Developing a New Approach to Riparian Enhancement in Santa Cruz County

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Talk Outline

Why a new approach?

Riparian and stream studies

Policy framework

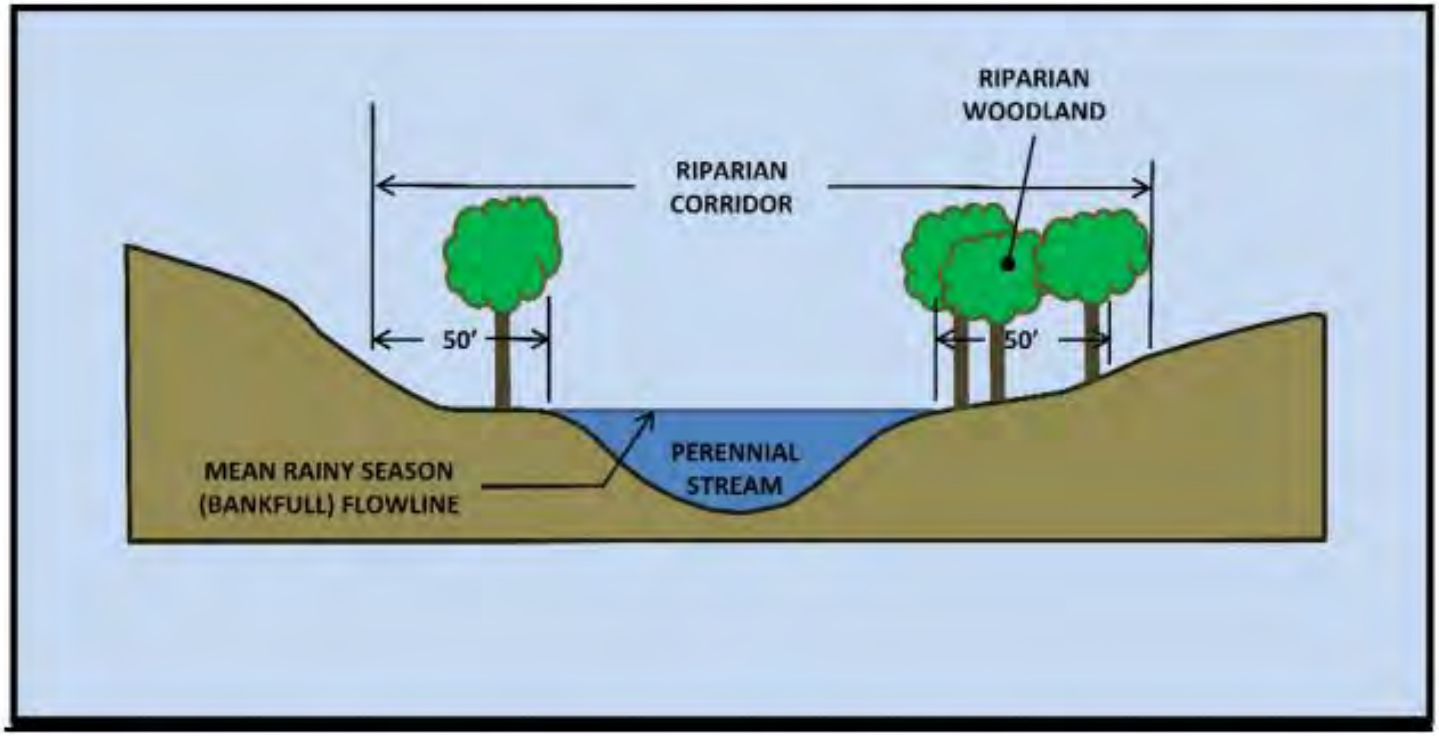
Paradise Park Pilot Project

Next steps

Why a new approach?

Riparian Corridor and Wetlands Protection Ordinance 1978

Example 6: Perennial Stream Located Outside of the Urban/Rural Services Line



In this example, the extent of the riparian corridor is measured from the greater of 50' from the mean rainy season (bankfull) flowline or the edge of the riparian woodland.


Mean Rainy Season Flowline = Bankfull
Extent of average winter flow

Protected from “development activities”

- Grading
- Land clearing
- Building and paving
- Tree and shrub removal
- Deposition of refuse and debris
- Use of herbicides, pesticides or any toxic chemicals

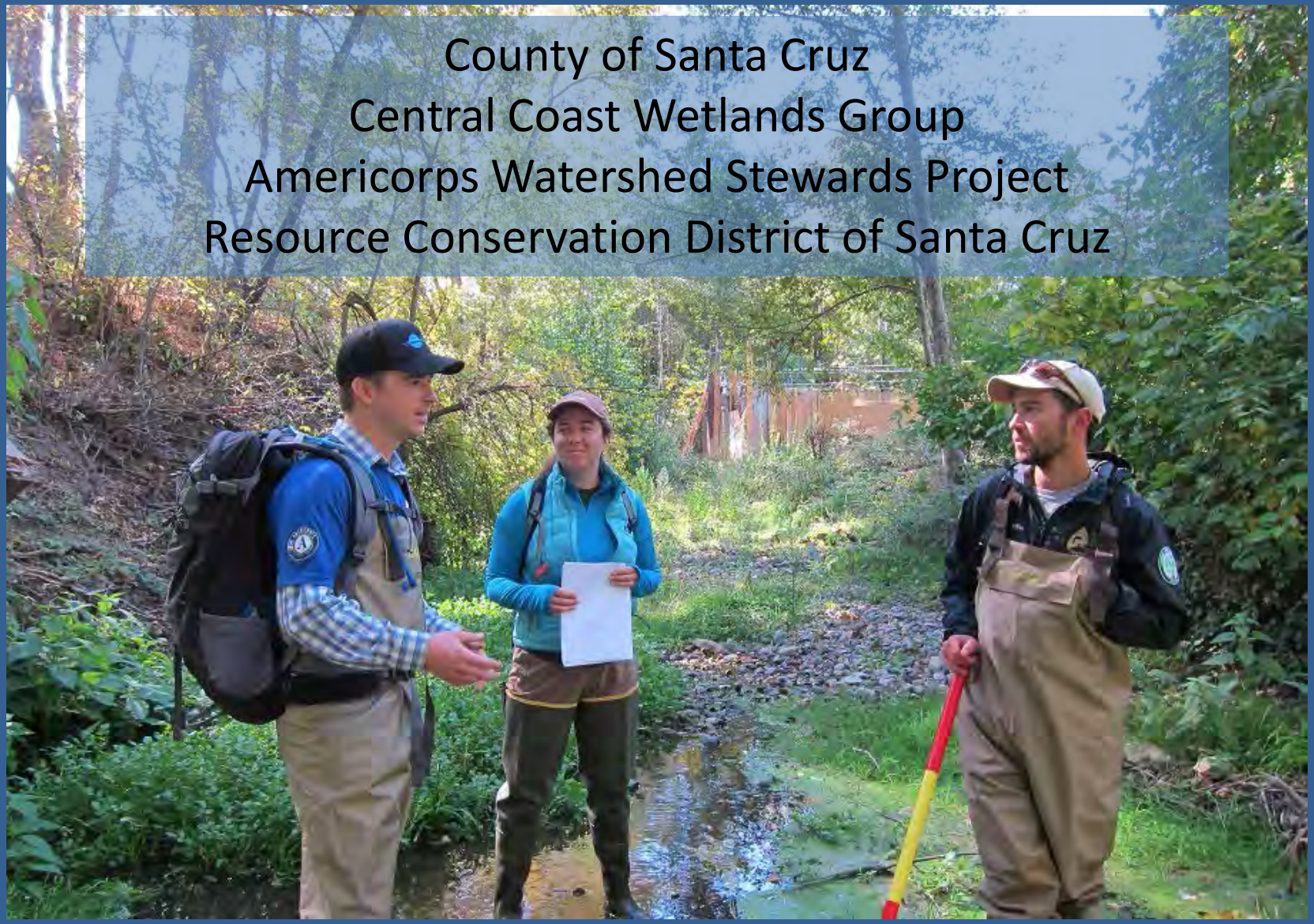
Community perception that Riparian Corridor Protection Ordinance was not working well

What about enforcement?

Enforcement

Document and Quantity Riparian Conditions

Riparian and Stream Studies Partners



Riparian and Stream Studies 2013-2017

- Riparian Index Prototype
- Stream Surveys
- Zayante Creek Riparian Inventory

- Riparian Index – RipRAM

- Paradise Park Riparian Inventory

Coho Salmon Recovery Plan 2012

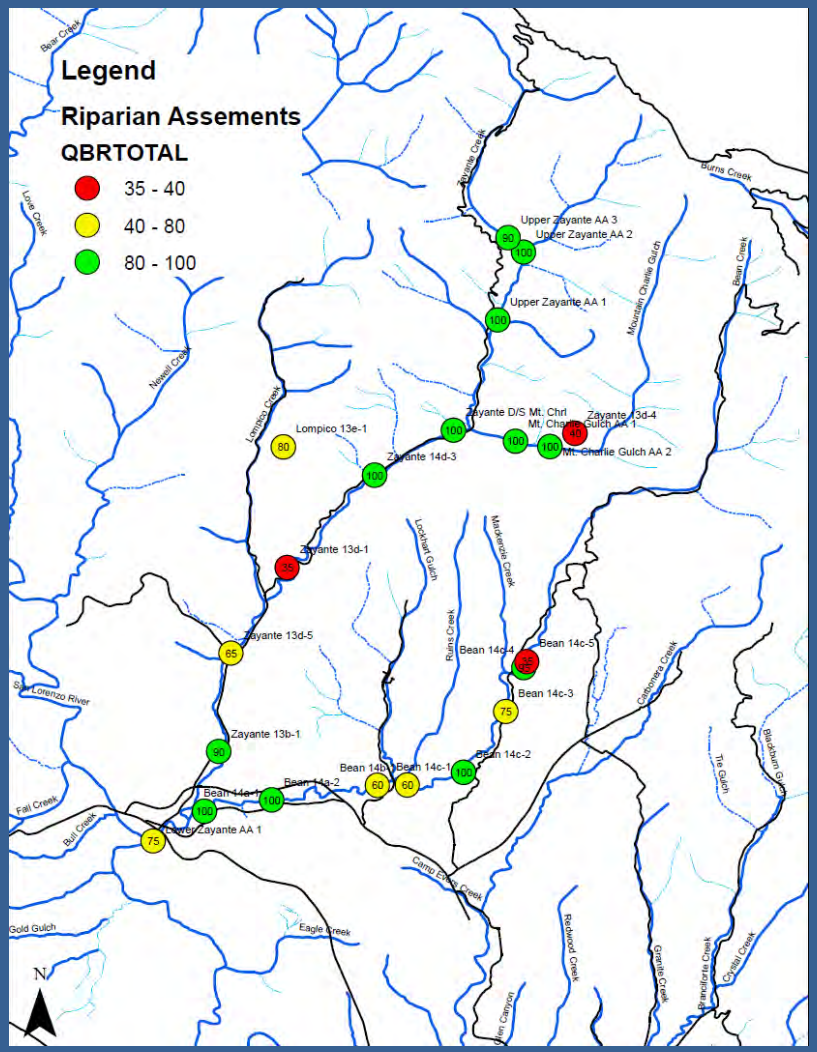
- Federal and State Listed as Endangered
- Critically endangered in Santa Cruz and San Mateo
- San Lorenzo River Watershed – Recovery Watershed

Photo: Morgan Bond

County of Santa Cruz Stream Wood Program


San Lorenzo Watershed
Zayante Watershed
San Lorenzo River
Zayante Creek
Bean Creek
Boulder Creek
Ben Lomond
Zayante
Bean Valley
Felton
Scotts Valley
Bonny Doon
Davenport
Paradise Park
Capitola
Santa Cruz
N
2
Miles

Index of Riparian Quality

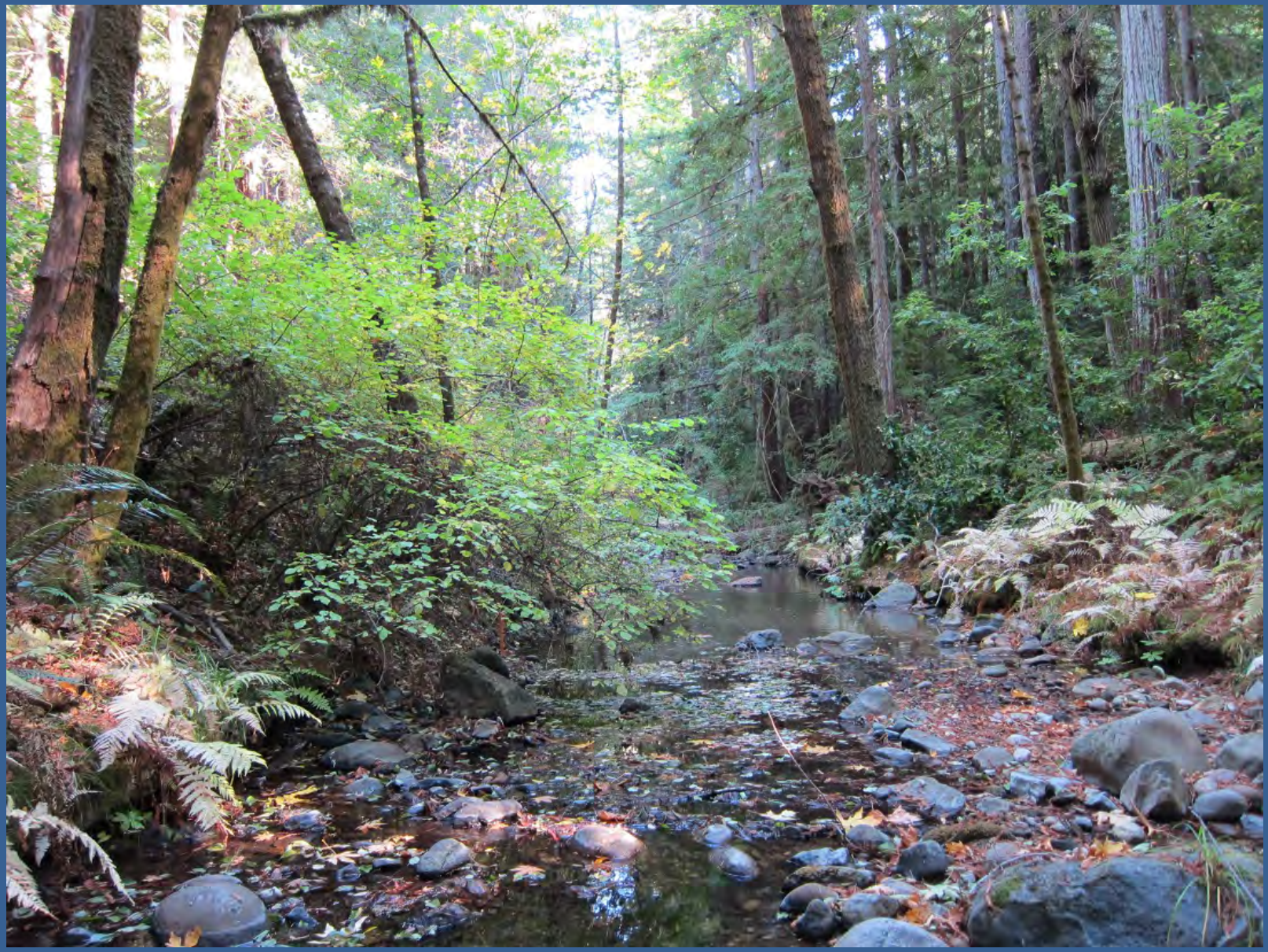


23 sites

Higher scores in upper watershed, low residential density areas

Lower scores in high density residential areas

High scores due to plant diversity

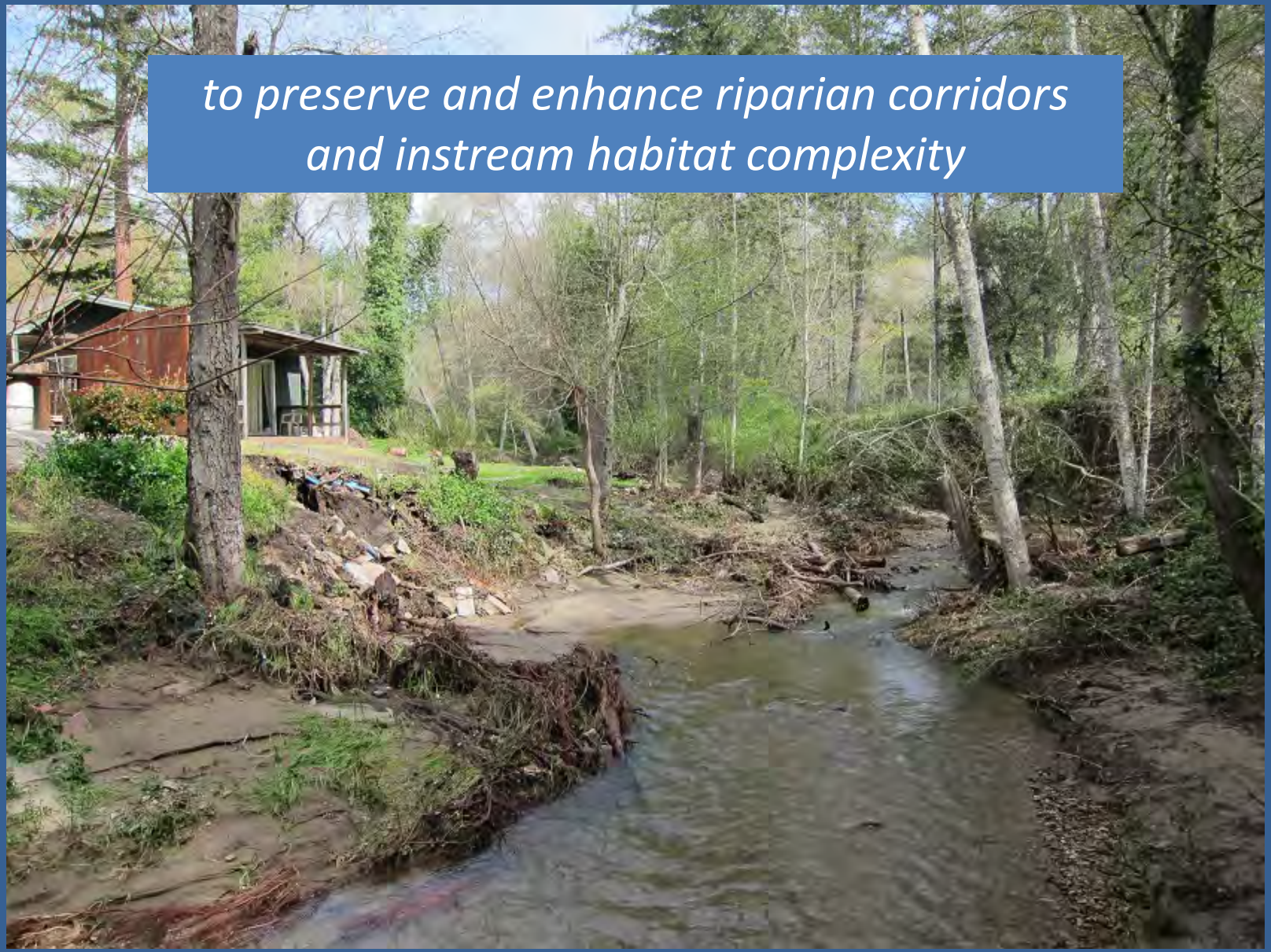


Zayante Riparian Inventory

Policy Framework

to preserve and enhance riparian corridors and instream habitat complexity

- Work within Riparian Neighborhoods
- Focus on Cooperative Stewardship
- Protection Tiers, depending on encroachment
  - Tier A : Full 50’ protection
  - Tier B: 25’ protection or enhancement
  - Tier C: drainage, erosion control, invasives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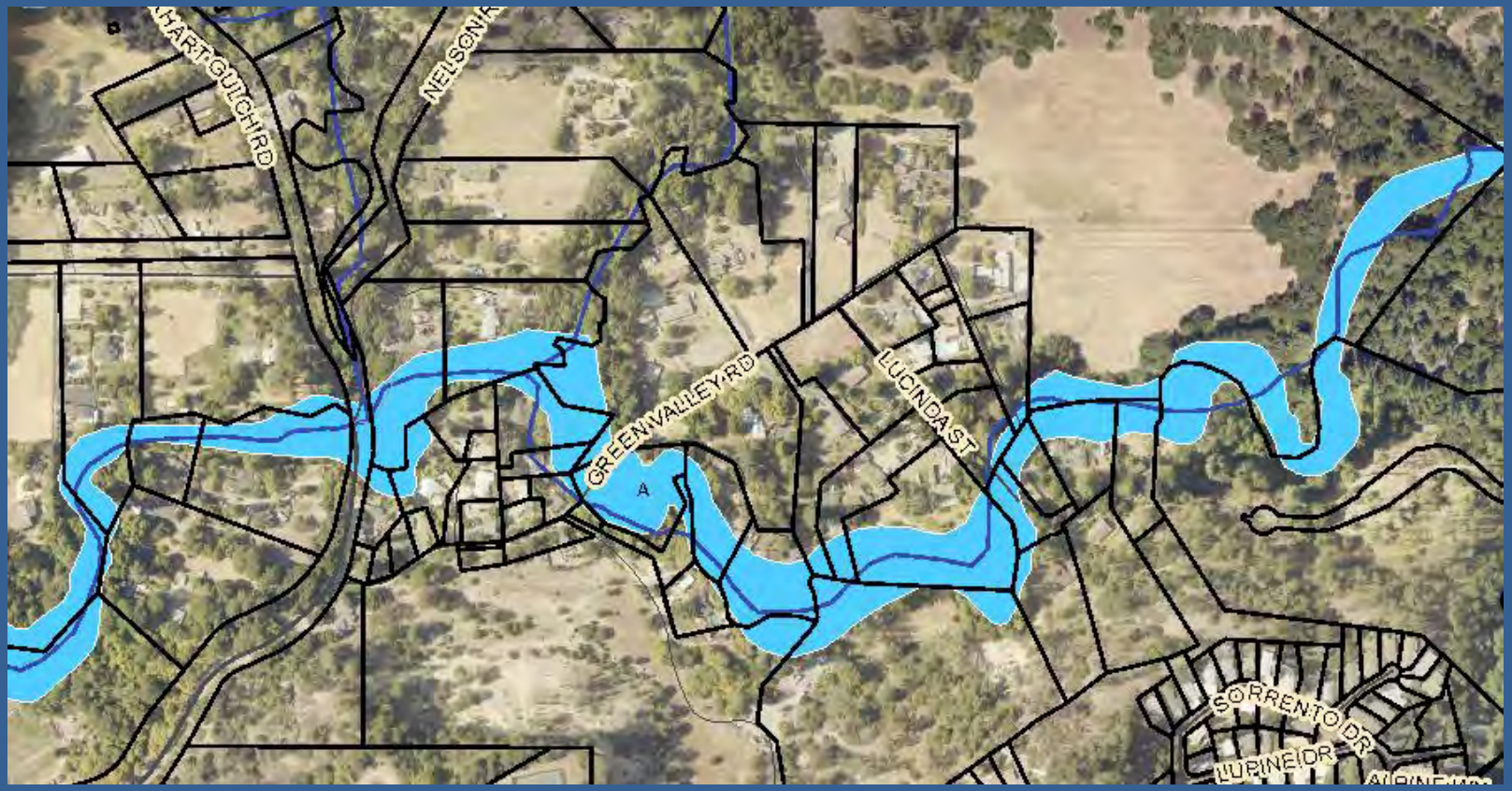
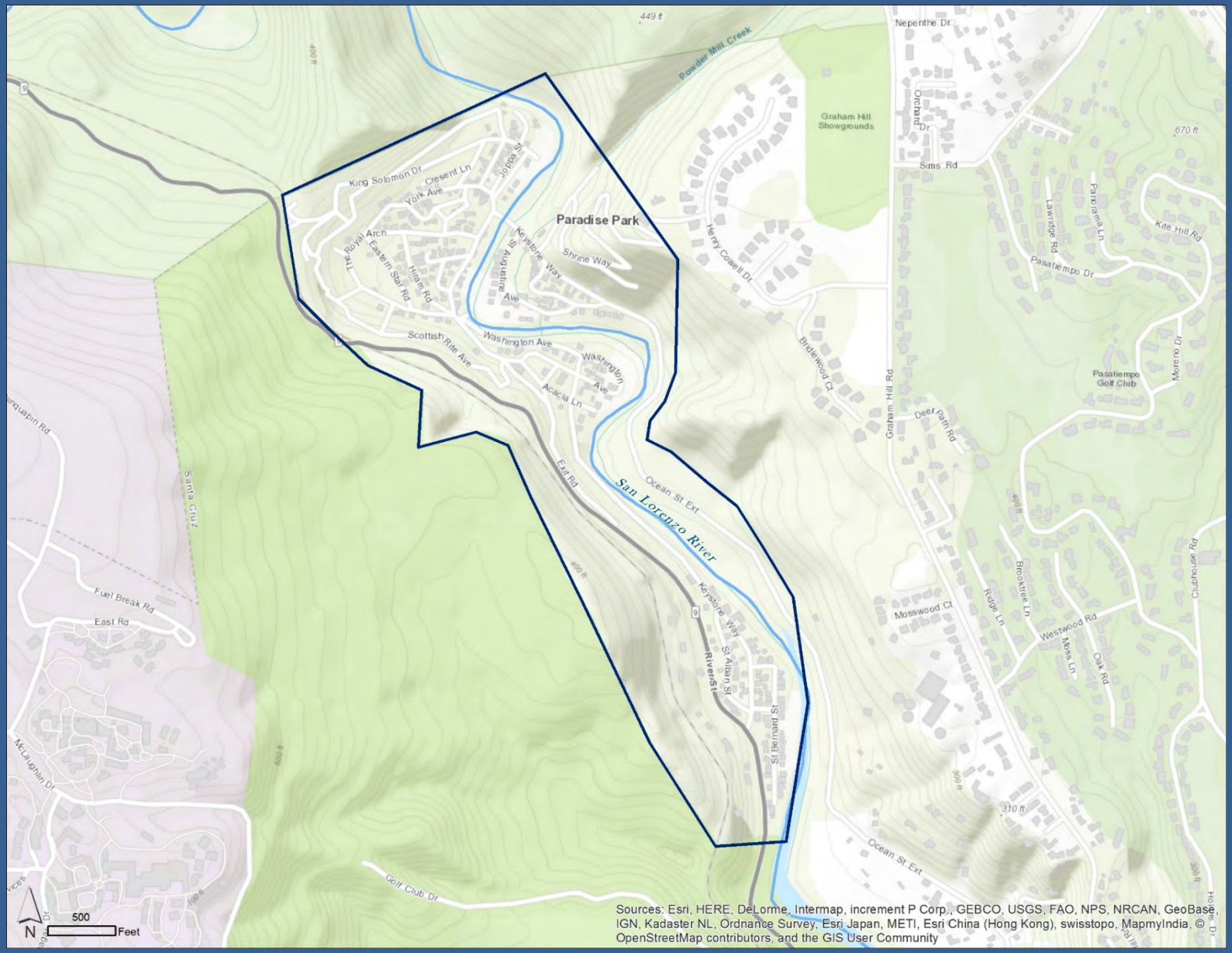
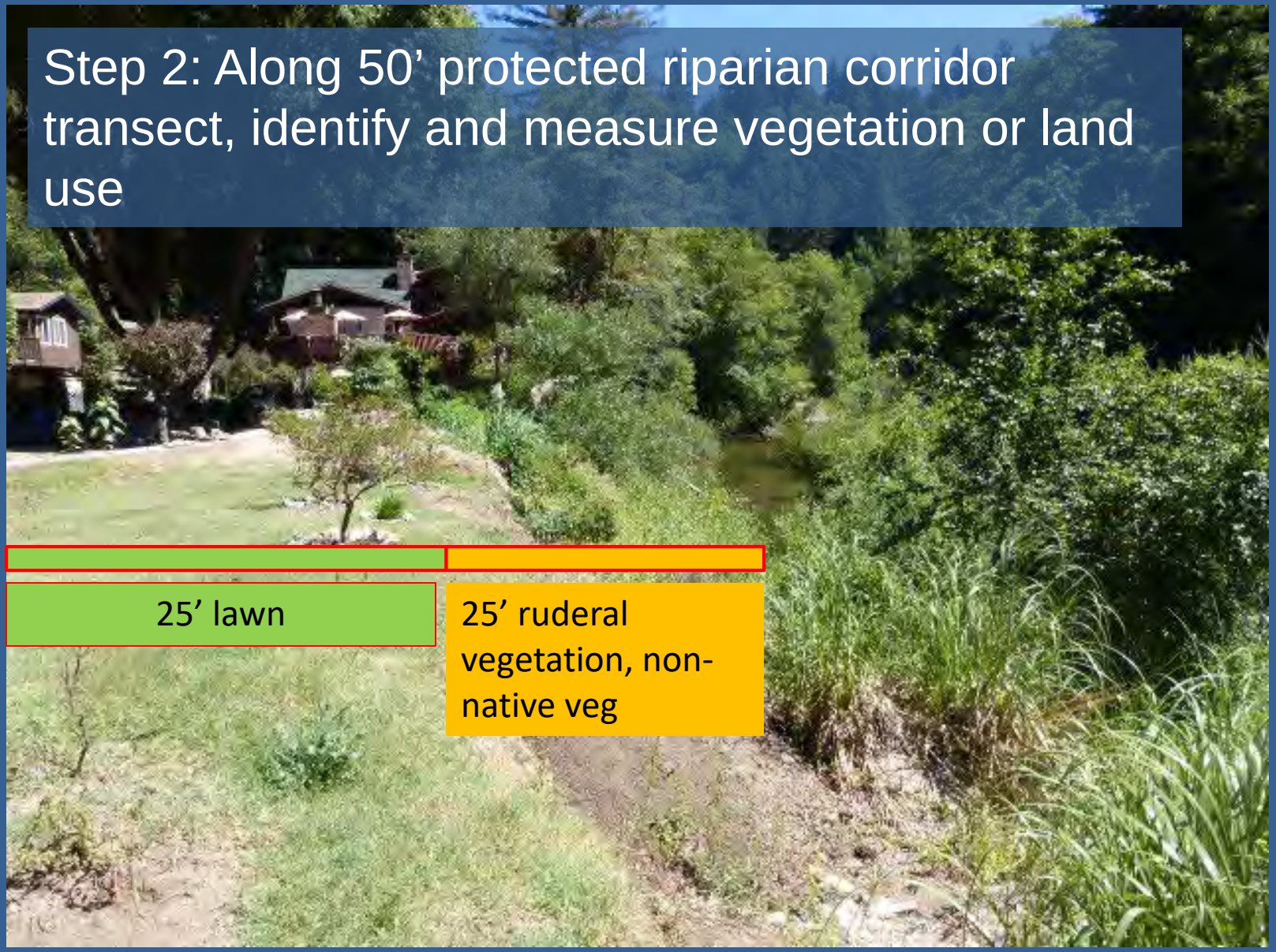

HART GULCH RD
NELSON R
GREEN VALLEY RD
LUCINDA ST
A
SORRENTO DR
LUPINE DR

Pilot Project: Paradise Park Masonic Club

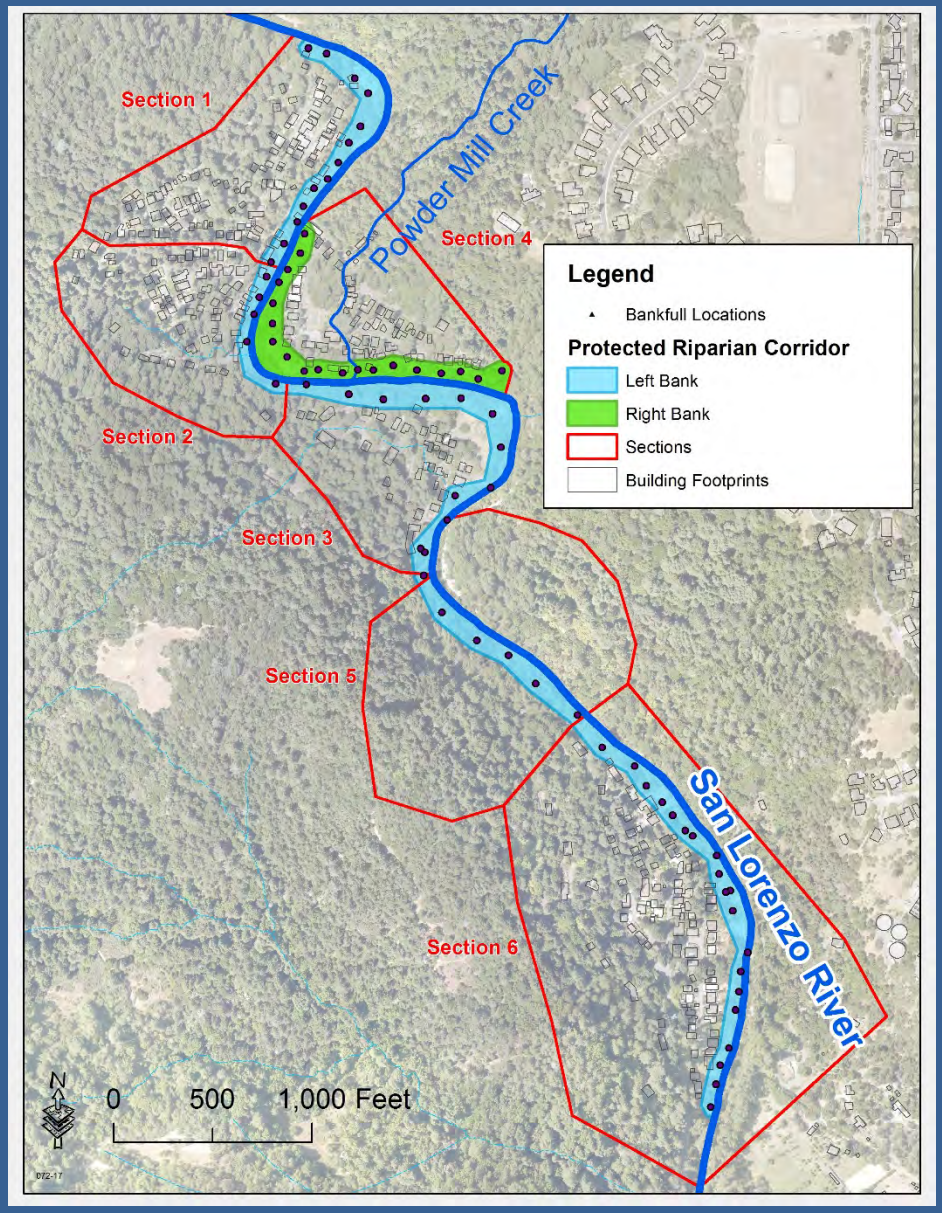


Riparian Inventory 2.0
Step 1: Locate and stake mean high water mark

Step 2: Along 50’ protected riparian corridor transect, identify and measure vegetation or land use




10’ house
30’ Riparian veg
10’ bare


Section 1
Powder Mill Creek
Section 4
Legend
Bankfull Locations
Protected Riparian Corridor
Left Bank
Right Bank
Sections
Building Footprints
Section 2
Section 3
Section 5
San Lorenzo River
Section 6
N
0
500
1,000 Feet

Paradise Park Results

- 76 transects
- Right Bank
  - 86% had riparian vegetation with average width of 21’
  - 50% transects had non-native vegetation
- Left Bank
  - 26% had riparian vegetation with average width of 33’
  - 21% had non-native vegetation
- 38% of transects had houses within the protected riparian corridor

Next Steps

Work with Paradise Park community: review plan, identify priority projects


Small grant to purchase local, native riparian vegetation

Develop outreach materials for riparian plantings with focus on landscape quality plants

Use Native Riparian Plants

Only native species should be planted in a riparian corridor. These plants provide low maintenance, attractive landscaping as well as habitat for native wildlife. Local plants form the base of the food chain and are part of the complex web between insects, birds, fish, and other wildlife species. Native plants often require less water and are more resilient to insects and disease than many non-native ornamentals. When planted properly, native plants can also help prevent soil erosion.


California Rose


Coffeeberry


Sword Fern

Plants that occur naturally along a specific creek are adapted to local conditions and will be the easiest to grow. Contact your local native plant nursery to assist you in determining which plants are best suited for your area. Your plants will have an increased chance of survival if you water them regularly during the dry season for the first 3 to 5 years, and weed regularly. Native trees and shrubs do not require fertilizers and pesticides.

When selecting plants for your riparian corridor, choose a variety of species including ground covers, shrubs, and trees. By planting a diversity of riparian plants you will create a more natural setting, which will benefit both aquatic and terrestrial species.

Common Riparian Plants in Santa Cruz County

Ground Covers:
- Sword Fern *(Polystichum mumitum)*
- Chain Fern *(Woodwardia fimbriata)*
- California Blackberry *(Rubus ursinus)*
- Mugwort *(Artemisia douglasiana)*
- Alum Root *(Heuchera micrantha)*

Shrubs:
- Blue Elderberry *(Sambucus mexicana)*
- California Rose *(Rosa californica)*
- California Huckleberry *(Vaccinium ovatum)*
- Thimbleberry *(Rubus parviflorus)*
- Coffeeberry *(Rhamnus californica)*
- Oregon Grape *(Mahonia aquifolium)*
- Pink Flowering Currant *(Ribes sanguineum and R. californicum)*
- Snow Berry *(Symphoricarpos albus)*
- Hazelnut *(Corylus cornuta)*

Trees:
- Big Leaf Maple (*Acer macrophyllum*)
- California Bay Laurel (*Umbellularia californica*)
- Coast Redwood (*Sequoia sempervirens*)
- Douglas Fir (*Pseudotsuga menziesii*)
- Red Willow (*Salix laevigata*)
- Red Alder (*Alnus rubra*)
- Arroyo Willow *(Salix lasiolepis)*
- Box Elder *(Acer negundo)*
- Black Cottonwood *(Populus balsamifera ssp. trichocarpa)*
- Red Dogwood *(Cornus sericea)*
- Coast Live Oak *(Quercus agrifolia)*

Riparian Demonstration Garden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