

# Waste Discharges and Surface Water Quality in Agricultural Areas

Item 4

March 23, 2018

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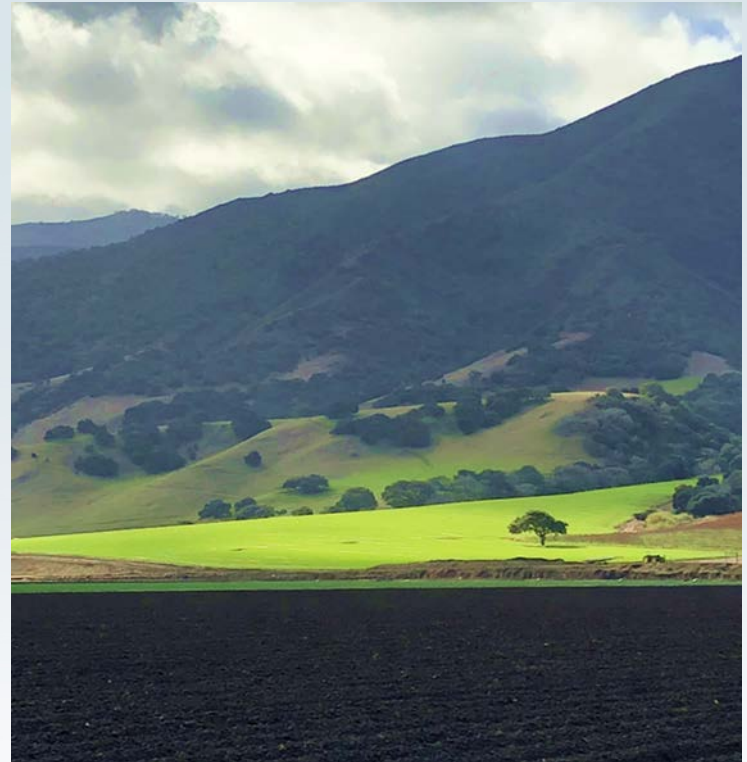
*Senior Environmental Scientist*



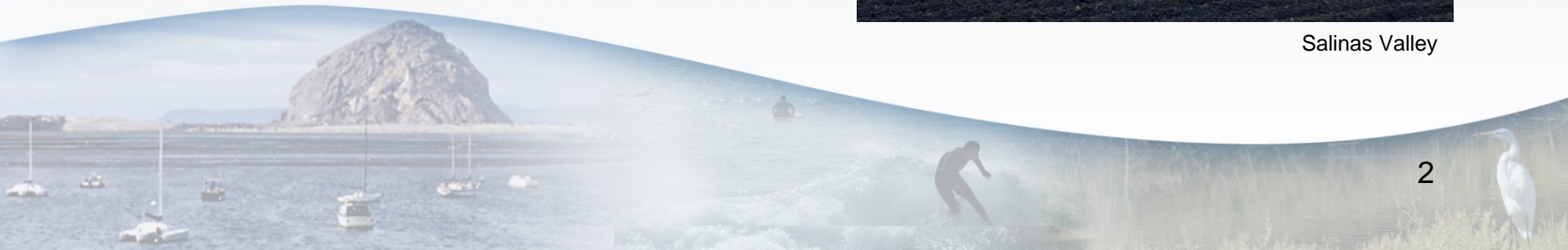
# Summary

## Agricultural Areas

- Waste Discharges
- Degradation
- Impairments
- Trends
- Conclusion
- Next Steps



Salinas Valley





# Waste Discharges to Surface Water

## Agricultural Areas

- Irrigation
- Tile Drain
- Stormwater \*



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\* Not highlighted in this presentation

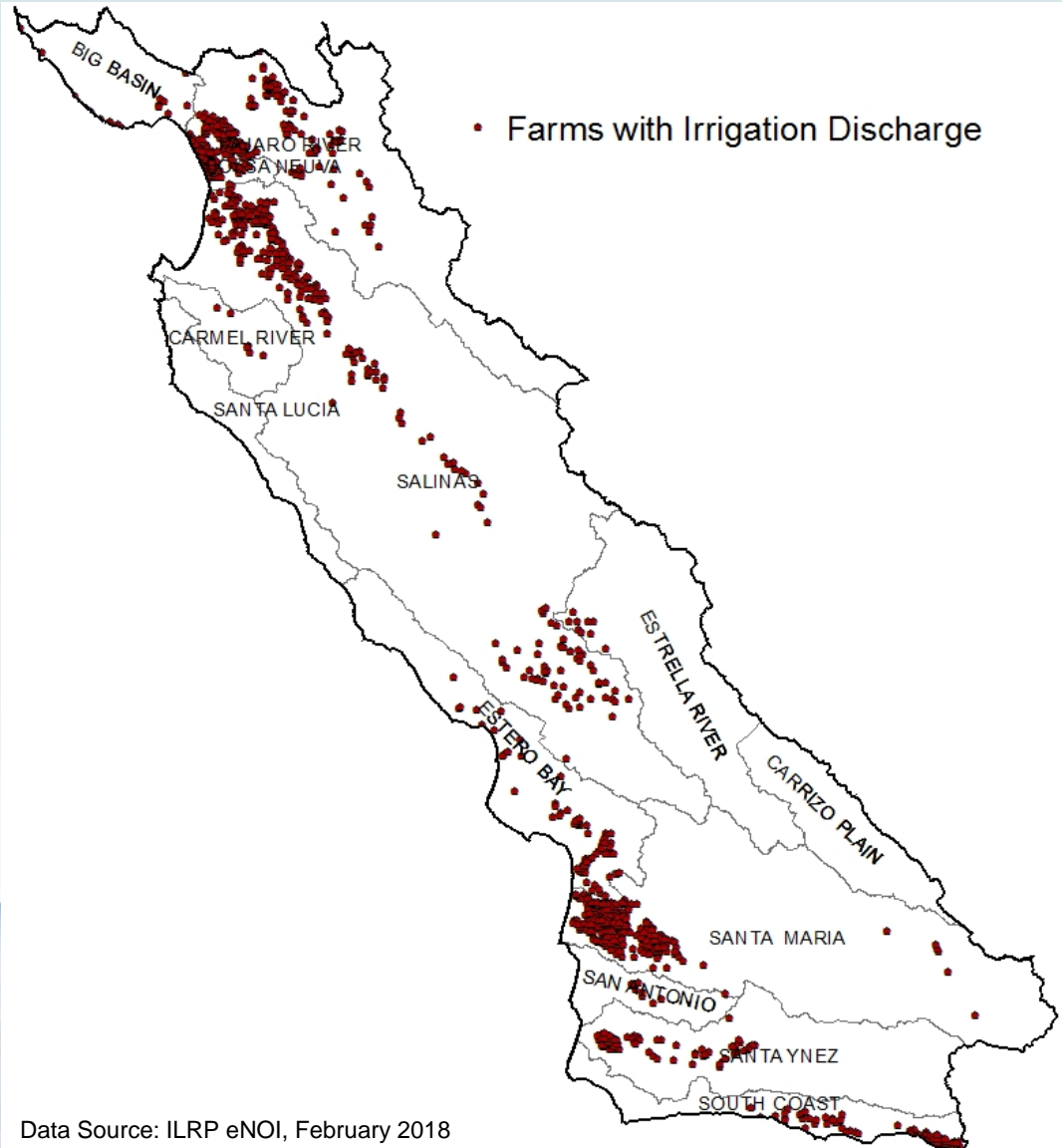
# Waste Discharges to Surface Water

## Irrigation Water

Irrigation discharge can degrade water quality.

- Pesticides
- Toxicity
- Nutrients
- Sediments

29% of farms report irrigation discharge



Data Source: ILRP eNOI, February 2018

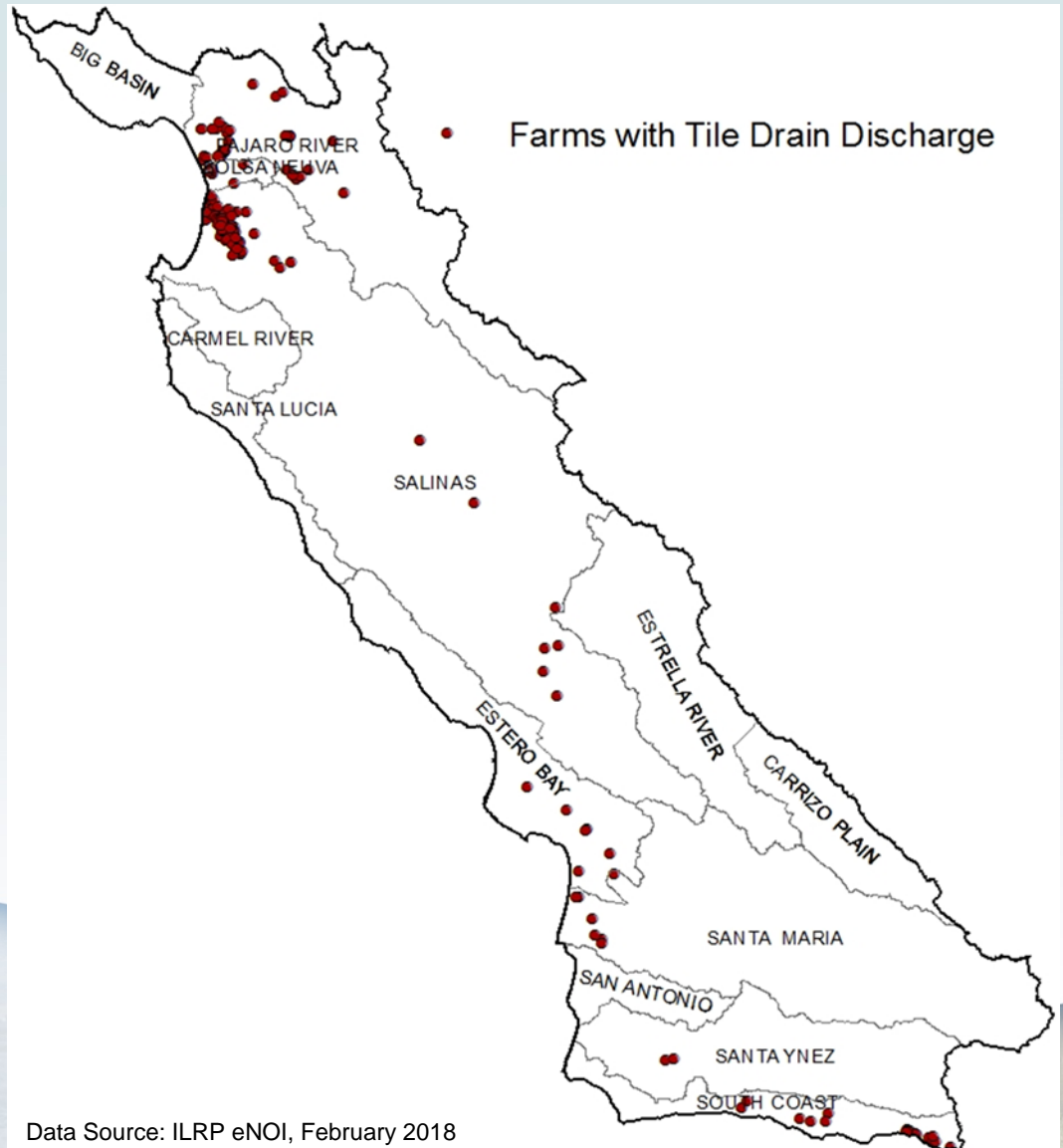
# Waste Discharge to Surface Water

## Tile Drain Water

Tile drain discharge can degrade water quality.

- Pesticides
- Toxicity
- Nutrients
- Sediments

5% of farms report tile drain discharge



Data Source: ILRP eNOI, February 2018

# Surface Water Quality Degradation

## Agricultural Areas

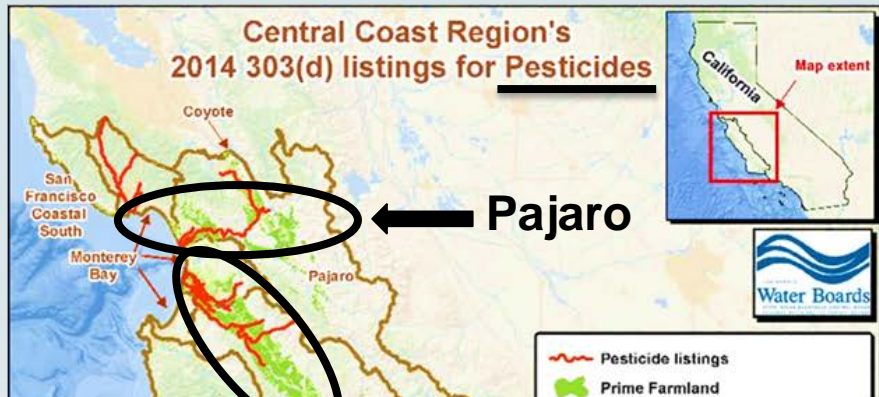
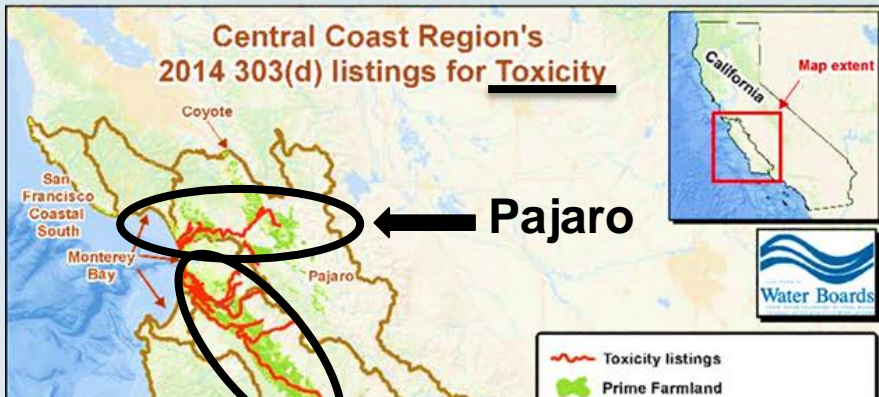
- Pesticides
- Toxicity
- Nutrients
- Sediments and Turbidity
- Riparian and Wetland Habitat





# Surface Water Quality Impairments

## Agricultural Areas



### Water Quality Objective for Toxicity

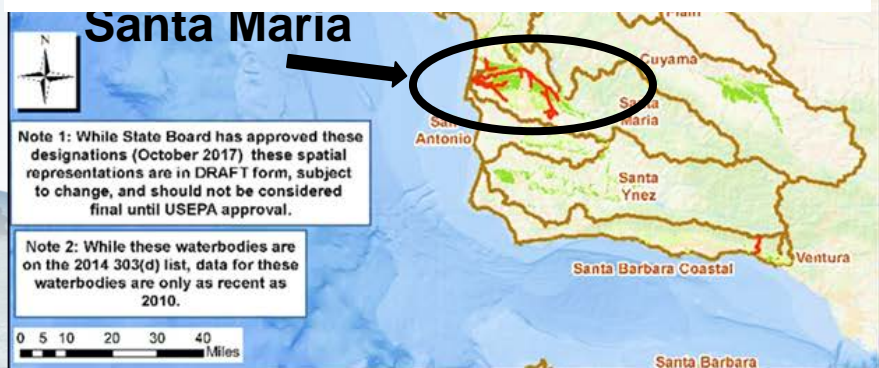
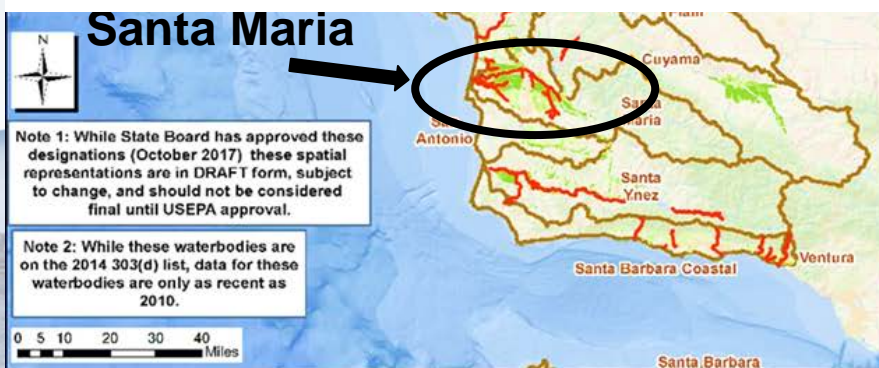
All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal or aquatic life.

**Not achieved in many agricultural areas.**

### Water Quality Objective for Pesticides

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life.

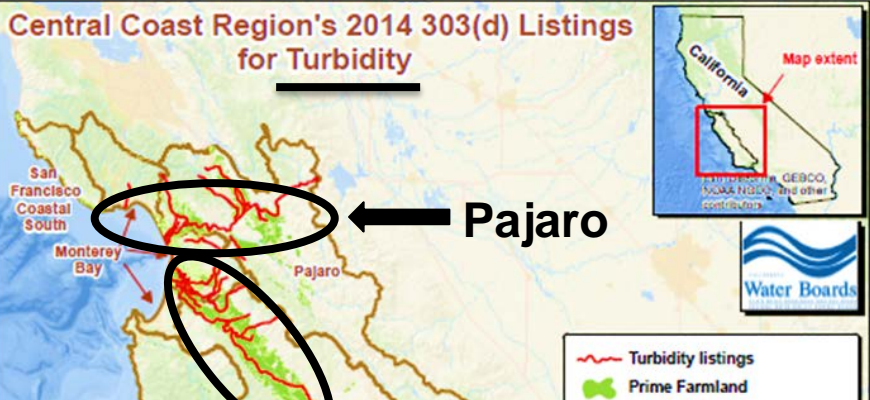
**Not achieved in many agricultural areas.**





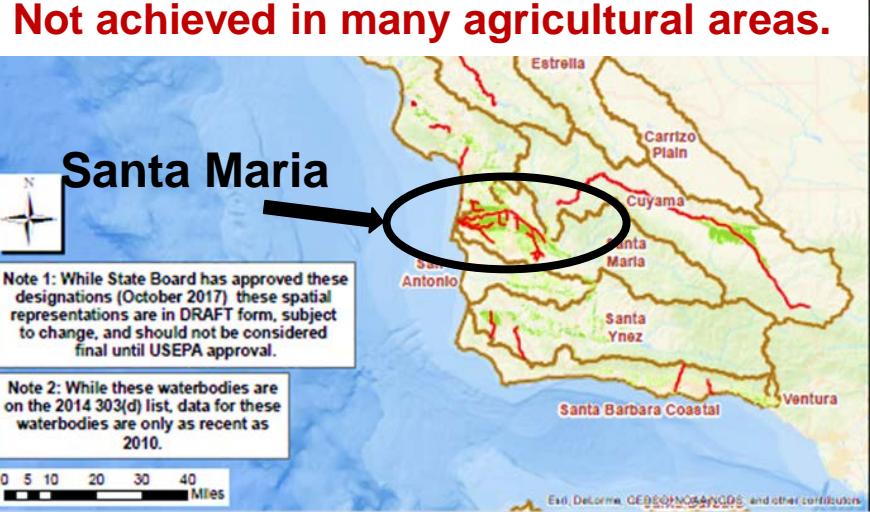
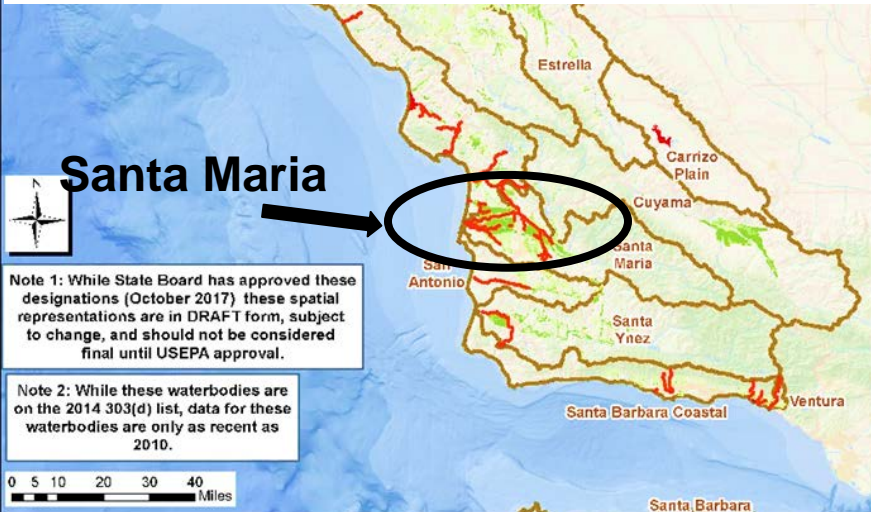
# Surface Water Quality Impairments

## Agricultural Areas



**Water Quality Objective for Nitrate**  
 Drinking Water / Human Health  
 10 mg/L as Nitrate, as Nitrogen  
**Not achieved in many agricultural areas.**

**Water Quality Objective for Turbidity**  
 Waters shall be free of changes in turbidity  
 that cause nuisance or adversely affect  
 beneficial uses.  
**Not achieved in many agricultural areas.**

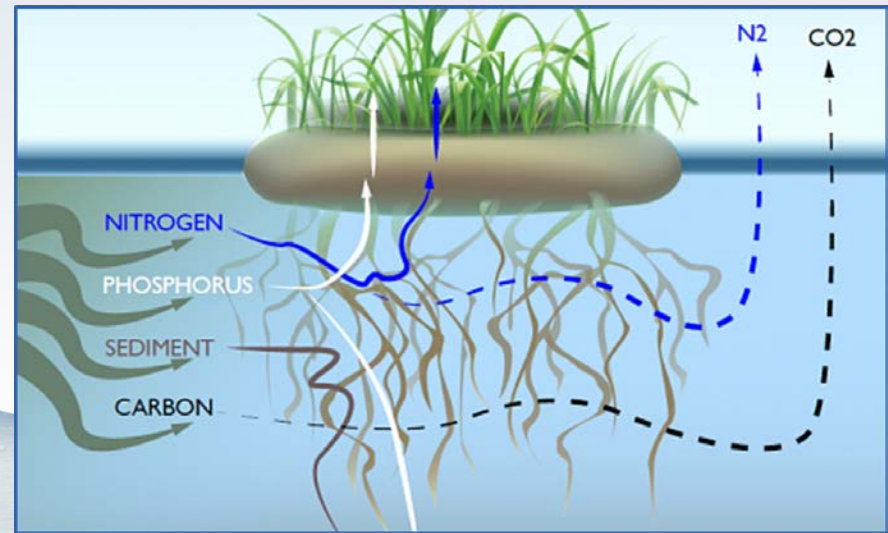
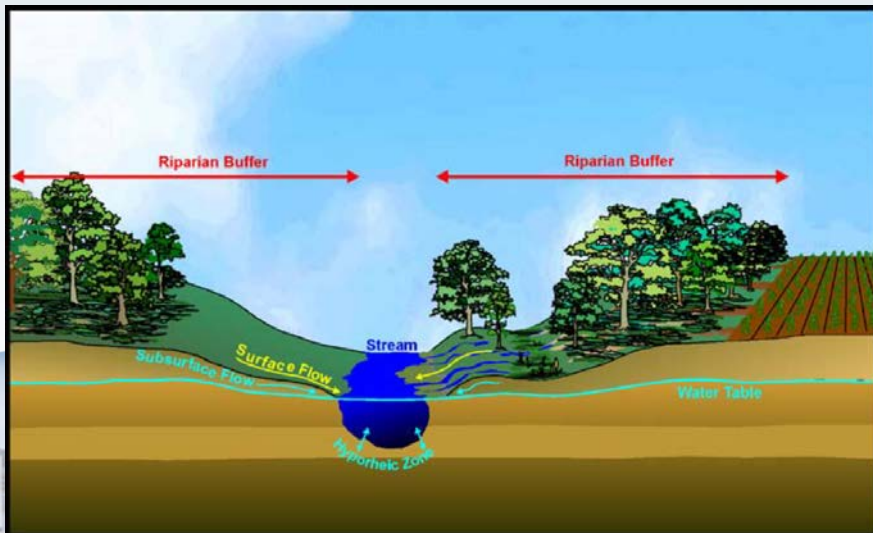




# Riparian and Wetland Habitat

## Agricultural Areas

- Benefits
  - Water quality protection
  - Reduce water quality impacts
- Conditions are degraded



# Surface Water Quality Trends

## Agricultural Areas

- Single parameter may show a positive trend at a few monitoring sites
- Single parameter does not indicate overall improvement in water quality conditions
- Many parameters still do not meet water quality objectives





# Conclusion

## Agricultural Areas

- Waste discharges degrade water quality
- Many impairments
- Some trends for single parameters
- Overall water quality conditions are not improving



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- Continue to identify and develop options
- Address water quality impacts of waste discharges from irrigated lands





# Thank you for your time

**Any comments ?**

**Any questions ?**

