

TMDLs for Sediment Toxicity and Pyrethroid Pesticides in the Lower Salinas River Watershed

Kickoff Meeting January 22, 2015

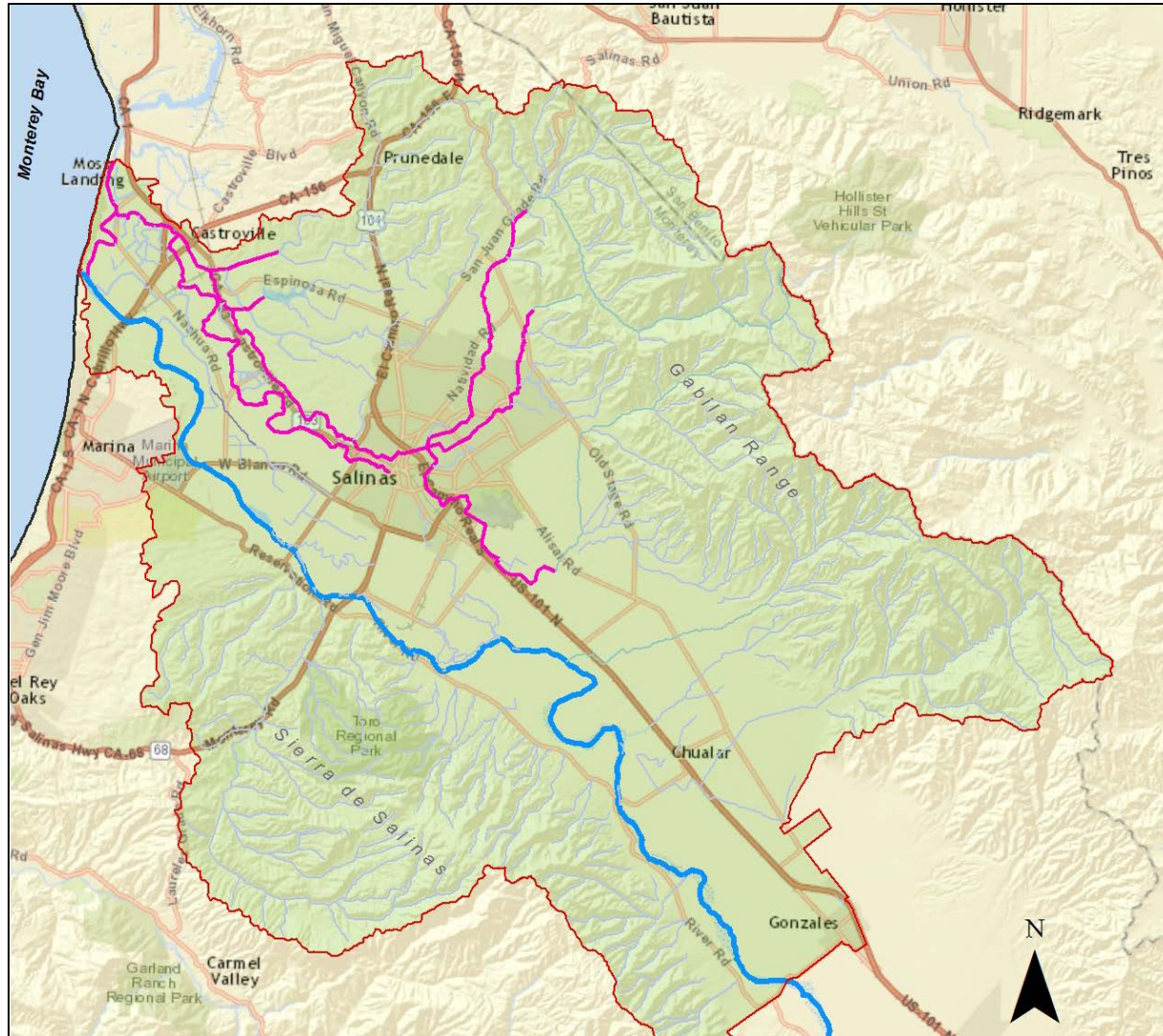


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Overview of Presentation

- Background
- Sediment toxicity impairments
- Pyrethroid impairments
- TMDL process/stakeholder involvement
- Questions and comments

Project Area



Purpose of the TMDL Project

Water quality planning project to address impaired waters on the Clean Water Act 303(d) list

Impaired Water: *A waterbody not meeting water quality standards or may be threatened in the future...*

Water Quality Objective

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.

Water Quality Objective

Pesticides

No individual pesticide or combination of pesticides shall reach concentrations that adversely affect beneficial uses.

Sediment Toxicity Impairment

- Exceedance of General Objective for toxicity set to protect aquatic life beneficial uses
- Sediment toxicity test - *Hyalella azteca*, % survival after 10 days
- 303(d) List



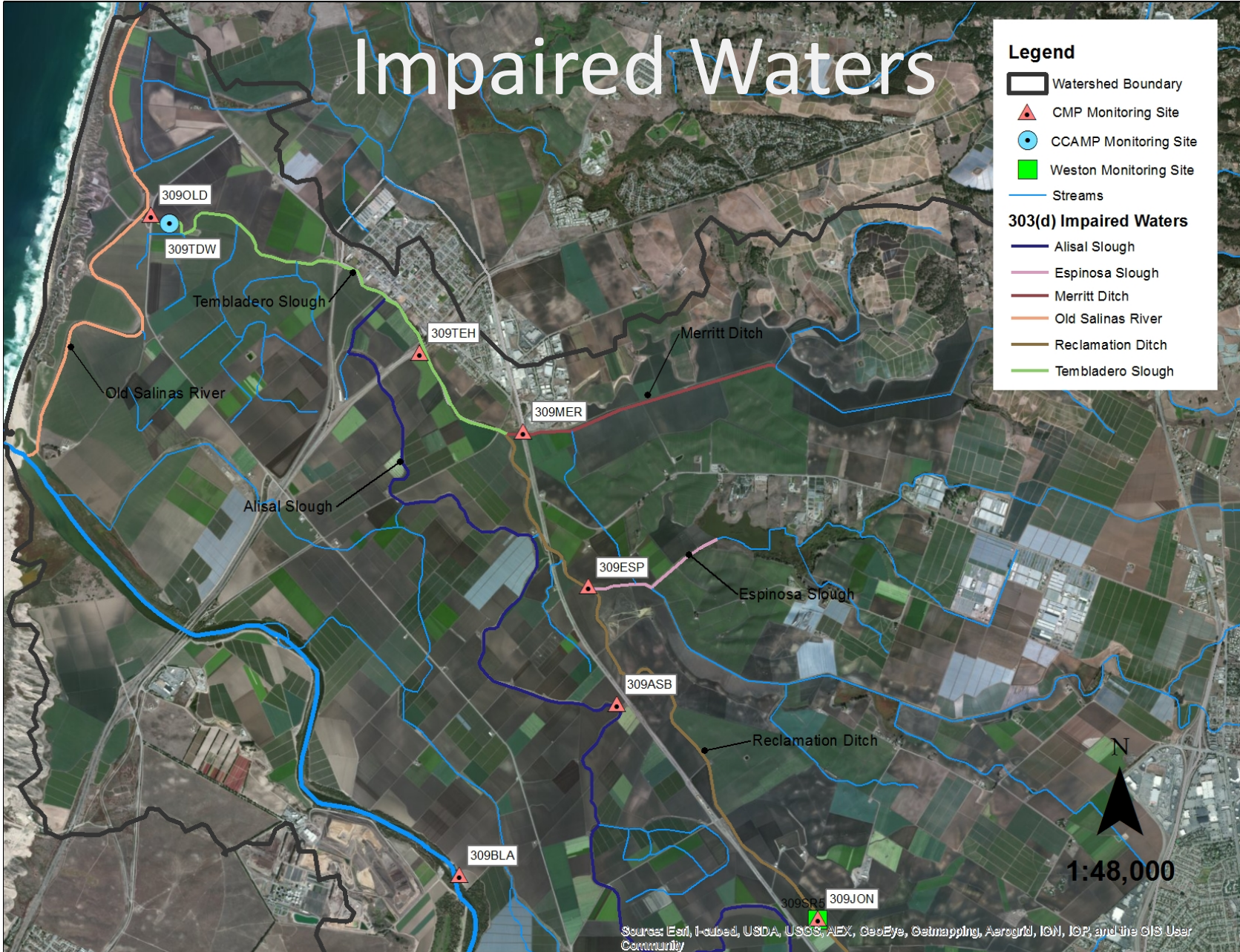
Impaired Waters

Legend

- Watershed Boundary
- CMP Monitoring Site
- CCAMP Monitoring Site
- Weston Monitoring Site
- Streams

303(d) Impaired Waters

- Alisal Slough
- Espinosa Slough
- Merritt Ditch
- Old Salinas River
- Reclamation Ditch
- Tembladero Slough

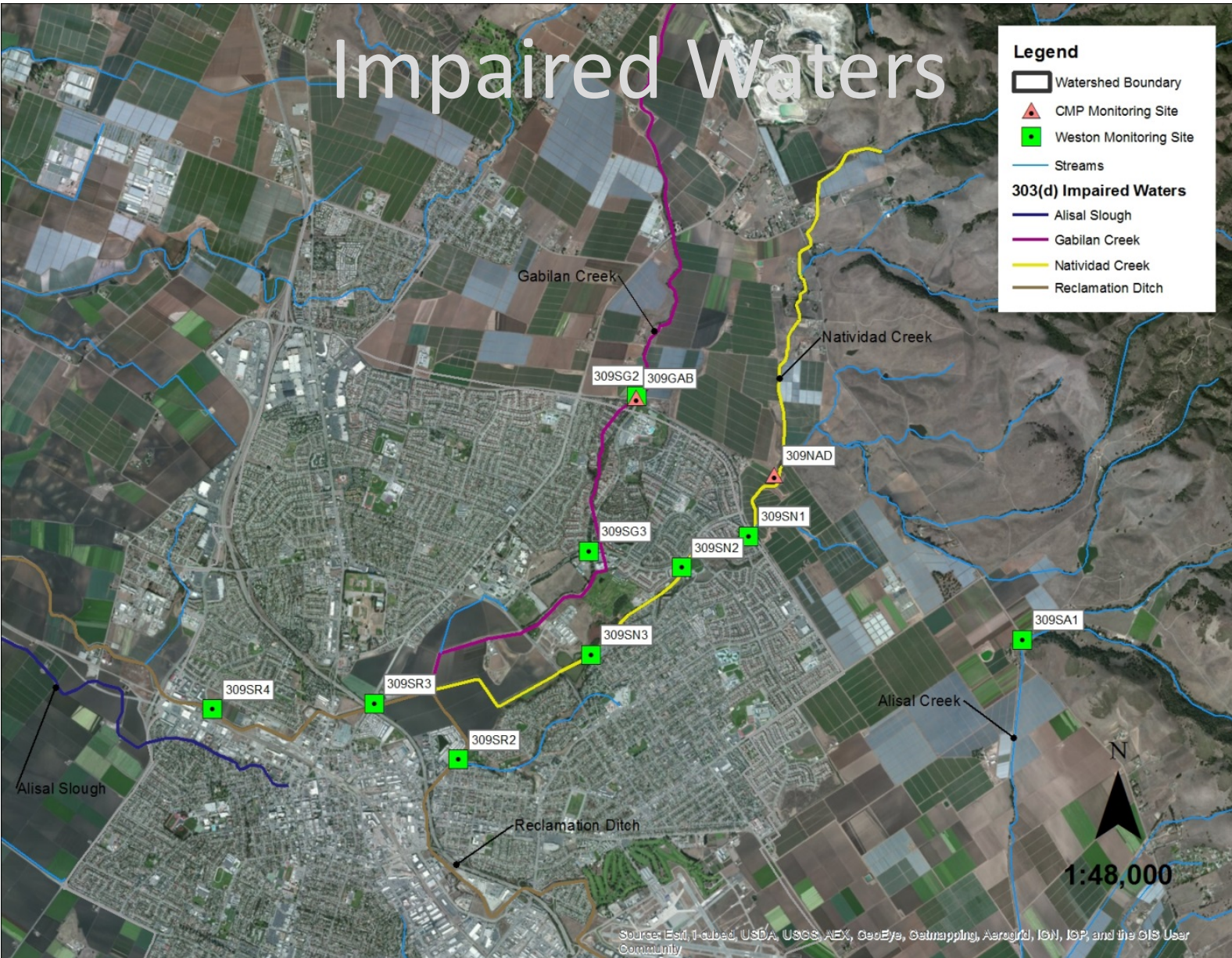


Source: Esri, i-cubed, USDA, USGS, AEX, GeoEye, Geomapping, AeroGRID, IGN, IGP, and the GIS User Community

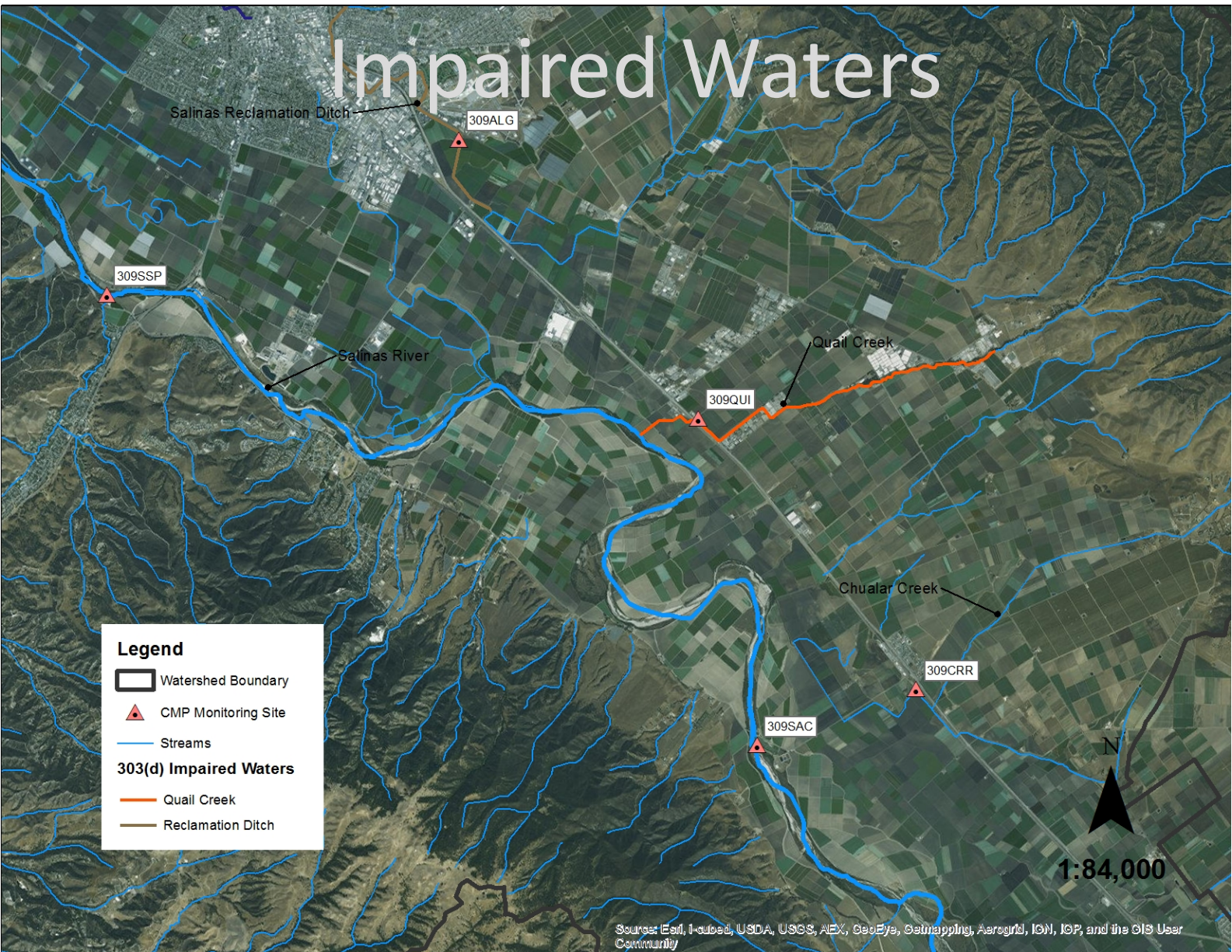
Impaired Waters

Legend

- Watershed Boundary
- CMP Monitoring Site
- Weston Monitoring Site
- Streams
- 303(d) Impaired Waters**
 - Alisal Slough
 - Gabilan Creek
 - Natividad Creek
 - Reclamation Ditch



Impaired Waters



Legend

- Watershed Boundary
- CMP Monitoring Site
- Streams
- 303(d) Impaired Waters**
 - Quail Creek
 - Reclamation Ditch

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Source: Esri, Intellicast, USDA, USGS, AEX, GeoEye, Geomapping, AeroGRID, IGN, IOP, and the GIS User Community

	Sediment Toxicity Monitoring Data					
	303(d) List		Additional Monitoring		Total	
Waterbody Name	Exc.	Samples	Exc.	Samples	Exc.	Samples
Alisal Creek	1	2	1	1	2	3
Alisal Slough	2	3	1	6	3	9
Blanco Drain	0	2	2	7	2	9
Chualar Creek			5	9	5	9
Espinosa Slough	2	2	6	6	8	8
Gabilan Creek	4	5	2	2	6	7
Merrit Ditch	2	2	5	6	7	8
Natividad Creek	5	5	6	6	11	11
Old Salinas River	7	8	3	3	10	11
Quail Creek	2	2	9	9	11	11
Reclamation Canal	8	9	15	16	23	25
Salinas River (Lower)	1	5	2	21	3	26
Tembladero Slough	3	3	17	19	20	22
Totals	37	48	74	111	111	159

Pyrethroid Impairments

- Watershed Studies
- Statewide studies
- Toxicity Unit Analysis

Toxicity Units

$$\text{Pyrethriod TUs} = \frac{\text{actual concentration (OC)}}{\text{known LC50 concentration values (OC)}}$$

Site ID	Waterbody	Toxicity	Toxicity Units (TU)			
			Organo-chlorine	Pyrethroids	Chlorpyrifos	Total
309ALG	Reclamation Canal	Yes	0.04	7.89	1.82	9.74
309ASB	Alisal Slough	No	0.02	1.02	0.47	1.51
309BLA	Blanco Drain	No	0.03	0.77	0.49	1.29
309CRR	Chualar Creek	Yes	0.01	0.00	0.33	0.34
309ESP	Espinosa Slough	Yes	0.01	5.24	0.57	5.82
309JON	Reclamation Canal	Yes	0.03	20.64	1.72	22.39
309MER	Merrit Ditch	Yes	0.00	2.54	0.42	2.97
309NAD	Natividad Creek	Yes	0.00	2.03	0.00	2.03
309OLD	Old Salinas River	Yes	0.01	4.48	0.25	4.74
309QUI	Quail Creek	Yes	0.06	11.30	2.19	13.55
309TEH	Tembladero Slough	Yes	0.03	3.67	0.61	4.31

TMDL Technical Report

- Data Analysis
- Numeric Targets
- Source Analysis
- TMDLs
- Allocations
- Implementation and Monitoring

TMDL Approval Process

- Central Coast Water Board Meeting
 - Staff Report
 - Technical Report
 - CEQA
 - Public Comments
- State Board Hearing
 - Public Comments
- Office of Administrative Law
 - Admin Record
- USEPA

CEQA

- CEQA meeting
- Substitute environmental documentation
 - TMDL Technical Report
 - Environmental Checklist and Analysis

Timeline (tentative)...

- CEQA Scoping Meeting – March 2015
- Draft TMDL report - Summer 2015
- Final Draft TMDL for Public Review & Comment – Fall 2015
- Water Board Meeting –Fall / Winter 2015-16

Questions and Comments

Communication and Outreach

- Sign-up on email subscription list
- TMDL website
- TMDL meetings
- Contact me directly

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