

Riparian and Wetland Habitat Agenda Item No. 4

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Topics for Today

Riparian and Wetland Habitat

- Functions and Values
- Spatial Extent
- Aerial Imagery and Photographs
- Impacts
- Efforts to Improve



Beneficial Uses

Riparian and Wetland Habitat

- Municipal and Domestic Supply
- Agricultural Supply
- Groundwater Recharge
- Freshwater Replenishment
- Fishing
- Estuarine Habitat
- Marine Habitat
- Wildlife Habitat
- Migration
- Spawning
- Areas of Special Biological Significance



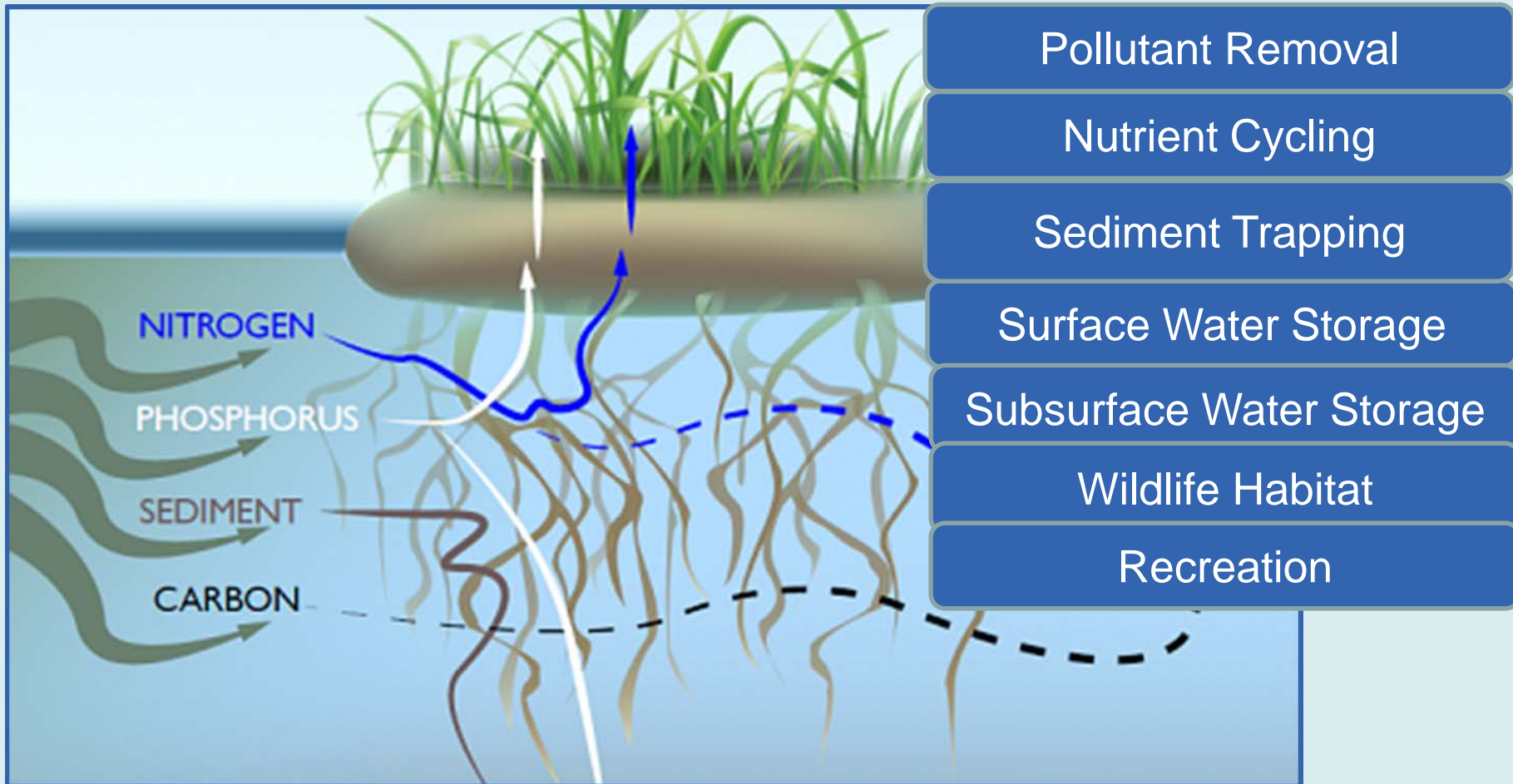
Water Quality Objectives Riparian and Wetland Habitats

- Temperature
- Dissolved oxygen
- Suspended sediment load
- Settleable material concentrations
- Chemical constituents
- Turbidity

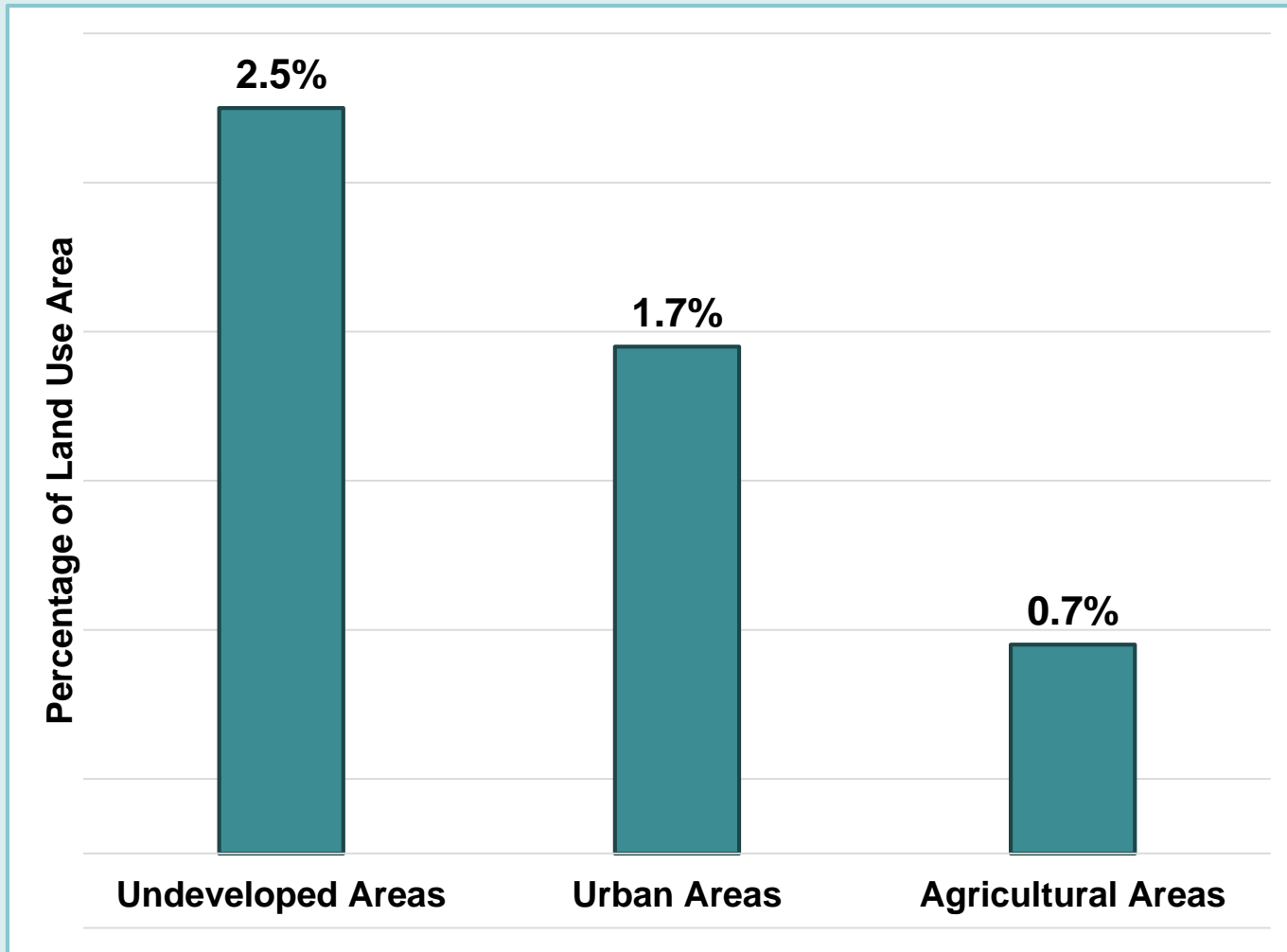


Wetlands

Functions and Values

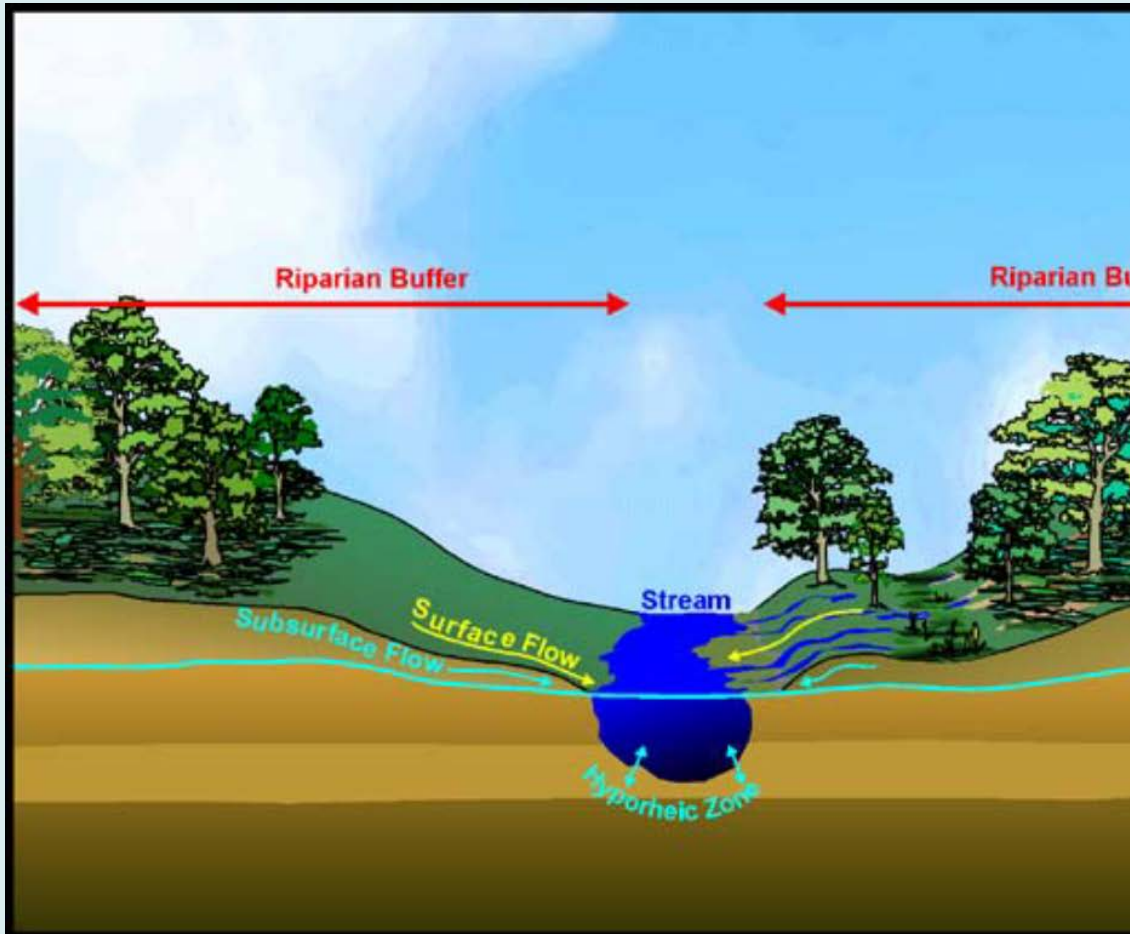


Wetlands Spatial Extent (Central Coast Region)



U.S. Department of Fish and Wildlife, National Wetland Dataset, v. 2 (May 2016)

Riparian Habitat Functions and Values



Sediment Trapping

Pollutant Filtering

Stream Energy Dissipation

Rain Drop Dissipation

Shade/Temperature

Extended Seasonal Flows

Surface Water Storage

Wildlife Habitat

Recreation

Riparian Nutrient and Sediment Removal Efficiencies

(Vegetation Type)

Buffer Type	Nitrogen Removal	Sediment Removal
Grass / Shrubs	Low	High
Trees	Medium	High
Grass / Shrubs / Trees	High	High

Jontos (2004); Franti, T.G., (1997); Gilliam et al. (1997); Lowrance et al. (1995); Osmond et al., (2000); Palace (1998); and Parsons et al. (1994)

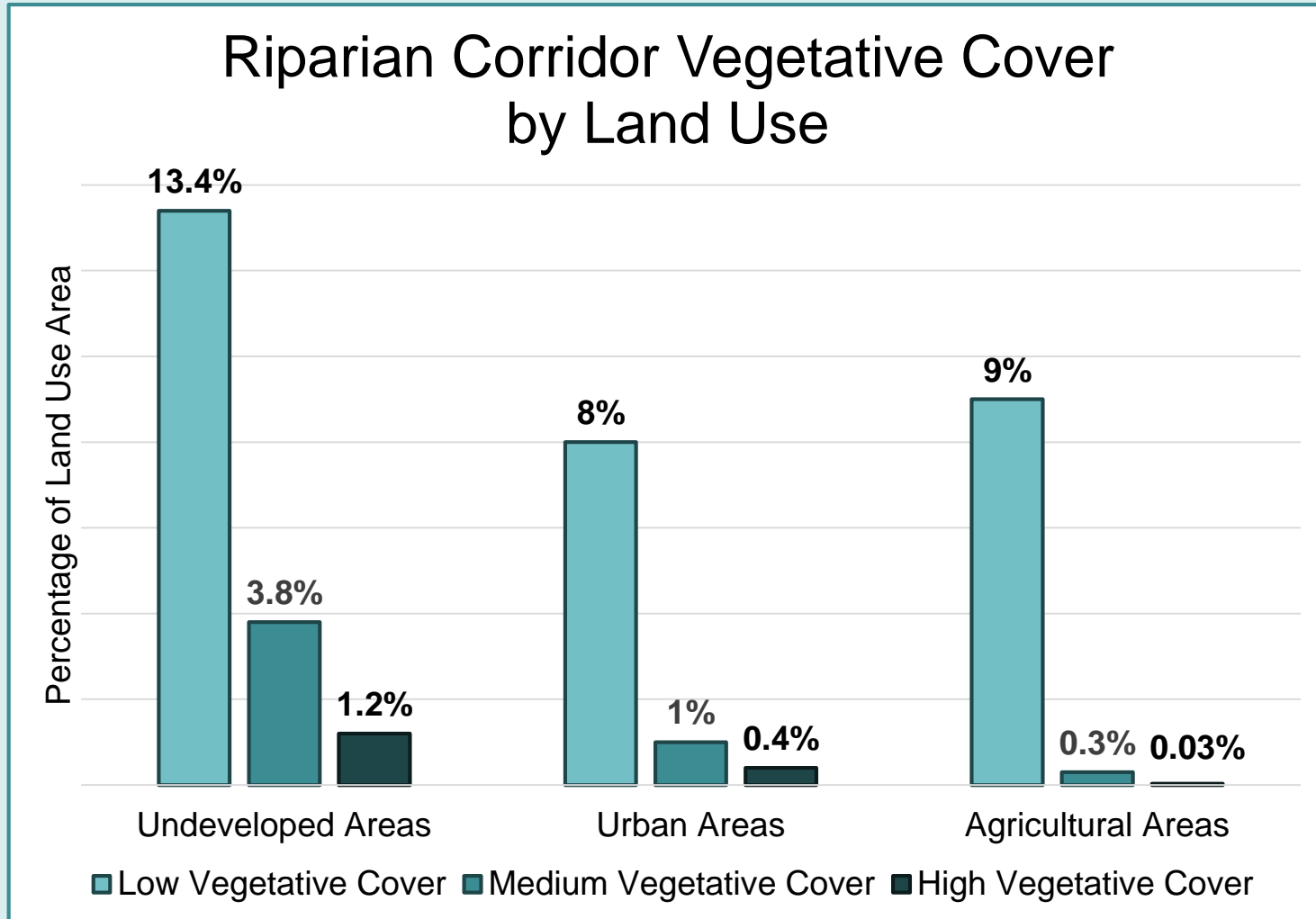
Riparian Nutrient and Sediment Removal Efficiencies

(Buffer Width)

Buffer Width (ft)	Vegetation Type	Nitrogen Removal	Sediment Removal
15	Grass	5%	60%
30	Grass	25%	75%
60	Trees	74%	90%
75	Grass / Trees	75%	95%
100	Grass / Trees	80%	98%

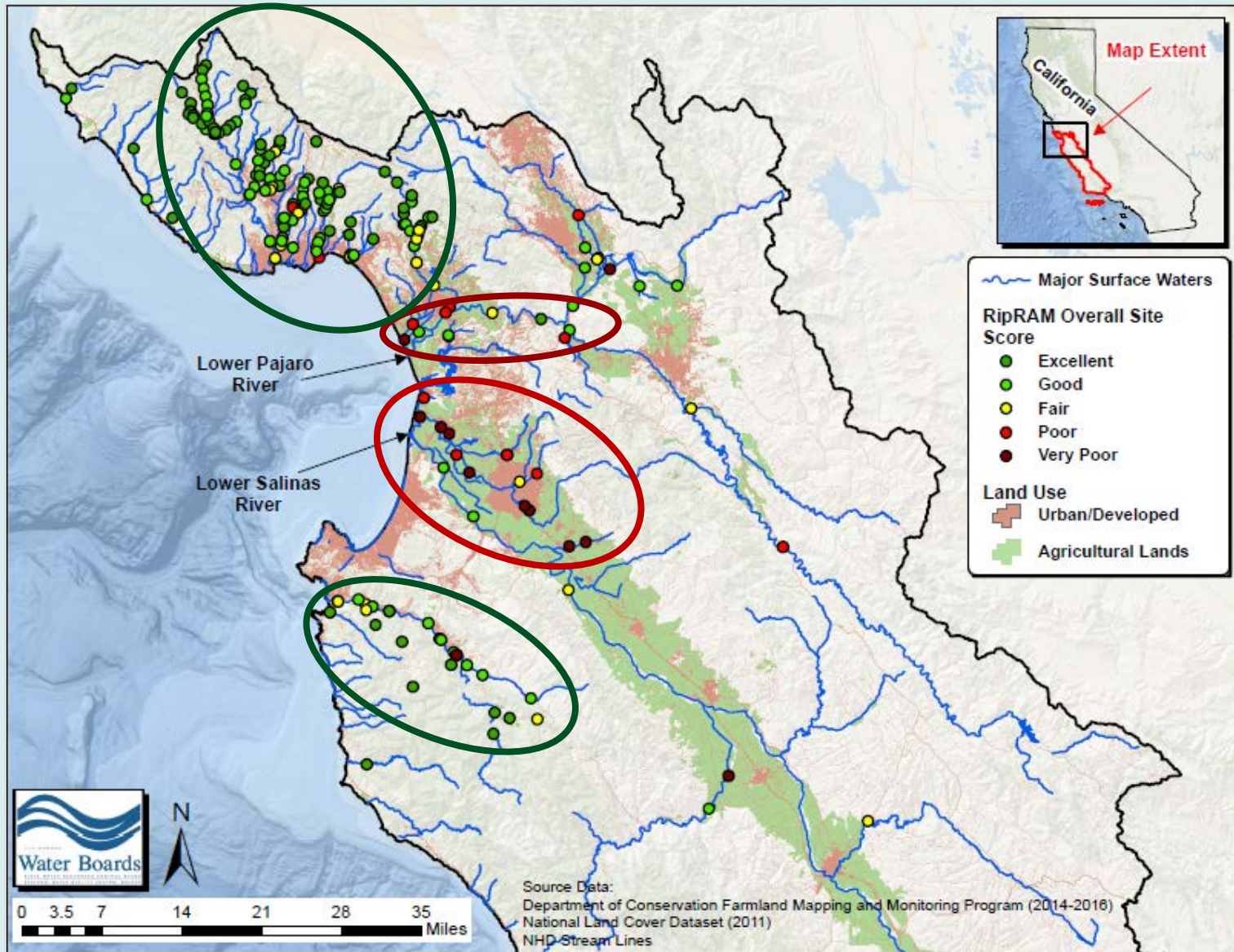
Lowrance, et al (1995), Magette et al (1989), Peterjohn & Correll (1984)

Riparian Cover Spatial Extent (Central Coast Region)



California Department of Forestry and Fire Protection. Riparian cover dataset (2010); California Department of Fish and Wildlife, Map Services Webpage. Accessed February 2018. NAIP_2016_CIR: Color infrared (CIR) / false color imagery; National Land Cover Dataset (2011); California Department of Conservation, Land Use Mapping (2014)

Riparian Rapid Assessment Method



Urban Areas Healthy Riparian Habitat

Diverse and mature riparian canopy (shade)



Carpinteria Creek



Soquel Creek

Urban Areas

Degraded Riparian Habitat

Concrete-lined channel



Franklin Creek

Minimal vegetation



San Lorenzo River

Agricultural Areas Healthy Riparian Habitat

Diverse and mature riparian canopy (shade)



Corralitos Creek



San Antonio Creek

Agricultural Areas Degraded Riparian Habitat

Minimal Buffers and Vegetation, Bank Erosion



Orcutt Creek



Old Salinas River

Impacts to Riparian and Wetland Habitat

- Encroachment
- Ditches, dikes, dams, and levees
- Herbicide and pesticide applications
- Riparian vegetation removal and ongoing management
- Groundwater withdrawals



Efforts to Improve Riparian and Wetland Habitat

- Salinas River Stream Maintenance Plan
- Individual Grower Efforts
- Grant Funded Restoration Projects



Conclusions

Riparian and Wetland Habitat

- Benefits
 - Water quality protection
 - Reduce water quality impacts
- Conditions are degraded
- Developing options for Ag Order 4.0



Questions ?

