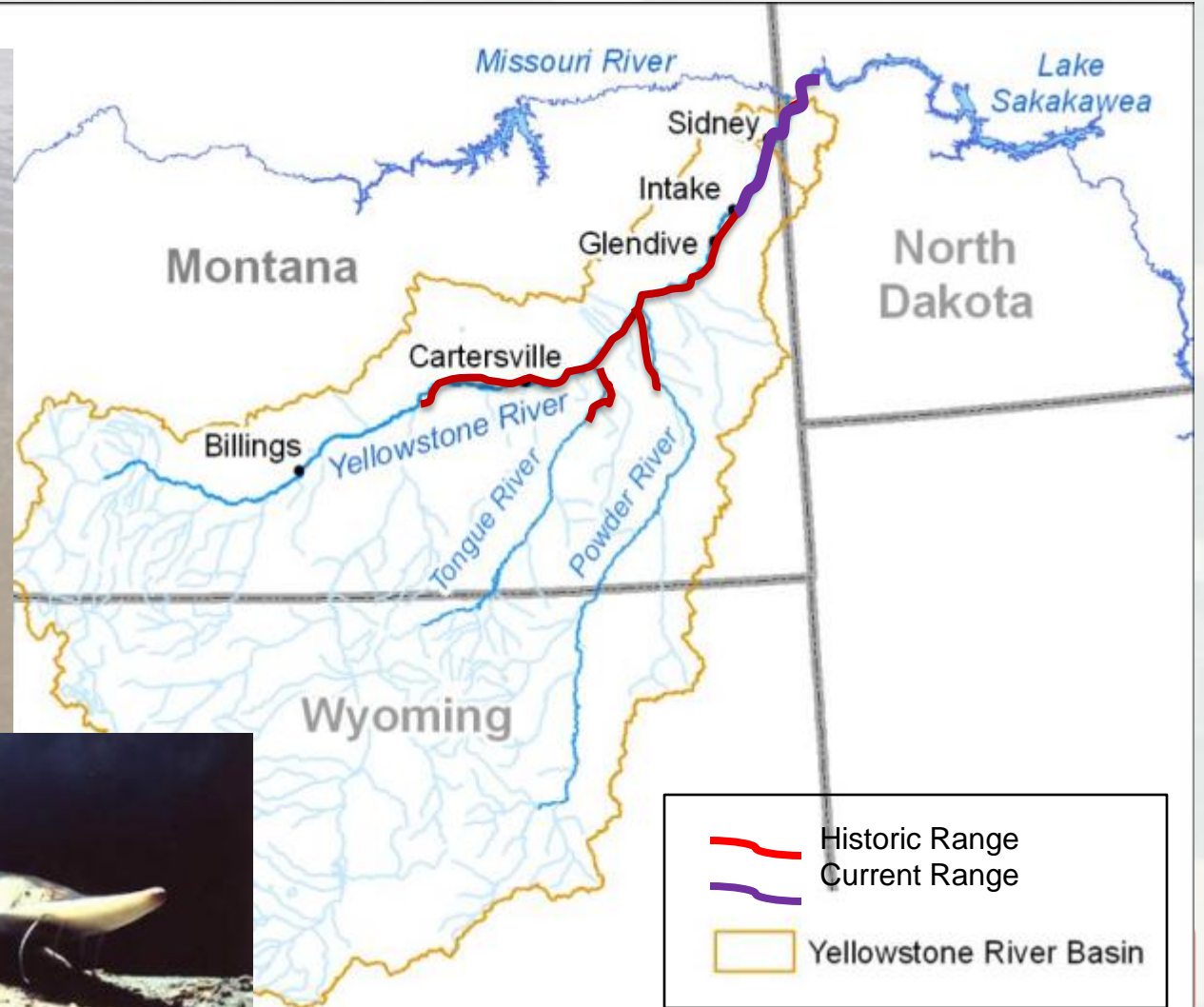
- O & M performed by the Lower Yellowstone Irrigation Districts
- Diversion Capacity ~1,400cfs
- 72-mile main canal & 225-miles of laterals deliver to ~55,000 acres

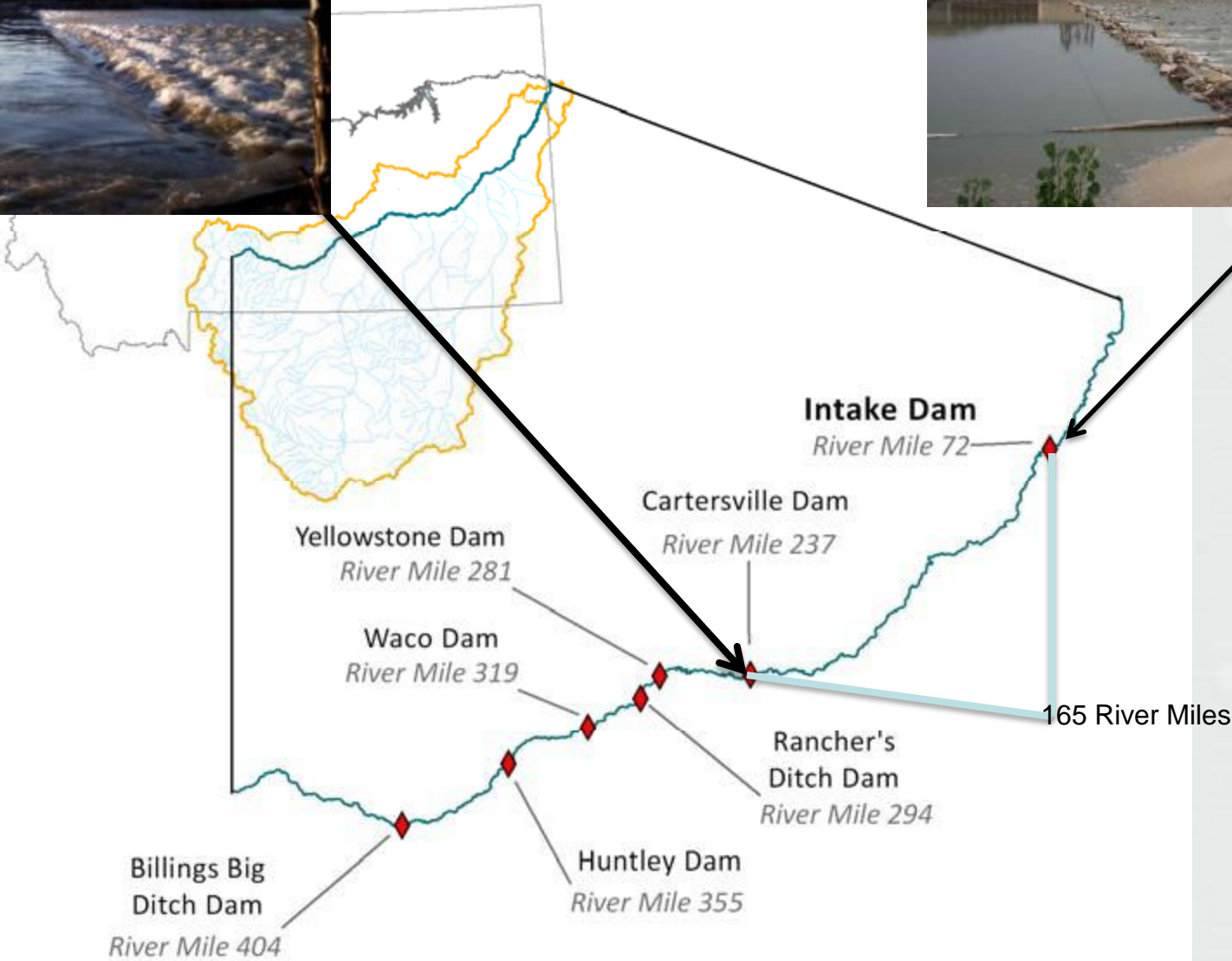
Maintenance:

- Placement of rock on dam crest to maintain head for diversion
- Replace rock washed away by high flows and ice



Yellowstone River Watershed Pallid Sturgeon Historic/Current Range





Resource Problem



- Intake diversion dam and structure negatively impacts fish populations
 - Entrainment (approx 500k/yr fish lost in diversion canal)
 - Prevention of fish passage upstream of the diversion dam
- Endangered Pallid Sturgeon require longer river reaches to increase survival of larval fish
 - Estimated local extirpation of native pop
 - Passage would add 165 river miles



Corps/Reclamation Partnership

▪ **2003 Missouri River Biological Opinion**

- work with Reclamation to provide passage at Intake Diversion Dam as a conservation recommendation and as an adaptive management action for Missouri River recovery.

▪ **Section 3109 WRDA 07**

- Authorized the Corps to use funding from the Missouri River Recovery and Mitigation Program to assist Reclamation with design, and construction of modifications to the Lower Yellowstone Project for the purpose of ecosystem restoration.

▪ **Amendments to 2003 Missouri River Biological Opinion**

- 23 October 2009** - amended the 2003 Missouri River Biological Opinion to include fish passage and entrainment protection at Intake, MT as a Reasonable and Prudent Alternative (RPA) element.

- 6 February 2013** - further amended the BiOp to state that if success criteria are met at Intake, the Corps will not be required to conduct any further studies of or make any structural or operational modifications at Ft Peck or Garrison Dams.



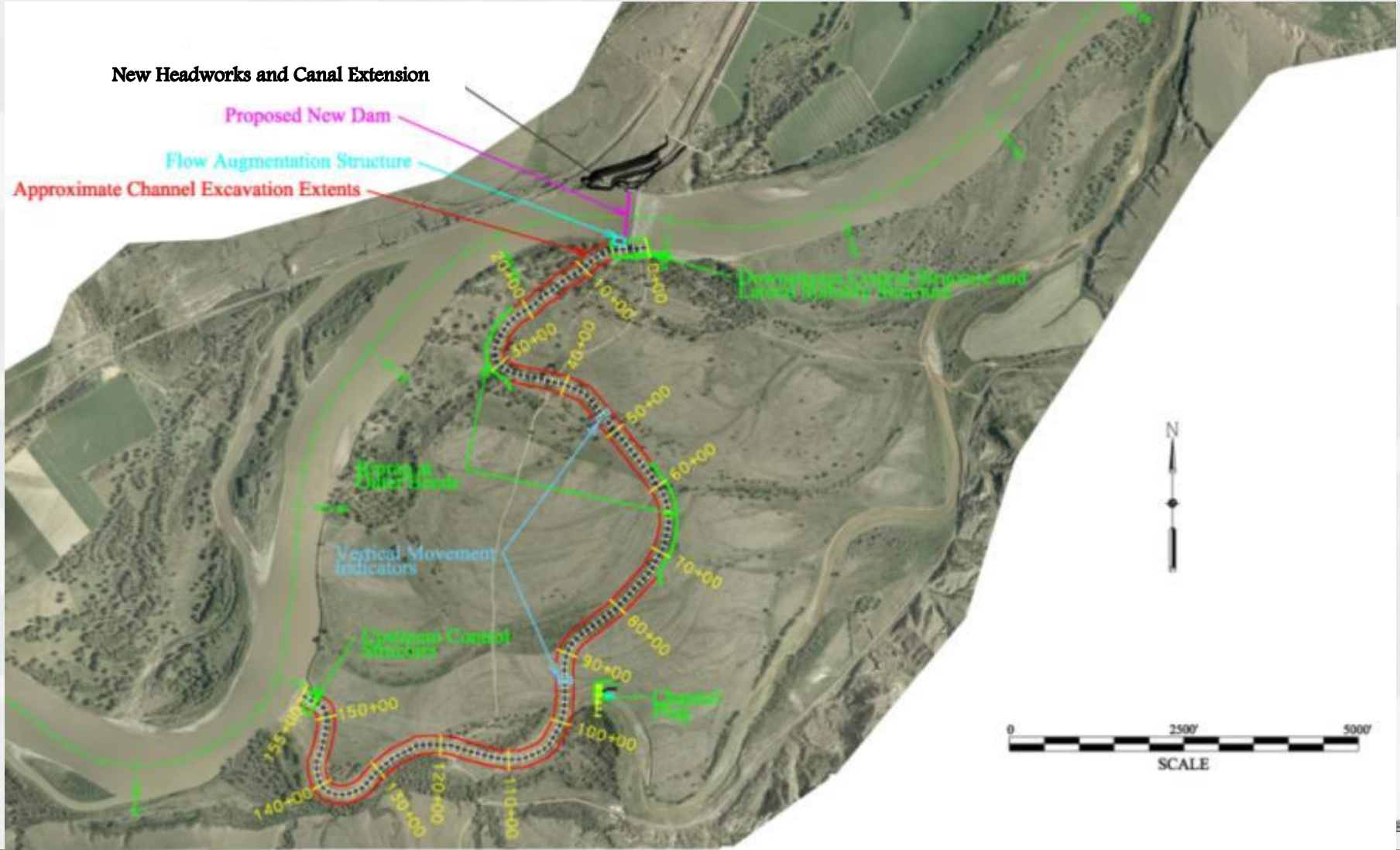
Status

- Signed FONSI April 2010
 - Phase I: Entrainment Reduction (Headworks and Fish Screens)
 - Phase II: Fish Passage (Rock Ramp)
- Phase I Initiated Fall 2010/Complete Apr 2012
- Design progression on rock ramp led to TPC increases
- Reformulation
 - Met with Agencies and BRT
 - Reassessed previously discarded alternatives
 - Discussed feasibility of any new alternatives
 - Alternatives Considered Further
 - Bypass Channel (Carried Forward)
 - Documentation of Side Channel Use

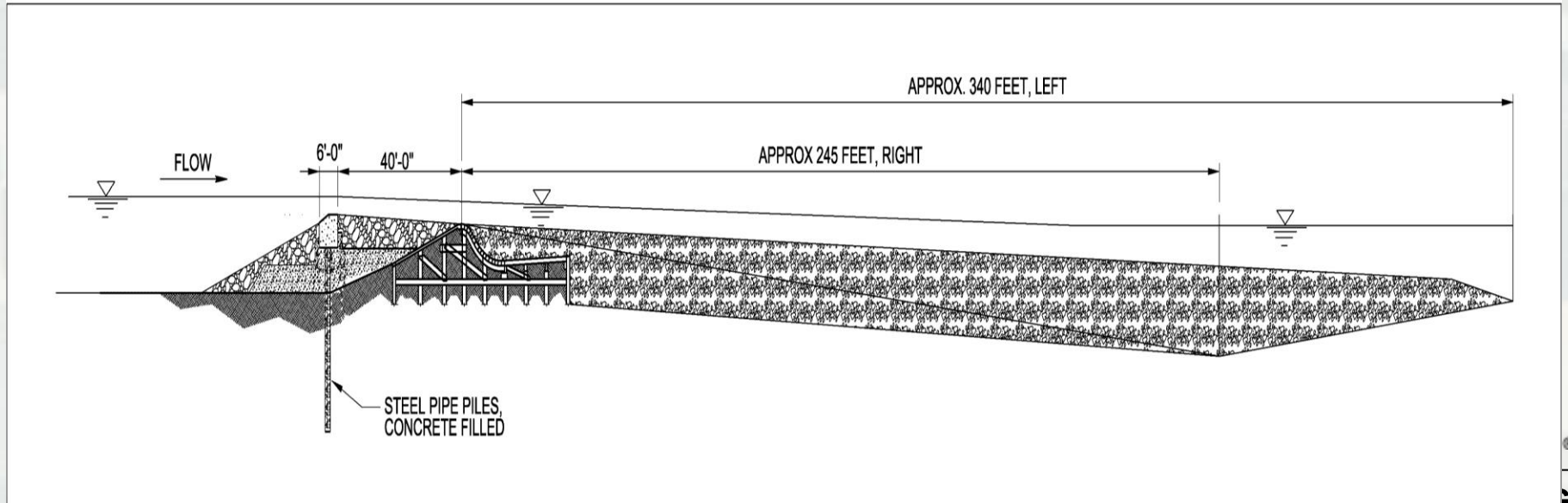


Fish Passage (Phase II)

- 15% Bypass Channel (Preferred Alternative)



Current and Proposed Weir



Schedule

- Release Draft EA for Public Review: March 2014
- Complete 60% Review: July 2014
- Decision on EA: September 2014
- Final Design Complete: December 2014
- Contract Solicitation: January 2015
- Contract Award: March 2015
- Construction Complete: December 2016



Questions?

