

Sonoma Water Stream Maintenance Program

401 Certification/WDR Renewal
December 10, 2020



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Southern Nonpoint Source and 401 Certification Unit



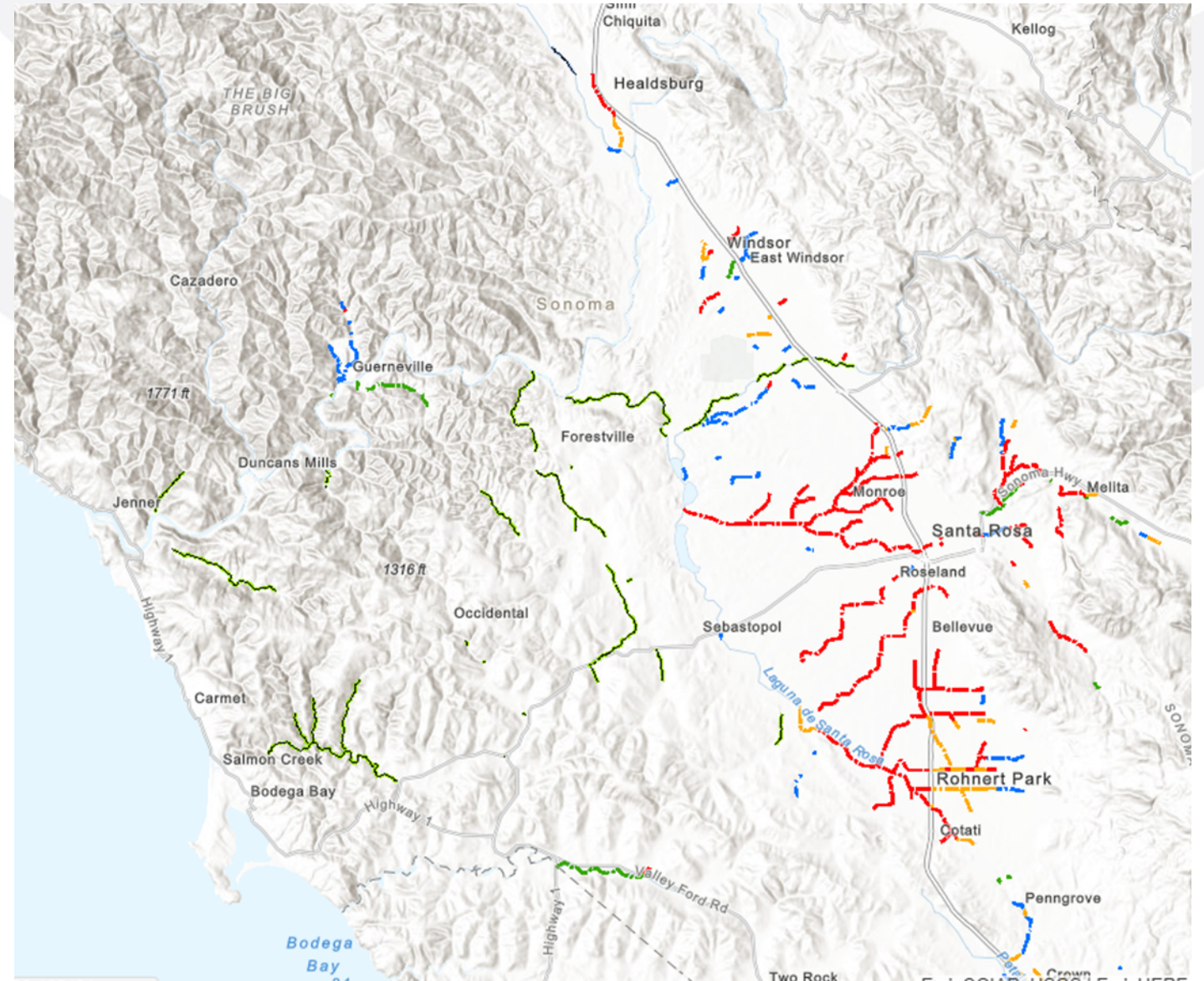
Healthy Watersheds, Effective Regulation, Strong Partnerships



Santa Rosa Creek
Reach 4
1997-2013

Overview

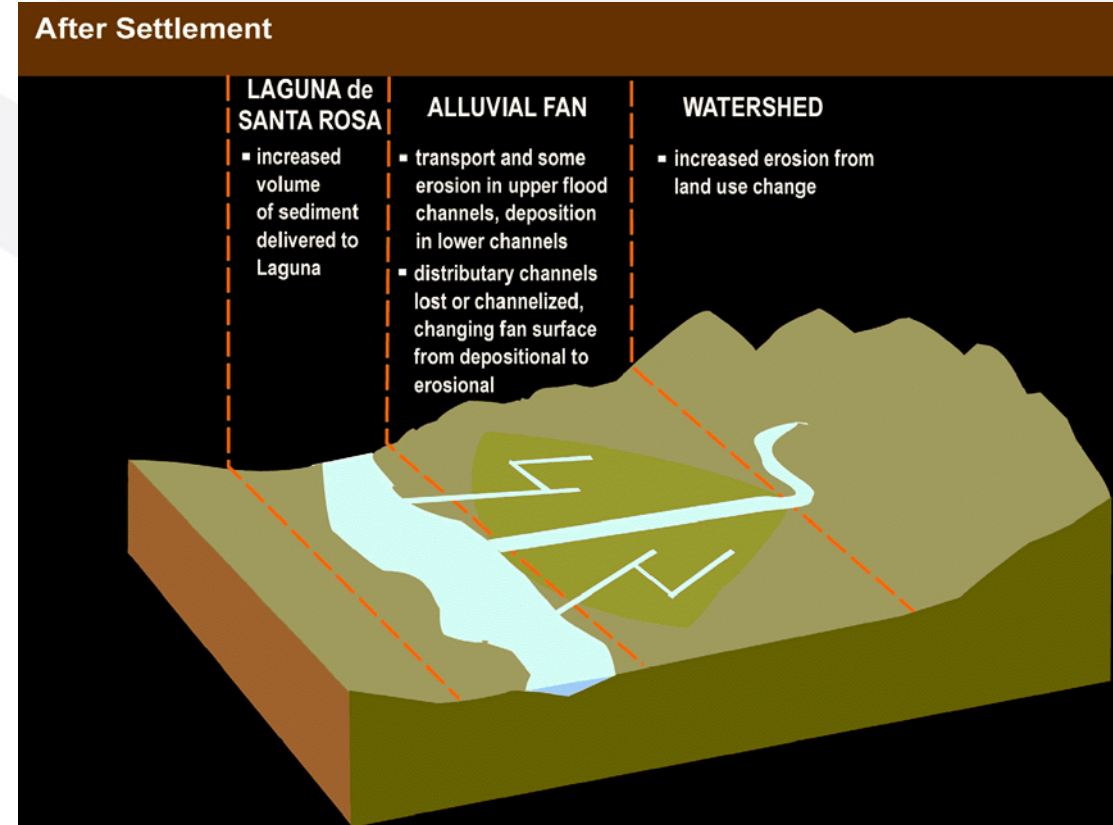
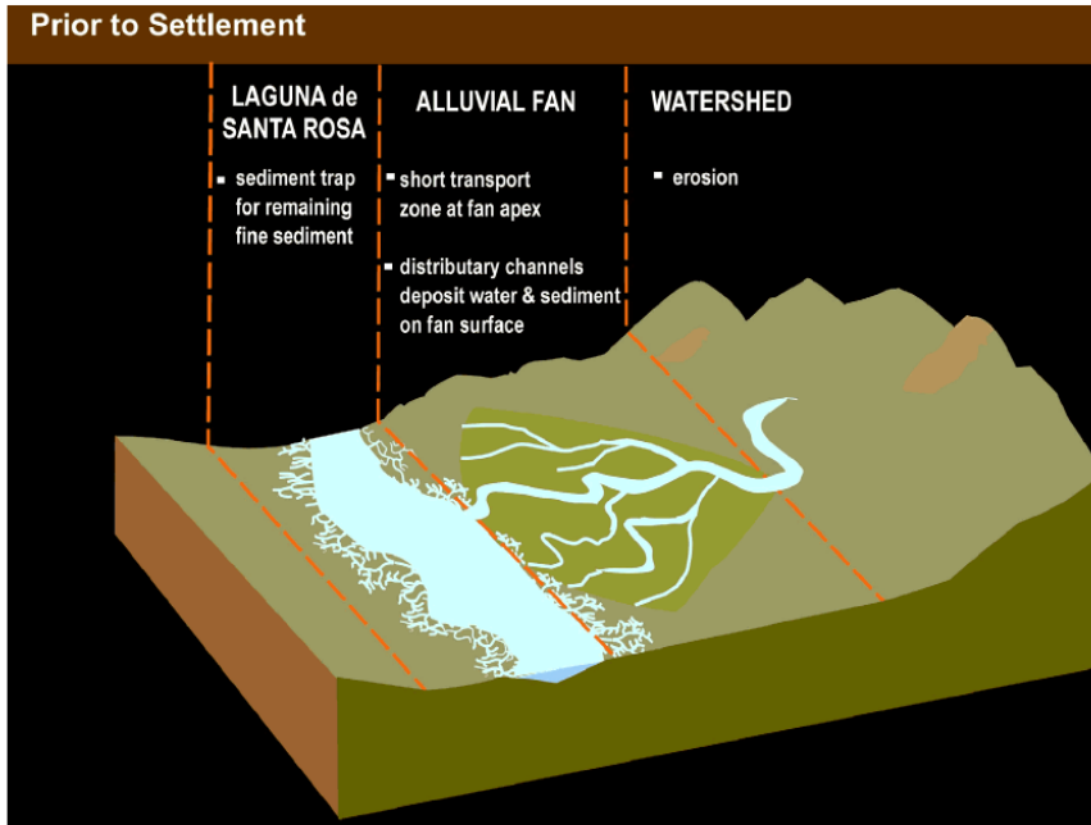
- Introduction
- Historical Setting
- Program Overview
- Covered Activities
- Mitigation
- Monitoring and Reporting



Introduction

- Before 2009, issued 5-10 individual certifications annually
- 2006-2009 SMP Manual and Programmatic Permit Development
- 2009 Programmatic 401 Cert/WDR adopted by Board
- MRP adopted with 401 Cert/WDR and updated 2010 & 2016

Historical Setting



Central Sonoma County - Then and Now

70 years of land use/land cover change in Sonoma County (1942-2013)



- 1
- 2
- 3
- 4
- 5

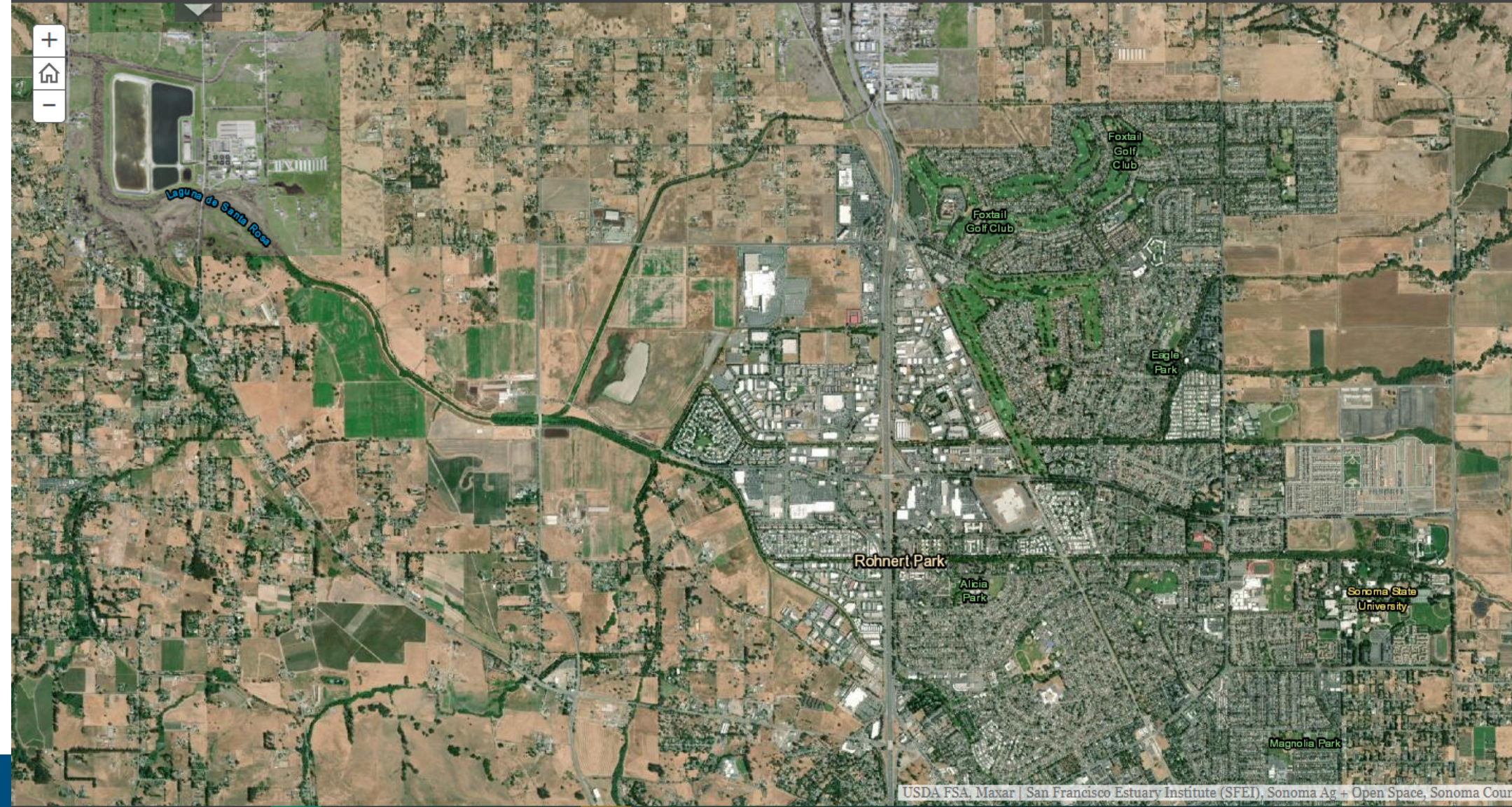


Central Sonoma County - Then and Now

70 years of land use/land cover change in Sonoma County (1942-2013)



- 1
- 2
- 3
- 4
- 5



Historical Setting



Santa Rosa Creek 1956



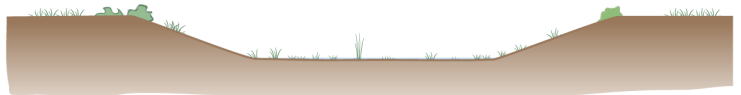
Laguna near Stony Point Road 1961

Program Overview

Current Practices

- Minimize stream impacts while providing necessary flow conveyance
- No unnecessary intervention
- Understand the system and processes
- Reduce maintenance frequency
- Consider public safety





Cross-section of trapezoidal flood control channel with minimal in-channel complexity or riparian vegetation. Overall habitat function is low.



A Straightened channel, minimal vegetation (Corona Creek)



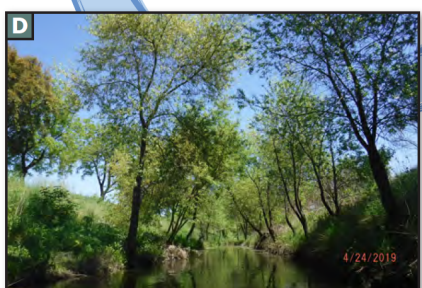
C Straightened channel, in-channel complexity, low canopy closure (Wilfred Creek)



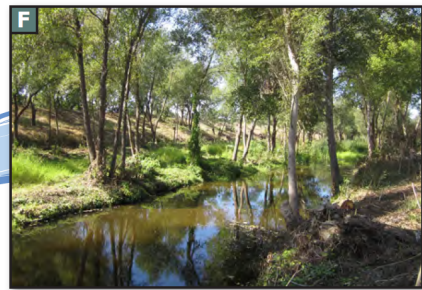
B Straightened channel in-channel cattail/willow vegetation (Lynch Creek)



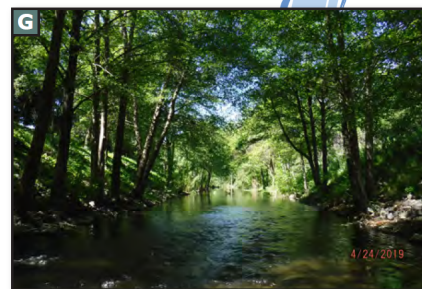
E Increased in-channel complexity, (riffle-bar-pool sequence), riparian forest with high canopy cover (Hinebaugh Creek)



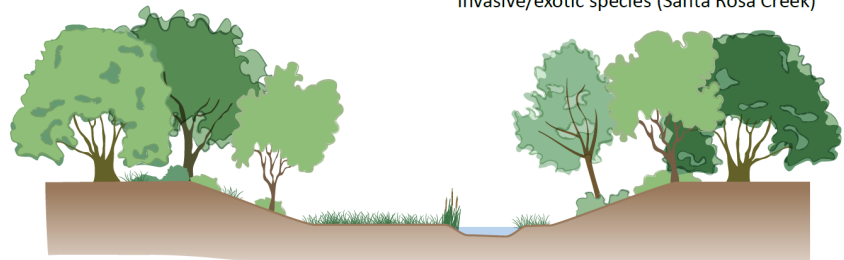
D Increased in-channel complexity, riparian woodland with low canopy cover (Roseland Creek)



F Increased in-channel complexity, (alternating bar features, low flow sinuosity, woody debris, pools), riparian forest with moderate canopy closure (Santa Rosa Creek)



G High in-channel complexity, (pool-riffle sequence), mature riparian forest with closed canopy, few invasive/exotic species (Santa Rosa Creek)



Cross-section of trapezoidal flood control channel with managed in-channel complexity (low-flow channel sinuosity, in-channel bars/benches, occasional in channel woody debris, riffle-pool sequences with mature riparian forest and closed canopy. Overall habitat function is improved)

Program Overview

Permit Structure

- Reliance on SMP Manual
- BMPs
- Management Triggers
- Annual Notifications
- Mitigation
- Monitoring
- Reporting



Covered Activities

- Sediment Removal
- Vegetation Management
- Bank Stabilization
- Other Maintenance Activities
 - Upper Bank Vegetation
 - Road Maintenance
 - Debris and Trash Removal
 - Repairing Fences
 - Removing Graffiti



Sediment Removal



- Reach scale
- Localized (including sediment basins)
- Engineered structures (reservoirs, concrete lined channels)



Cross Program Coordination



- Water Quality Trading Framework
- Laguna TMDL

Sediment Removal

Beneficial Reuse or Disposal

- Identify removal locations
- Test sediment samples per MRP
- Select appropriate locations for beneficial reuse



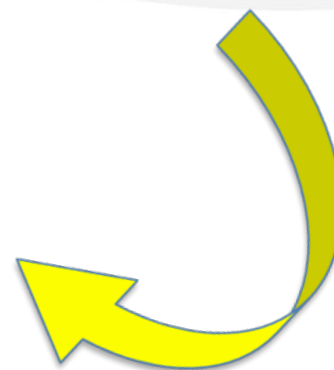
Vegetation Maintenance



- Maintain flow capacity
- Establish riparian canopy
- Control invasive vegetation
- Address hazards and fuel

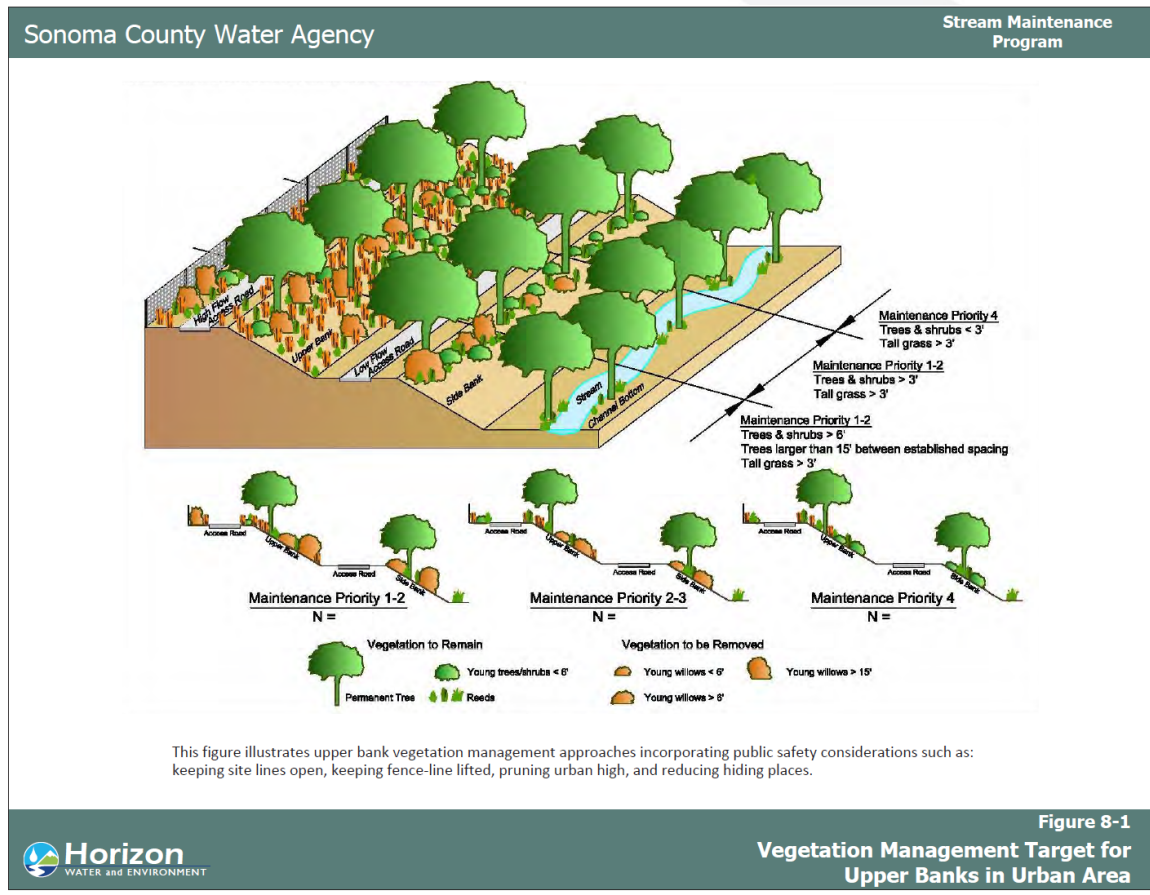
Bank Stabilization

- Need driven by storms
- Bioengineering techniques used



Constrained, engineered channels don't allow for natural bank failure and natural regeneration.

Other Maintenance Activities



Urban Forestry

Mitigation

- Replacement of ecological functions lost from sediment removal and bank stabilization treatments
 - Tier 1: on site and in kind
 - Tier 2: off site and in kind
 - Tier 3: off site watershed partnership projects



Monitoring and Reporting

- Pre-Maintenance Meetings and Field Tours
- Annual Notifications
- Sediment Sampling
- Annual Summary Reports
- Annual Program Performance Reviews
- 5-year Reviews



Staff Recommendation



Adopt:

Order and MRP R1-2020-0032

Clean Water Act Section 401 Water Quality
Certification and Waste Discharge Requirements
and Monitoring and Reporting Program
for the
Sonoma Water Stream Maintenance Program

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