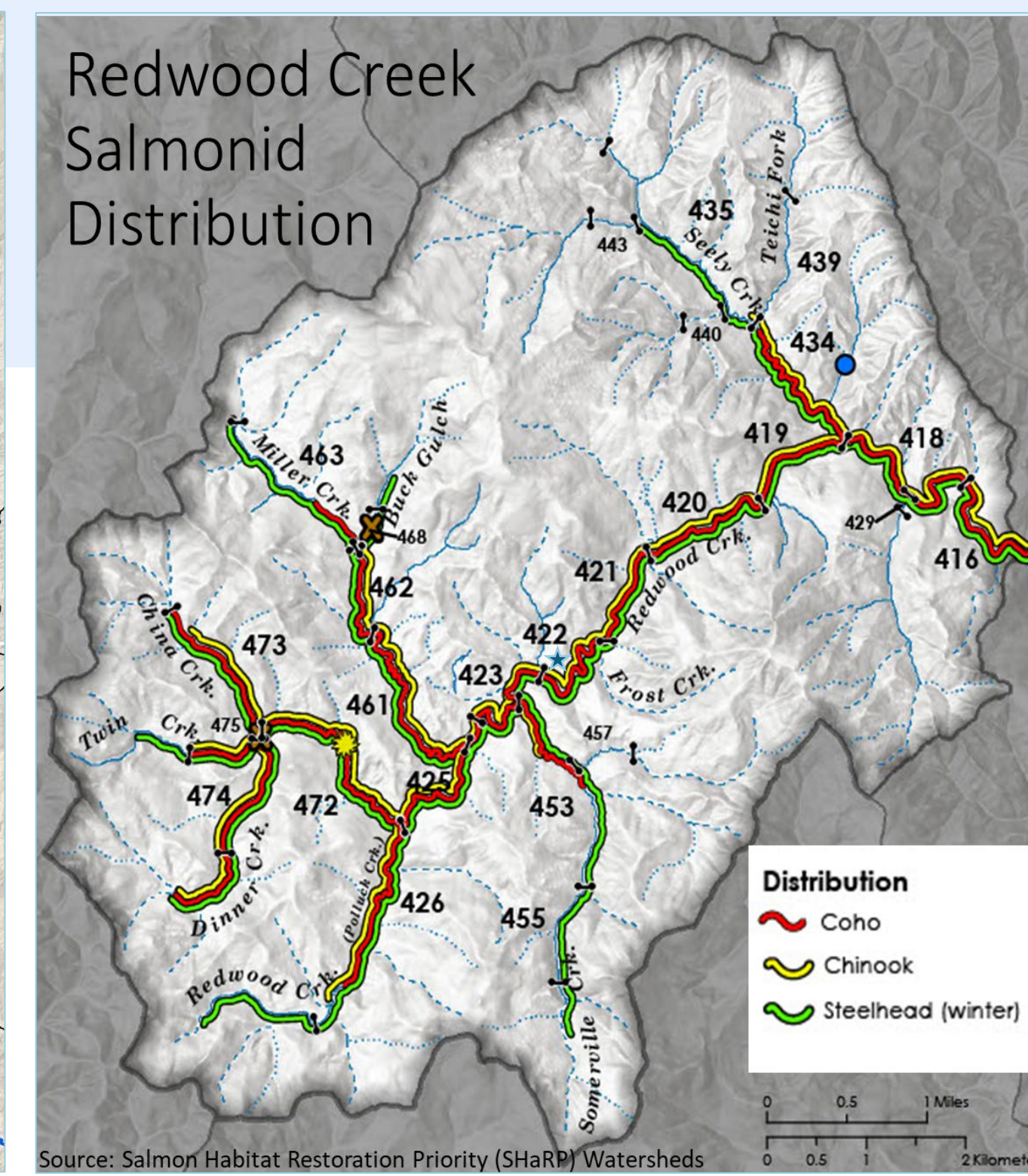


Marshall Ranch Streamflow Enhancement

Redwood Creek, South Fork Eel River

Katrina Nystrom Sheldon and Dana Stolzman, Salmonid Restoration Federation and Joel Monschke, Stillwater Sciences



Background

- Redwood Creek, SF Eel is a high-priority watershed for Coho Salmon Recovery (SHaRP)
- SRF measured streamflow throughout the watershed 2013-2023
- Streamflow has become critically low by mid-summer, disconnecting habitat
- Redwood Creek Feasibility Study & Target Flow Plan demonstrated that flow augmentation would be the most viable option to restore instream flows for juvenile salmonids and that building large ponds was more efficient than storage and forbearance in a drying creek



Lined Ponds to retain water



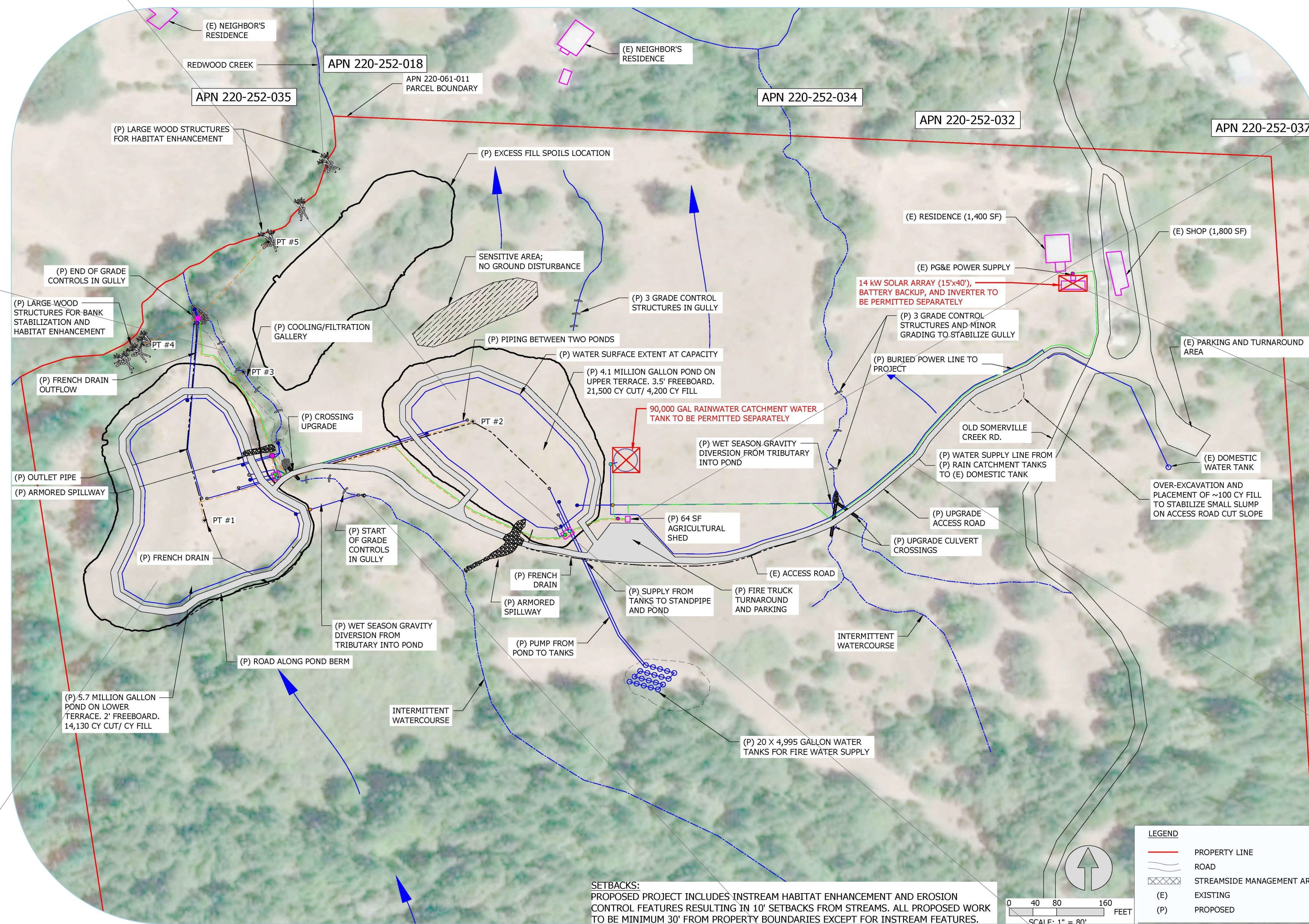
Large Wood Structures for Habitat Enhancement in Redwood Creek

Marshall Project Flow Enhancement Project Benefits

- WCB awarded for \$4.8 million for **ten million gallons** off-channel pond storage to supplement flows during dry season
- Five-months of flow augmentation during the dry season
- Large wood installation and gully treatments
- Native revegetation
- 20 years of long-term Operations & Maintenance



A previously deep gully now has grade control, is now part of the armored spillway and functions as a cooling/infiltration gallery.



Approved Plans



Powerhouse for flow regulation



System Powered by Solar



Upgraded access road and culverts



West Pond January 2024



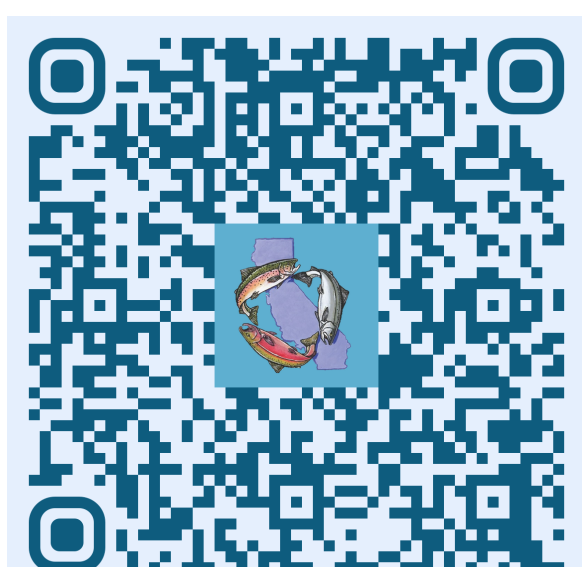
Wet Season Gravity Diversion to ponds.



East Pond March 2024

Next Steps for Flow Enhancement

- SRF is developing a Storage and Forbearance program for downstream water users with DWR and NCRP Prop 1 Funding
- CRGP grant to study impacts of forest thinning on streamflow



<https://www.calsalmon.org/programs/marshall-ranch-flow-enhancement>



Project Restoration Partners



TOM HICKS ATTORNEY AT LAW

