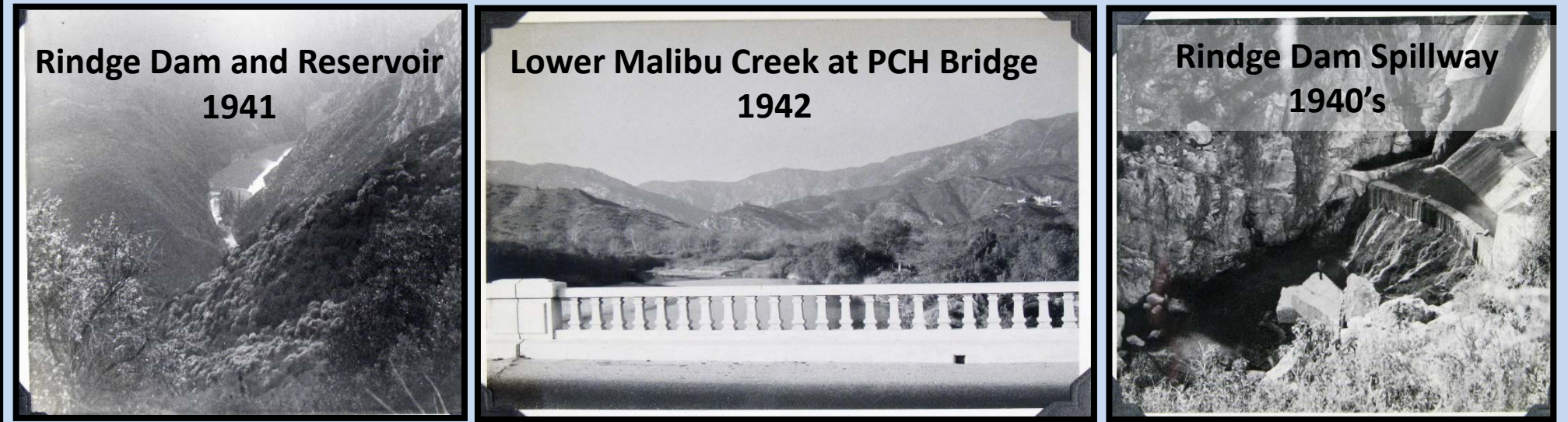


MALIBU CREEK ECOSYSTEM RESTORATION FEASIBILITY STUDY

LOS ANGELES AND VENTURA COUNTIES, CALIFORNIA

LOCALLY PREFERRED PLAN (LPP) – ALT 2B2



STUDY OVERVIEW

This study evaluates ecosystem restoration opportunities within the eastern portion of the Malibu Creek watershed along Malibu Creek from Century Dam to the Pacific Ocean, Cold Creek and Las Virgenes Creek tributaries, and the Malibu shoreline and nearshore area. Rindge Dam, a 100-foot obsolete water supply dam located three miles upstream of the Pacific Ocean trapped sediment for decades and is a migratory barrier to aquatic and terrestrial species. Addressing Rindge Dam and other partial to complete aquatic habitat barriers within the watershed allows for restoration of a significant regional and national resource.

PLANNING OBJECTIVES

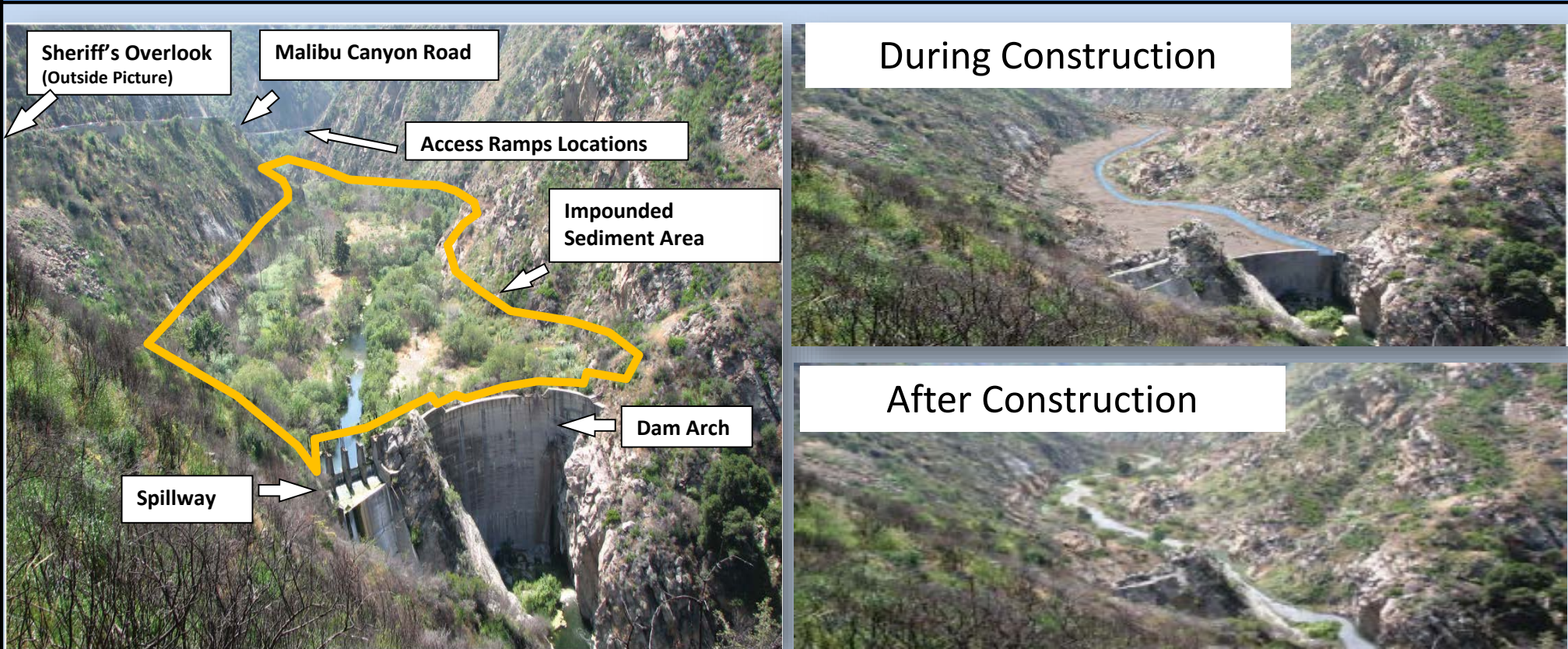
Establish a more natural sediment transport regime within the next several decades	Reestablish habitat connectivity along Malibu Creek and tributaries in the next several decades	Restore aquatic habitat of sufficient quality along Malibu Creek and tributaries
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RESOURCE SIGNIFICANCE AND HABITAT BENEFITS

- Diversity of plant and wildlife species
- Malibu Creek is an important regional corridor
- Restoring aquatic habitat connectivity represents a unique opportunity for systematic and sustainable ecosystem restoration.
- Malibu Creek is one of the last remaining habitats that support steelhead in the region.

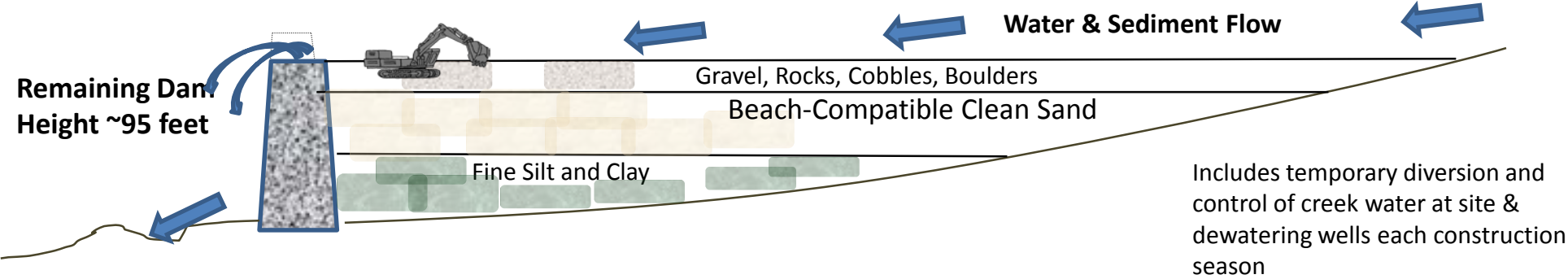


LPP COMPONENTS – ALTERNATIVE 2B2 - RINDGE DAM AREA

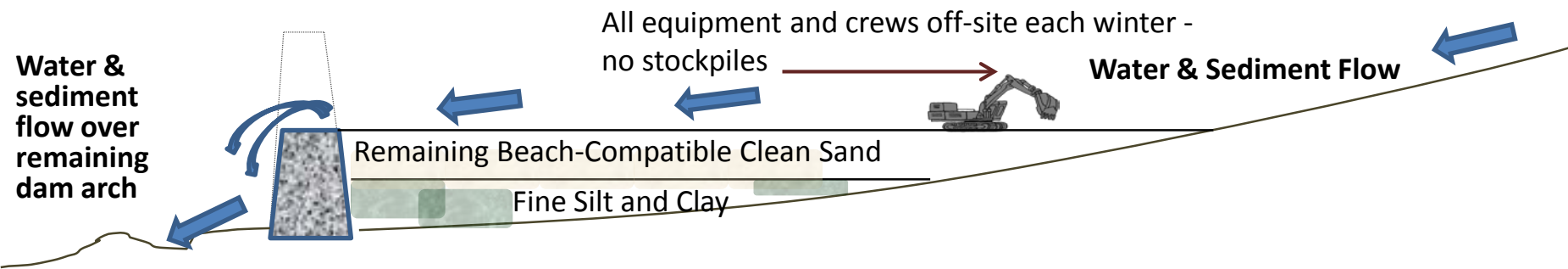


LPP COMPONENTS – ALTERNATIVE 2B2

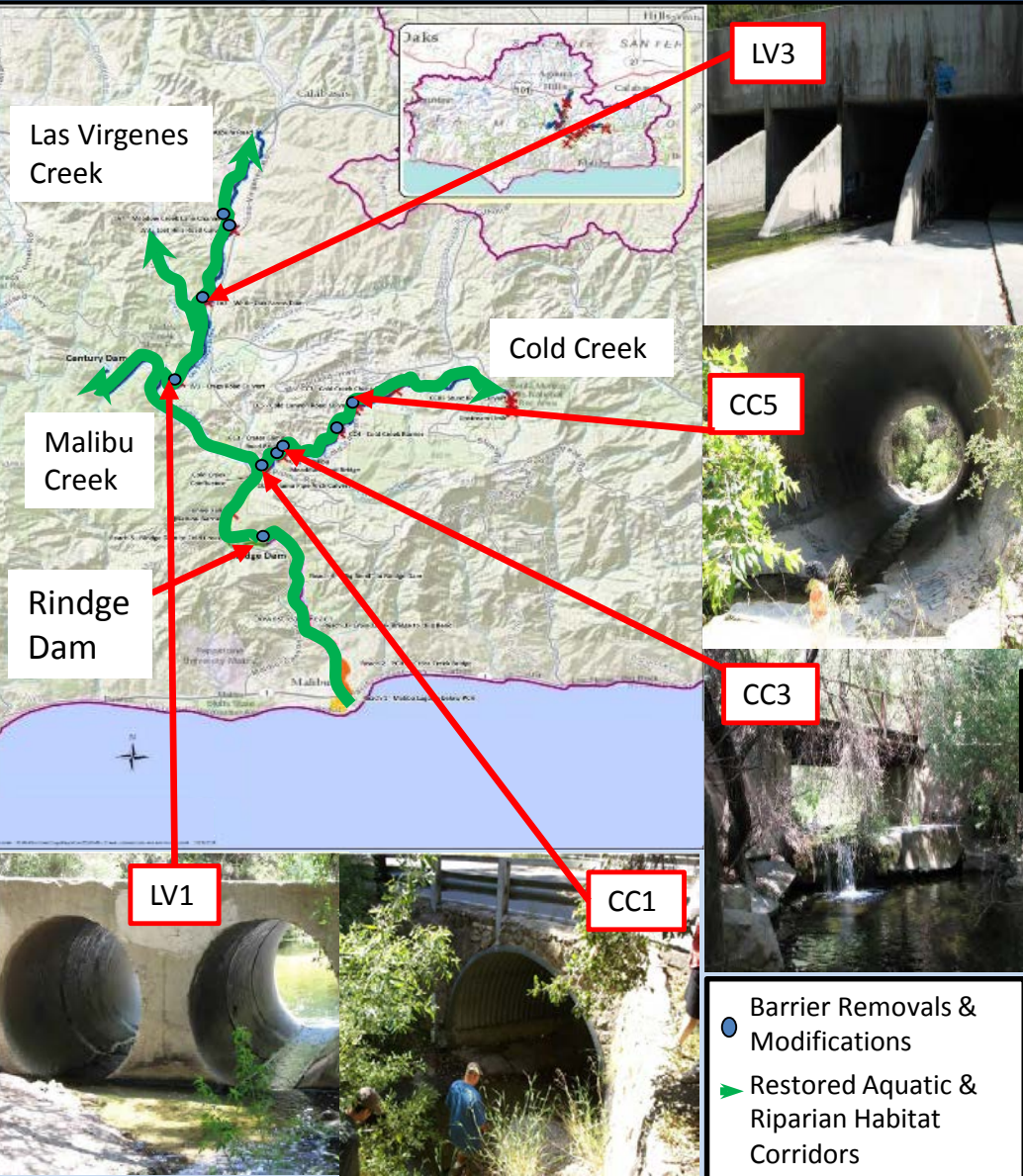
Site Prep & Excavation through end of first year



After mid-construction (years 3-5)



LPP Modifications to Upstream Barriers & Habitat Connectivity: Malibu, Las Virgenes & Cold Creeks



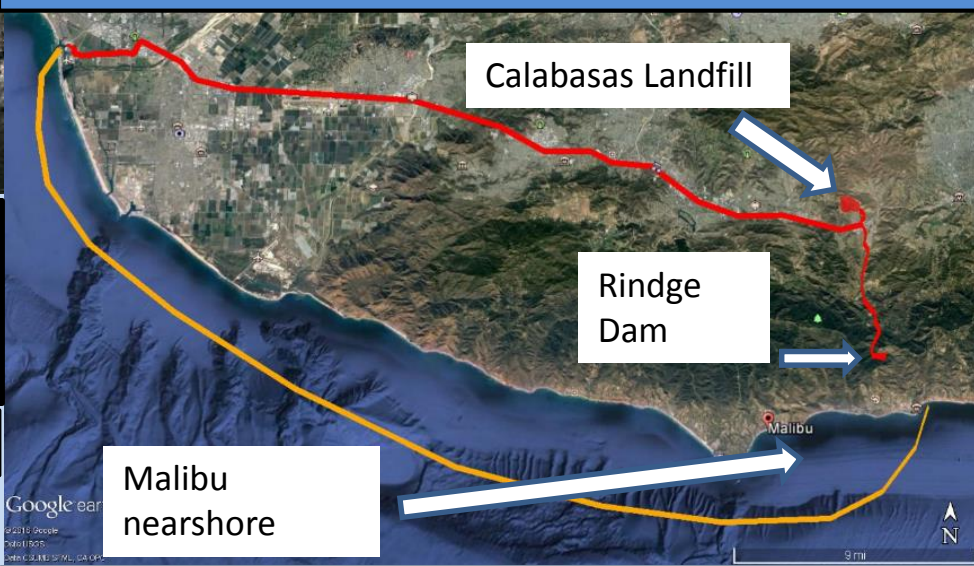
Summary

- Remove Rindge Dam Arch and spillway
- *Nearshore placement of mostly sands from Rindge Dam (276,000 cubic yards) east of Malibu Pier, via truck transport to Ventura Harbor and barge.*
- 2/3 of Rindge Dam impounded sediment goes to Calabasas Landfill
- Modification and/or removal of 8 upstream aquatic barriers

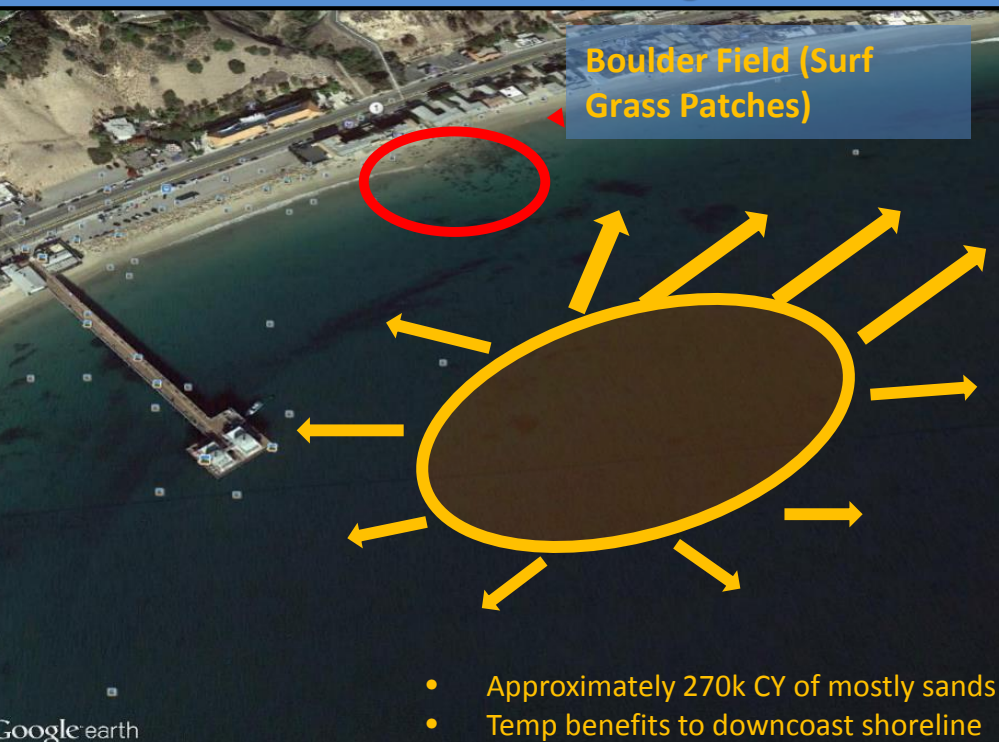
Benefits

- Removing Rindge Dam alone opens up an additional 5.5 miles of good to excellent aquatic habitat along Malibu Creek (8.5 miles from ocean to other barriers).
- Addressing Upstream Barriers increases the total aquatic habitat connectivity to 18 miles from the ocean to upper portions of Malibu Creek and Las Virgenes Creek and Cold Creek tributaries.

Truck Routes to Ventura Harbor and Barge to Malibu nearshore



LPP – Nearshore Placement, Rindge Dam Sands



LPP - Cost and Benefits Comparison

Summary of Benefits and Costs (\$1,000s)	
Total First Cost	\$168,787
Interest during Construction	\$22,345
Investment Cost	\$191,132
Annualized Investment Cost	\$7,606
OMRR&R	\$52
Total Annual Cost	\$7,657
Benefits (AAHUs)	152.5
Annual Cost/AAHU	\$50.2

