



Trinity River Restoration Program



Record of Decision (ROD), 2000

“to restore and maintain the Trinity River's anadromous fishery resources”

[by]

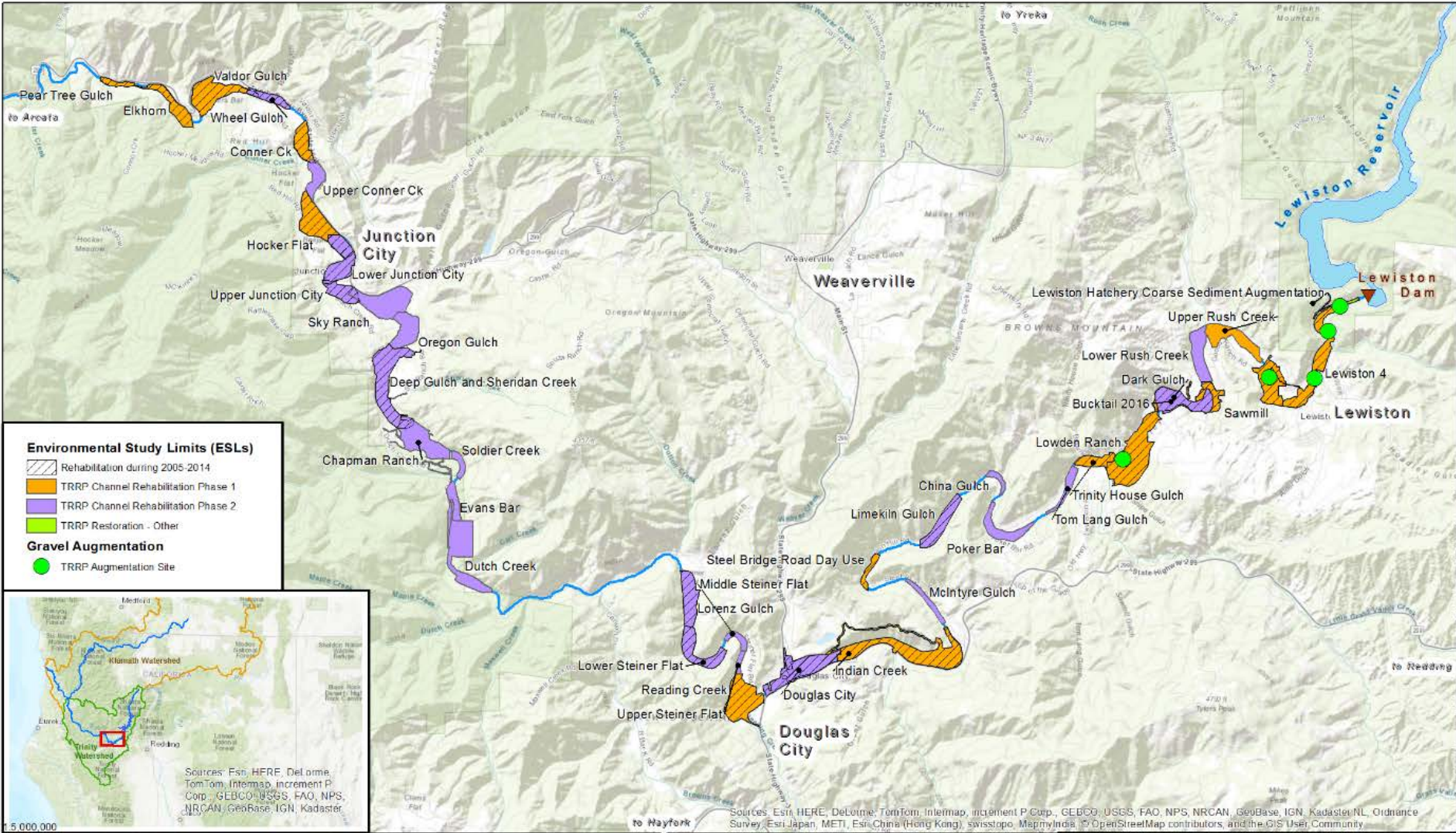
“rehabilitating the river itself, restoring the attributes that produce a healthy, functioning alluvial river system”



Chapman Ranch Channel Rehabilitation Site: Phase A

Justin Alvarez, HVTF and Fred Meyer, McBain Associates

April 4 2017

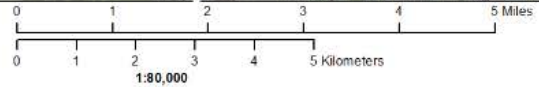


Environmental Study Limits (ESLs)

- Rehabilitation during 2005-2014
 - TRRP Channel Rehabilitation Phase 1
 - TRRP Channel Rehabilitation Phase 2
 - TRRP Restoration - Other
- Gravel Augmentation**
- TRRP Augmentation Site



TRINITY RIVER RESTORATION PROGRAM (TRRP)
U.S. Dept. of the Interior, Bureau of Reclamation, Mid-Pacific Region
P.O. Box 1300, 1310 South Main St.
Weaverville, CA 96093
Tel: (530) 623-1850; Fax: (530) 623-9944



TRRP Channel Rehabilitation and Gravel Augmentation Sites
January 2018

Chapman Ranch

Description: Heavily altered; large tailings and mine terrace

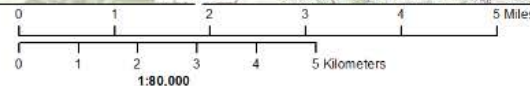
- Hydraulic mine debris washed into valley bottom
- Valley bottom was dredged, eliminating or reconfiguring the natural channel
- Juvenile salmon habitat decreases with flow

Environmental Study Limits (ESLs)

- Rehabilitation during 2005-2014
 - TRRP Channel Rehabilitation Phase 1
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- ### Gravel Augmentation
- TRRP Augmentation Site

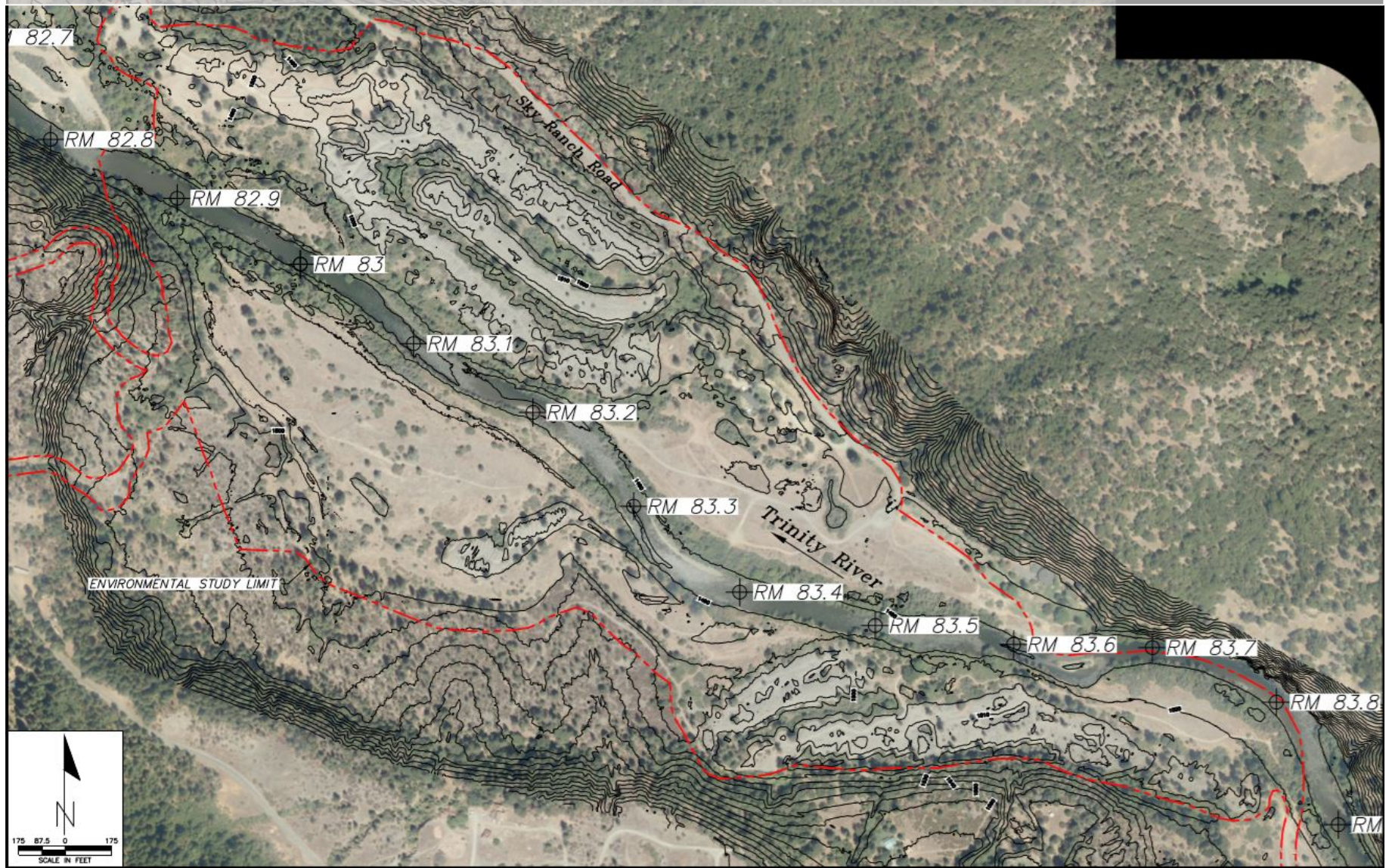


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TRRP Channel Rehabilitation and
Gravel Augmentation Sites
January 2018

Chapman Ranch Existing Site Conditions



Restoring Natural River Processes with a Goal of Increasing Juvenile Rearing Habitat

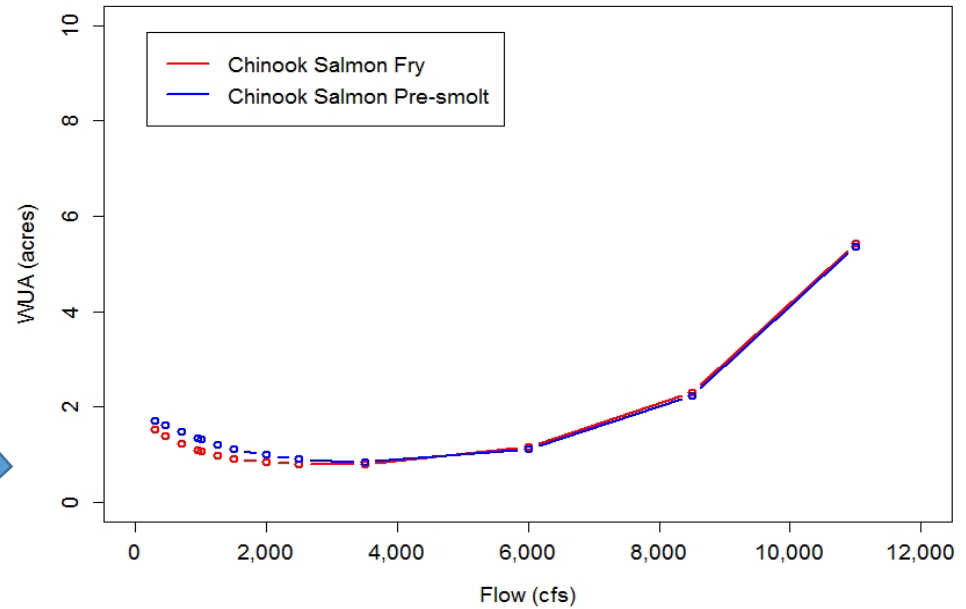
Restoring:

- Natural processes of scour and deposition to create and maintain channel complexity
- Areas of suitable velocity and depths for juvenile salmon and steelhead with enhanced access to cover:
 - Meanders
 - Side channels
 - Alcoves
 - Large wood
 - Coarse sediment
 - Vegetation

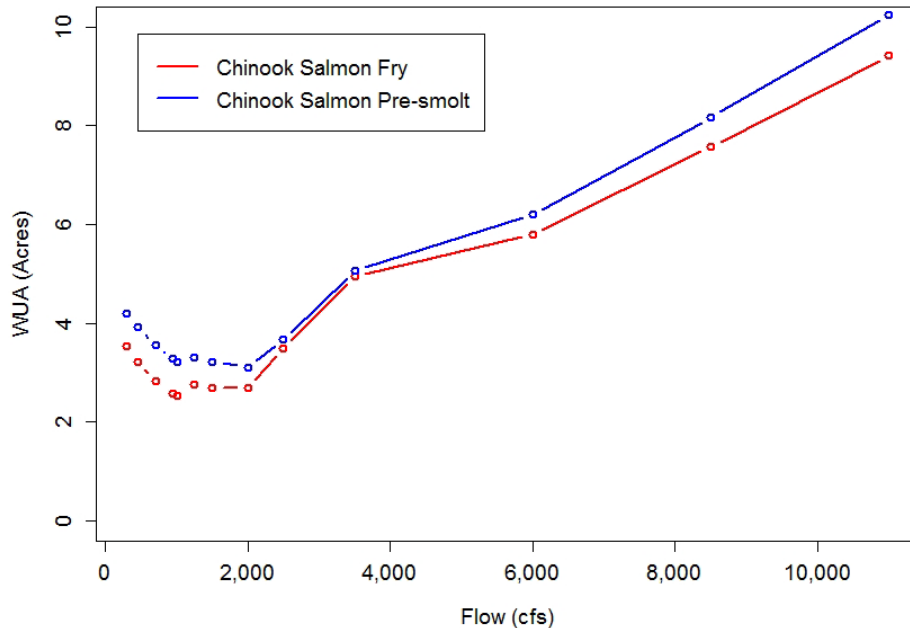
Chapman Ranch Phase A Increased Habitat



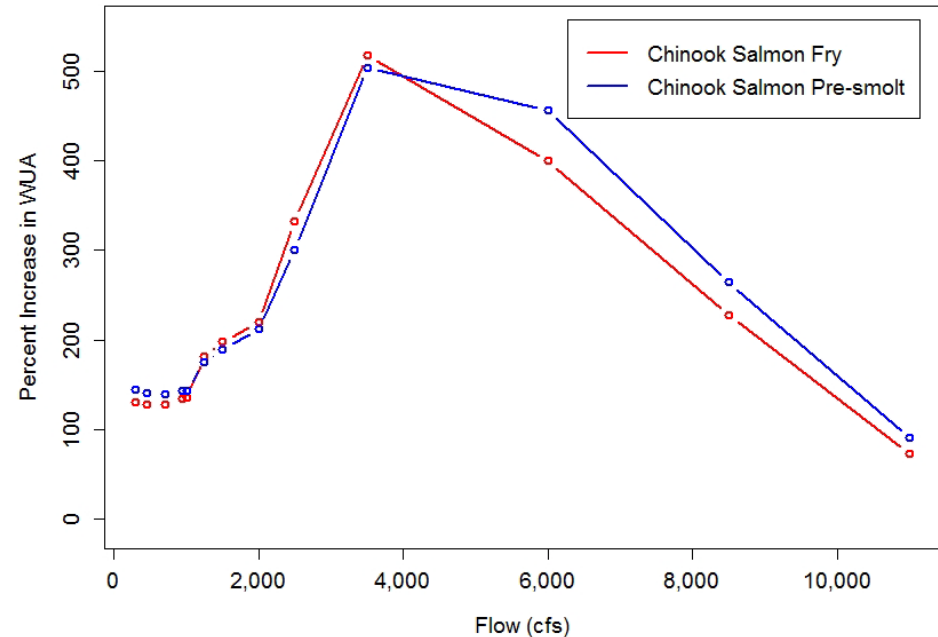
2-D MODELED EXISTING HABITAT



2-D PREDICTED 100% DESIGN HABITAT



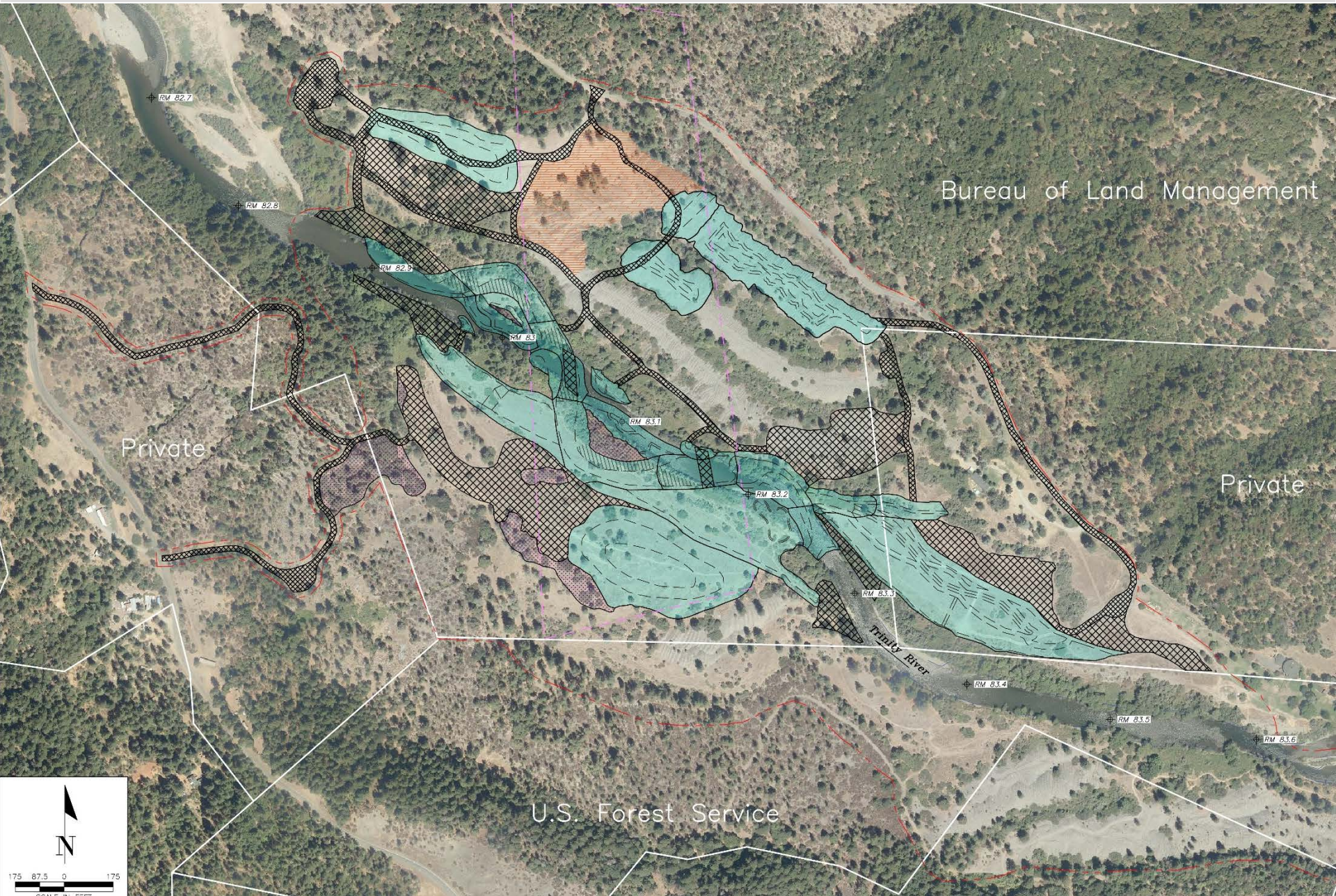
PERCENT CHANGE EXISTING VS DESIGN



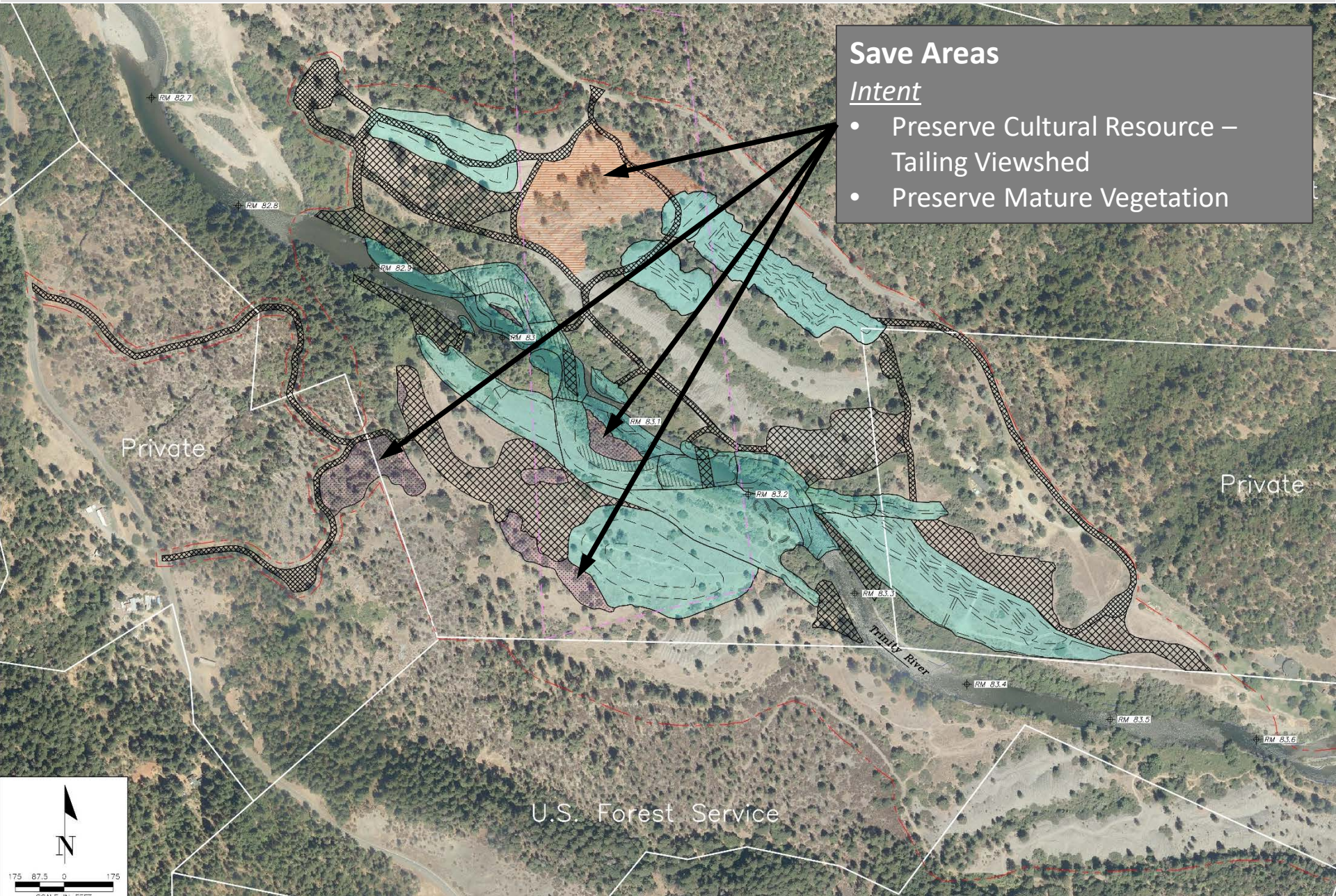
Public Outreach and Partner Coordination

- Project was identified in 2009 MEIR/EA
- Individual landowner meetings 2016-2018
- Workgroup meetings from conceptual through 90% design stages 2015-2018
- Project split into two phases to accommodate coordination with US Forest Service 2017-2018
- Mining claim and cultural resource coordination with Bureau of Land Management 2017-2018
- Chapman booth at 2017 Deep Gulch/Sheridan Creek NEPA meeting
- Public meeting November 28, 2018
- Final design modifications based on CLOMR review 2019

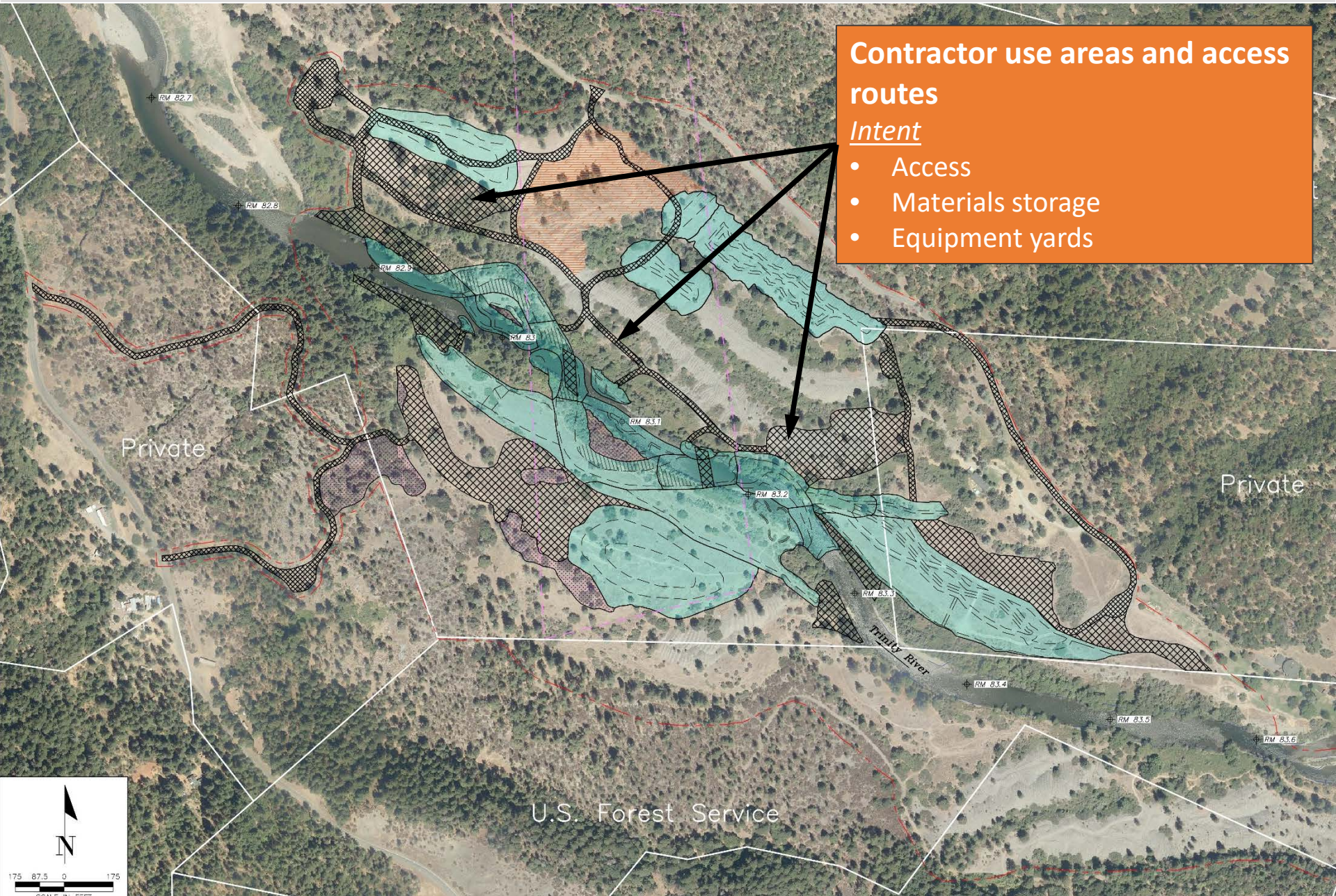
Chapman Ranch Final Design



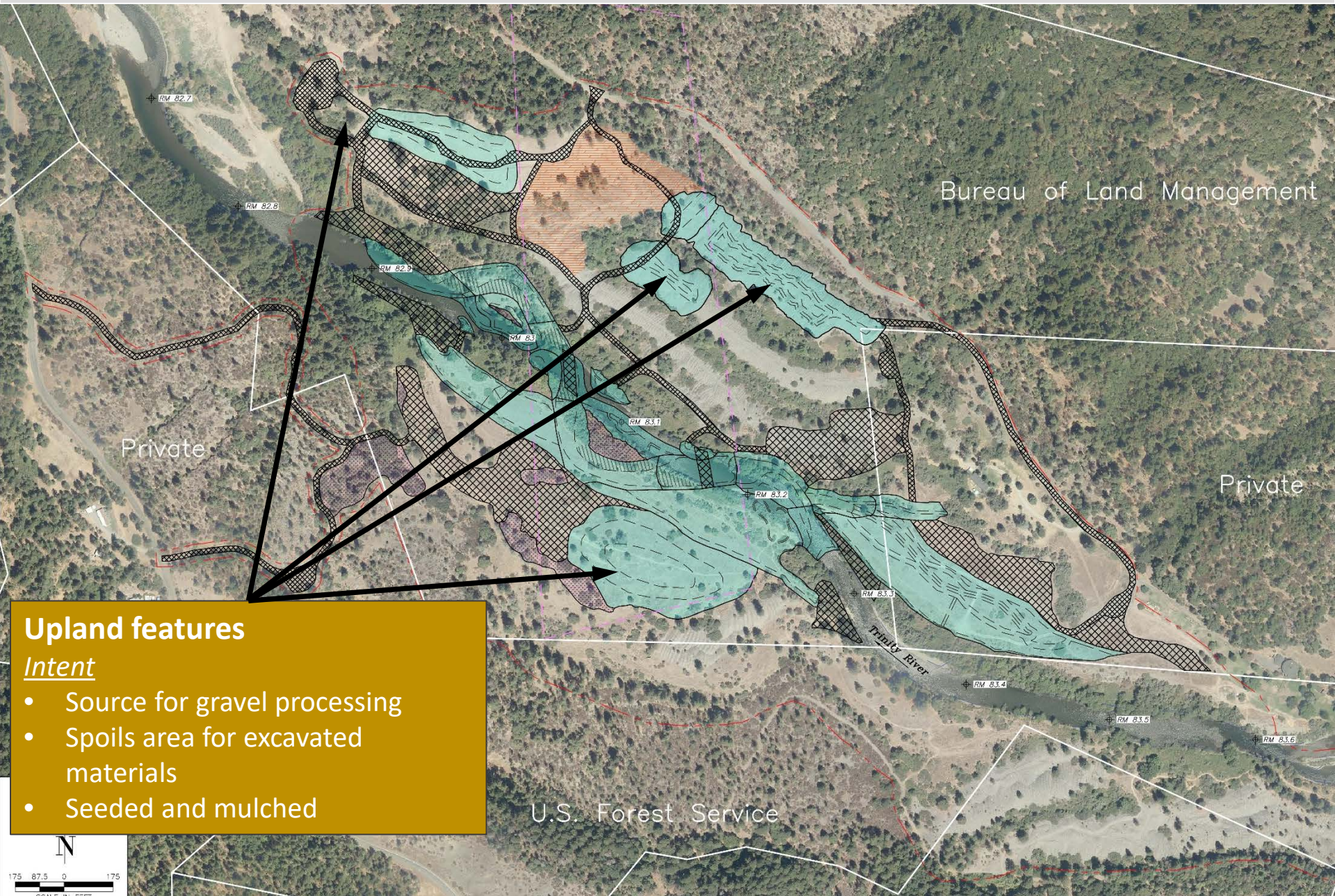
Chapman Ranch Final Design



Chapman Ranch Final Design



Chapman Ranch Final Design

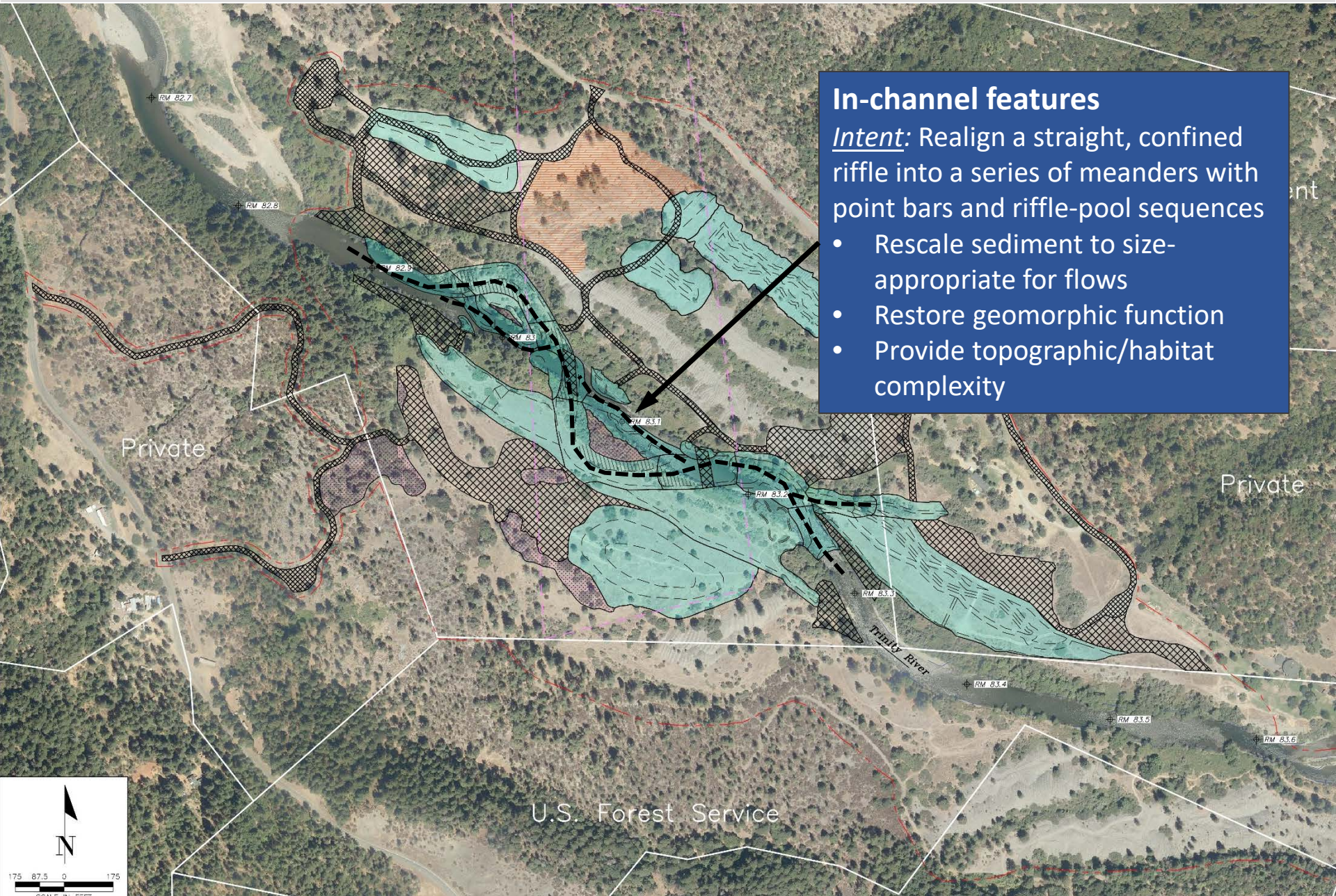


Chapman Ranch Final Design

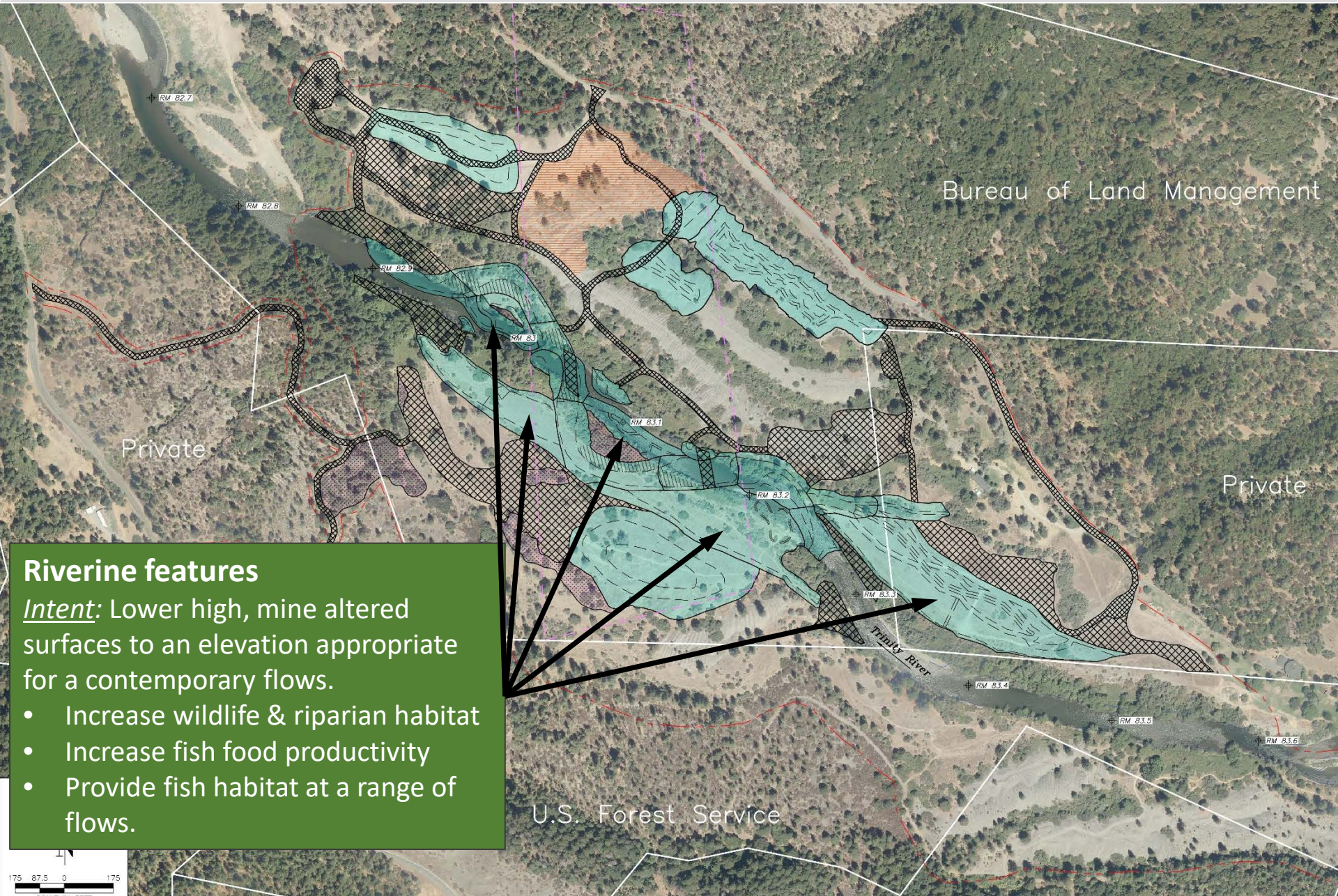
In-channel features

Intent: Realign a straight, confined riffle into a series of meanders with point bars and riffle-pool sequences

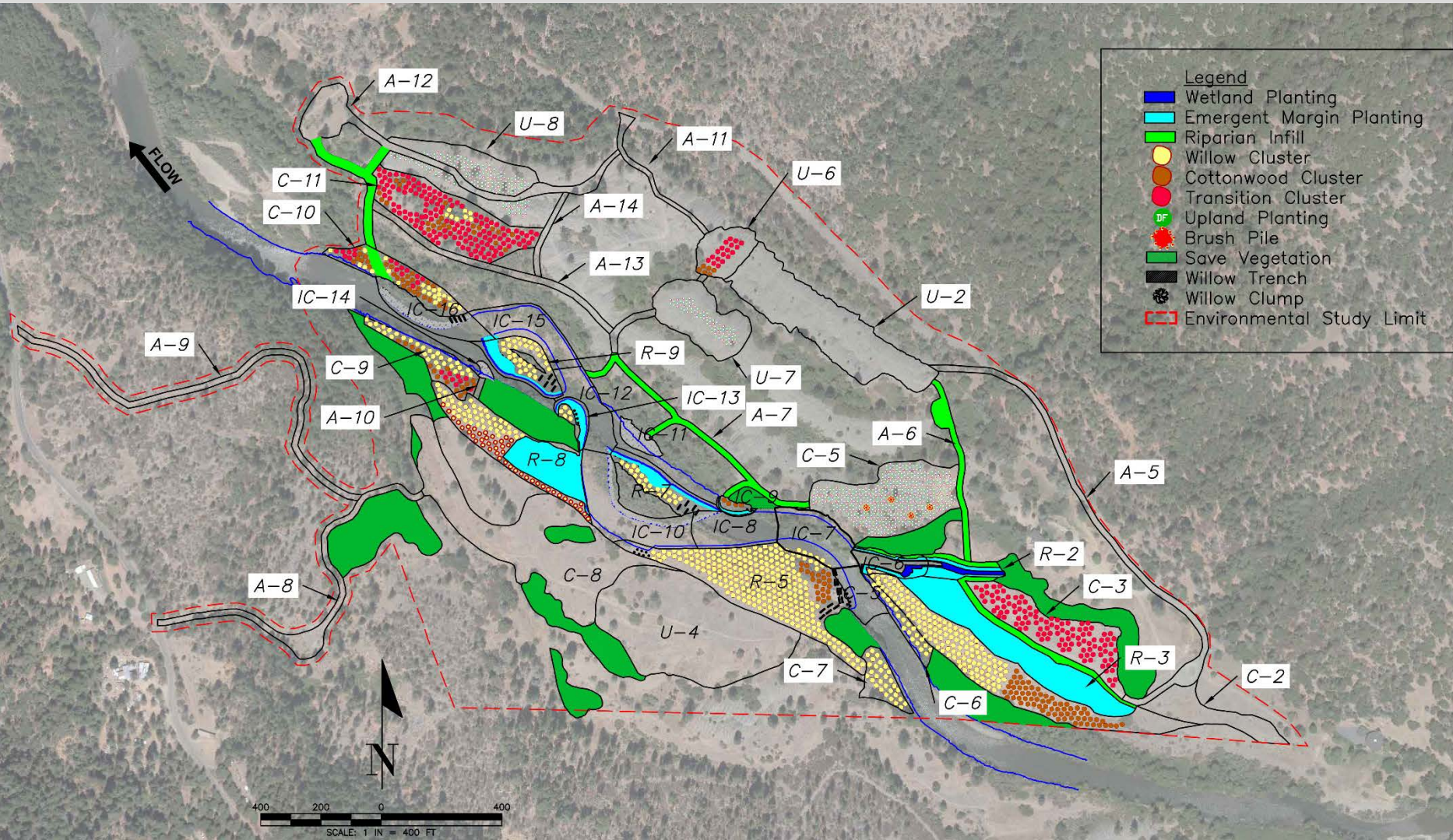
- Rescale sediment to size-appropriate for flows
- Restore geomorphic function
- Provide topographic/habitat complexity



Chapman Ranch Final Design



Chapman Ranch Final Revegetation Design



Revegetation

Intent: Promote the establishment and growth, during normal and wetter years, of a more diverse assemblage of deciduous hardwoods with varying ages so that the size and frequency distribution of naturally recruited wood would increase in the future. Mitigate for riparian vegetation removed as part of construction activities.

Next Steps

- HVTF to submit final stamped drawing package and design report
- TRRP to complete negotiations with implementation contractor(s)
- Finalize landowner agreements and remaining permits
- Build it!!!

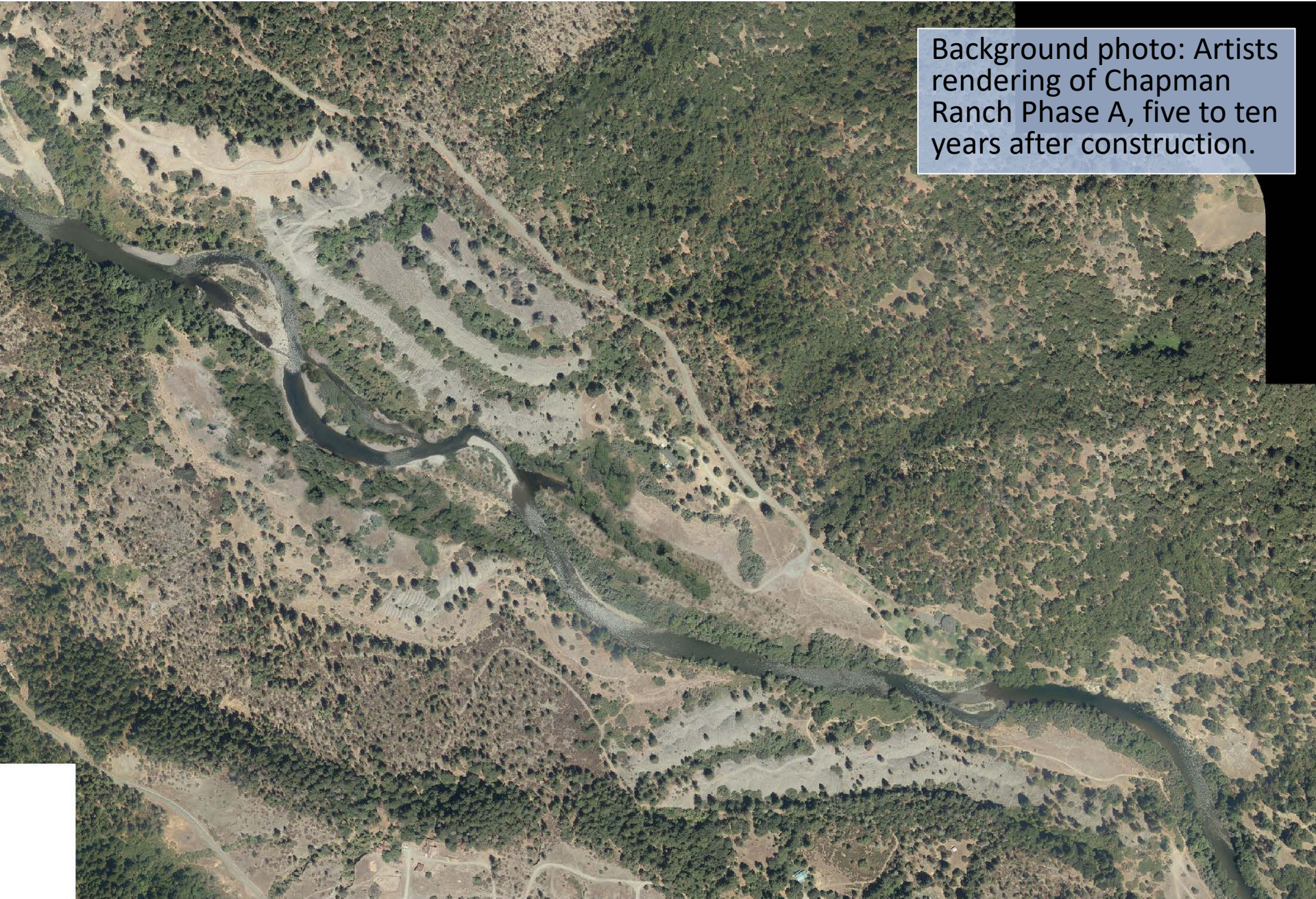


Chapman Ranch Existing Conditions



Chapman Ranch Rendering

Background photo: Artists rendering of Chapman Ranch Phase A, five to ten years after construction.



Questions?

