Update on the Conditional Waiver for Irrigated Lands

Alison Jones, Staff Environmental Scientist

Central Coast Water Board

In the Central Coast we have:

- 438,000 acres of irrigated agriculture
- Impaired waters associated with ag
- A 2-year-old conditional waiver program
  - 1600 individually enrolled operations (and growing)
  - Industry-led regionwide monitoring

TMDL Listings with Irrigated Agriculture as one of the Possible Pollutant Sources
TMDL Listings
Pajaro Valley
Pajaro River
Llagas Creek
Elkhorn Slough
San Benito River
Salinas River
Salinas Valley
Paso Robles
Morro Bay
San Luis Obispo
San Luis Obispo Creek
Santa Maria River
Santa Maria
San Antonio Creek
Santa Ynez River
Carpinteria Marsh
Santa Barbara
Central Coast Waterboard
Agricultural Activity
and
TMDL Listings
(e.g Sediment, Nutrients, Pesticides, Pathogens)
N
Miles
0 4.5 9 18 27 36

Waiver Conditions

(Adopted July 4, 2004)

Farm Plan

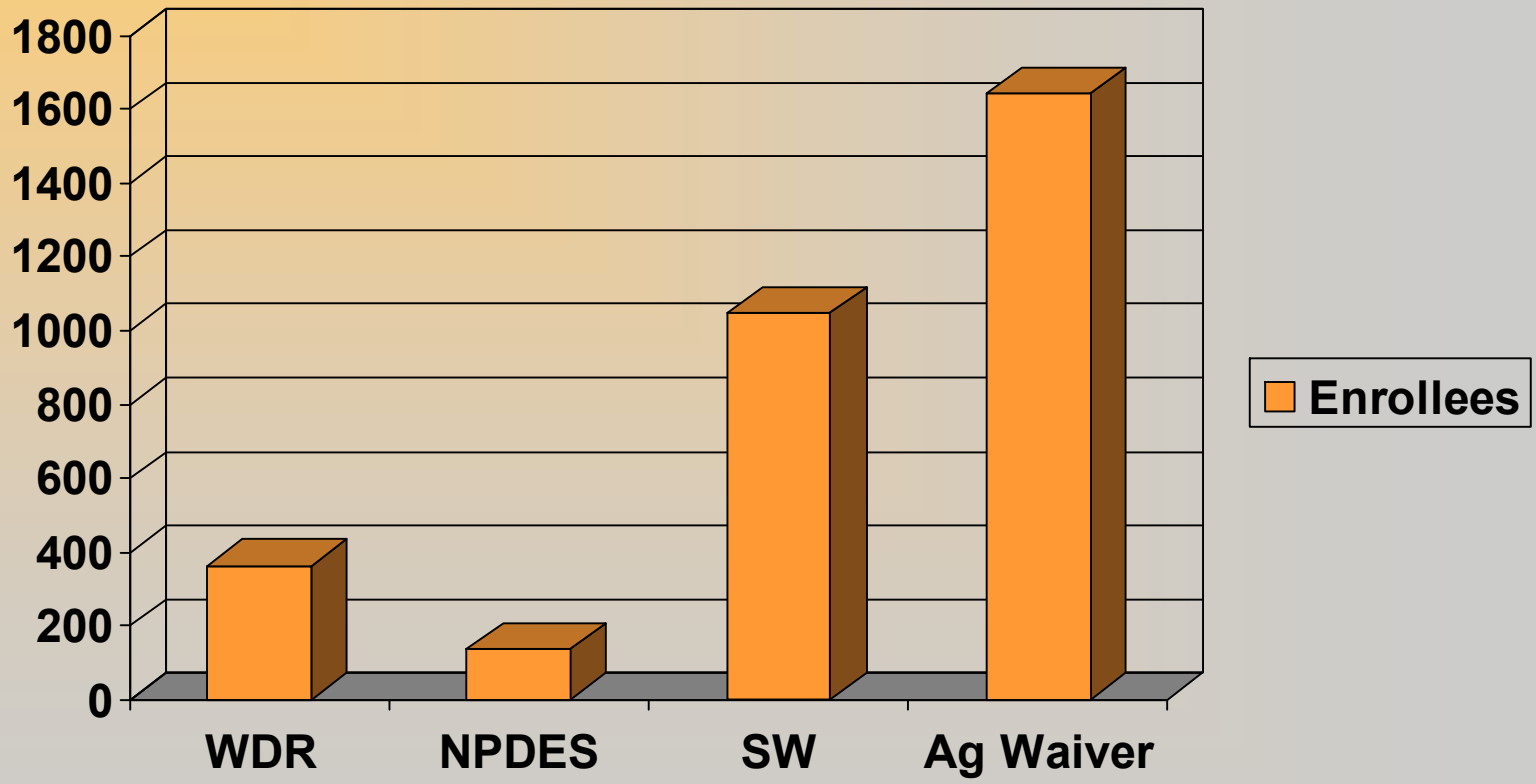
Education

Monitoring

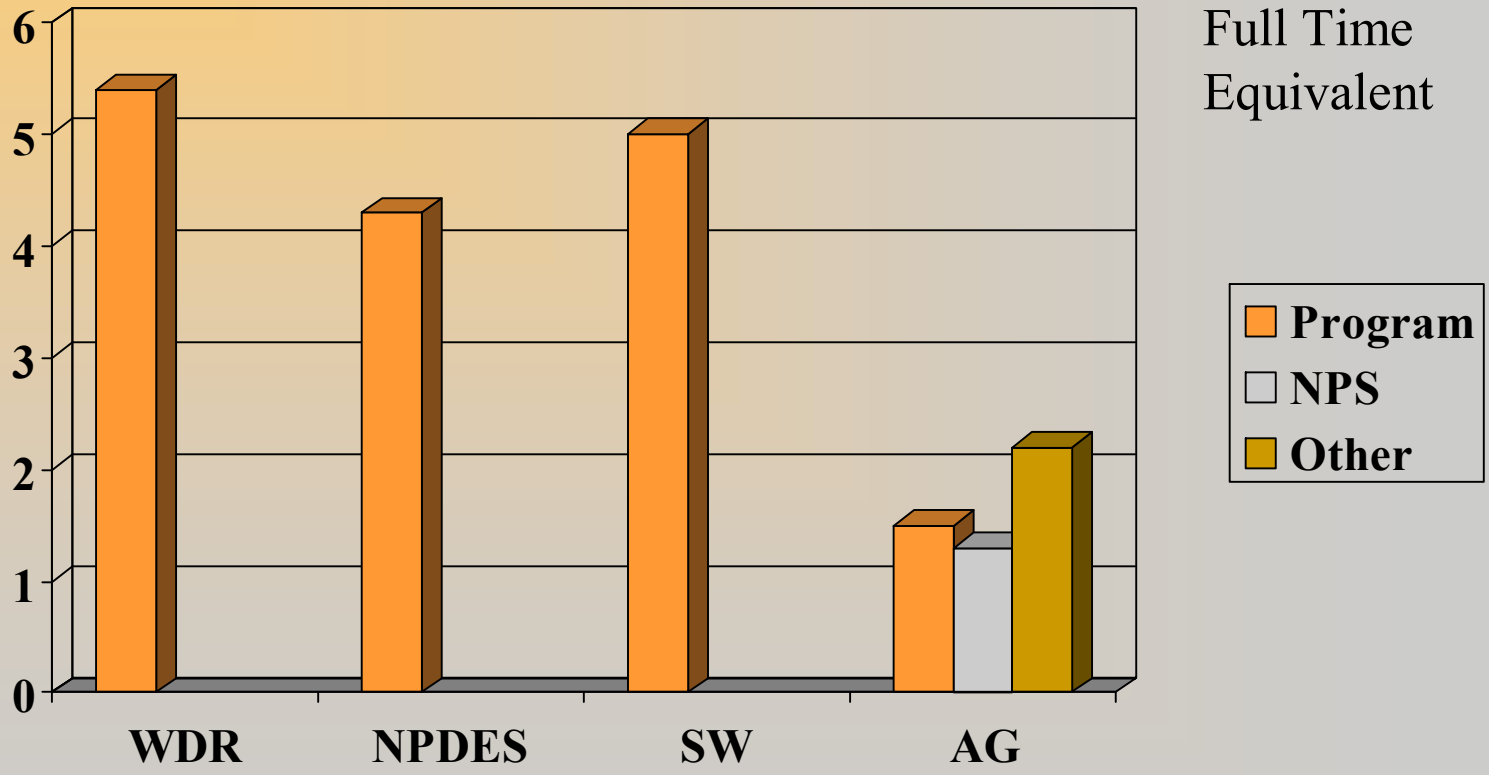
Implementation of Management Practices

Other key components:
individual enrollment,
management practice reporting

CC Water Board Programs



Program Staffing (PYs)



Board Ag Staff

Staff Person	**Lead Assignment**
Alison Jones	Program Management
Peter Meertens	Data Management
Jill Wilson	Inspections and Enforcement
Amanda Bern	Monitoring Program
Corinne Huckaby	Education and Outreach
Elaine Sahl	Grant Management
Bethany Crews	Enrollment, filing
Jeremy Farr	Enrollment, filing

Enrollment Totals

Region	**Irrigated Acres**	**Enrolled Acres**	**Percent Enrolled**
Central Coast	438,320	380,338	87%

Tier 1 Waiver

- Good for 5 years
- 15 Hours Education
- Complete Farm Plan
- 1 checklist update
- Monitoring

Tier 2 Waiver

- Good for 1 year
- 5 hrs education / yr
- Incomplete Farm Plan
- Report every year
- Monitoring

As soon as growers meet conditions for Tier 1 they may update their information

Tiers

TIER	NUMBER	PERCENT OF ENROLLEES	ACRES	PERCENT OF ACRES
Tier 1 (ed and plan)	728	46%	300,520	79%
Tier 2	846	54%	79,817	21%

Priority Activities

- Non-filers/enforcement actions
- Inspections (late summer)
- Monitoring data analysis, follow-up
- Database modifications
- January 1, 2007 management practice updates

Some Challenges

- Collecting and managing information
  - Asking the right questions
  - Coordinating with Ag Comm, CCWQP
- Integrating water quality data and management practices
  - Research
  - Outreach

Monitoring:
The Big Artichoke

Industry-led Cooperative Monitoring

- 50 sites in waterbodies with:
  - Ag related TMDLs
  - Elevated groundwater nitrate levels
- 25% of monitoring budget for follow-up to solve problems
- Electronic reporting

Structured for Compatibility

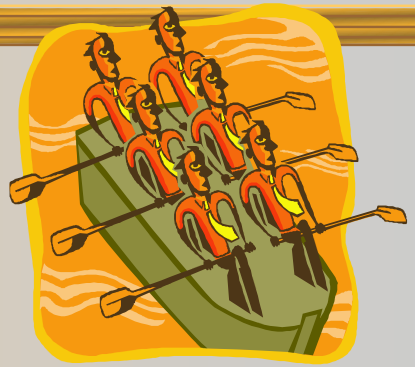
- With CCAMP
- With municipal stormwater permits
- With SWAMP

Electronic Reporting

- Web-based data checker
- Format will port into SWAMP
- Format will port into CCAMP web site generator

www.ccamp.org

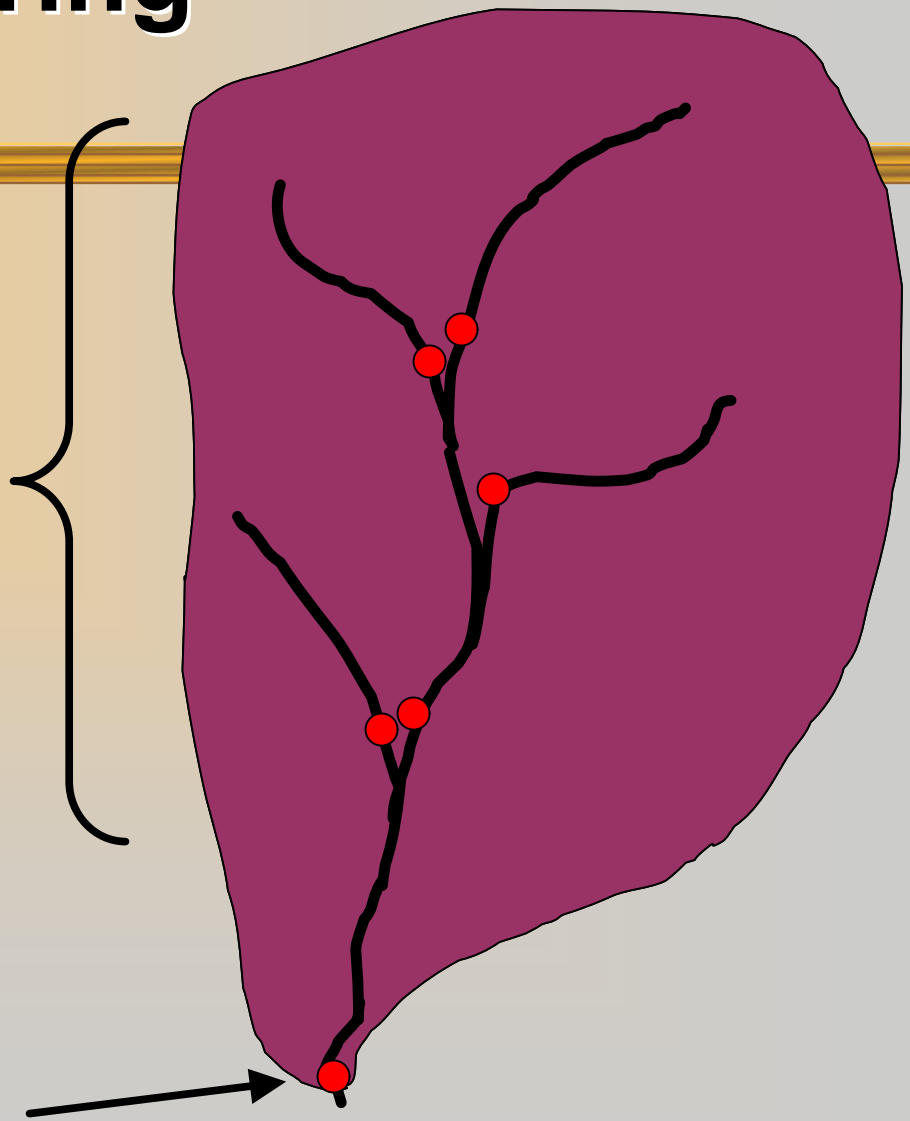
Cooperative Monitoring Program



- Phase I – 25 sites in 2005
  - Monthly conventional
  - Water toxicity (4 times)
  - Sediment toxicity (1 time)
  - Benthic invertebrate assessment (1 time)
- Phase II – 50 sites in 2006
- Phase I follow-up in 2006

Basic Monitoring Approach

Follow-up to detect source areas



Long term site

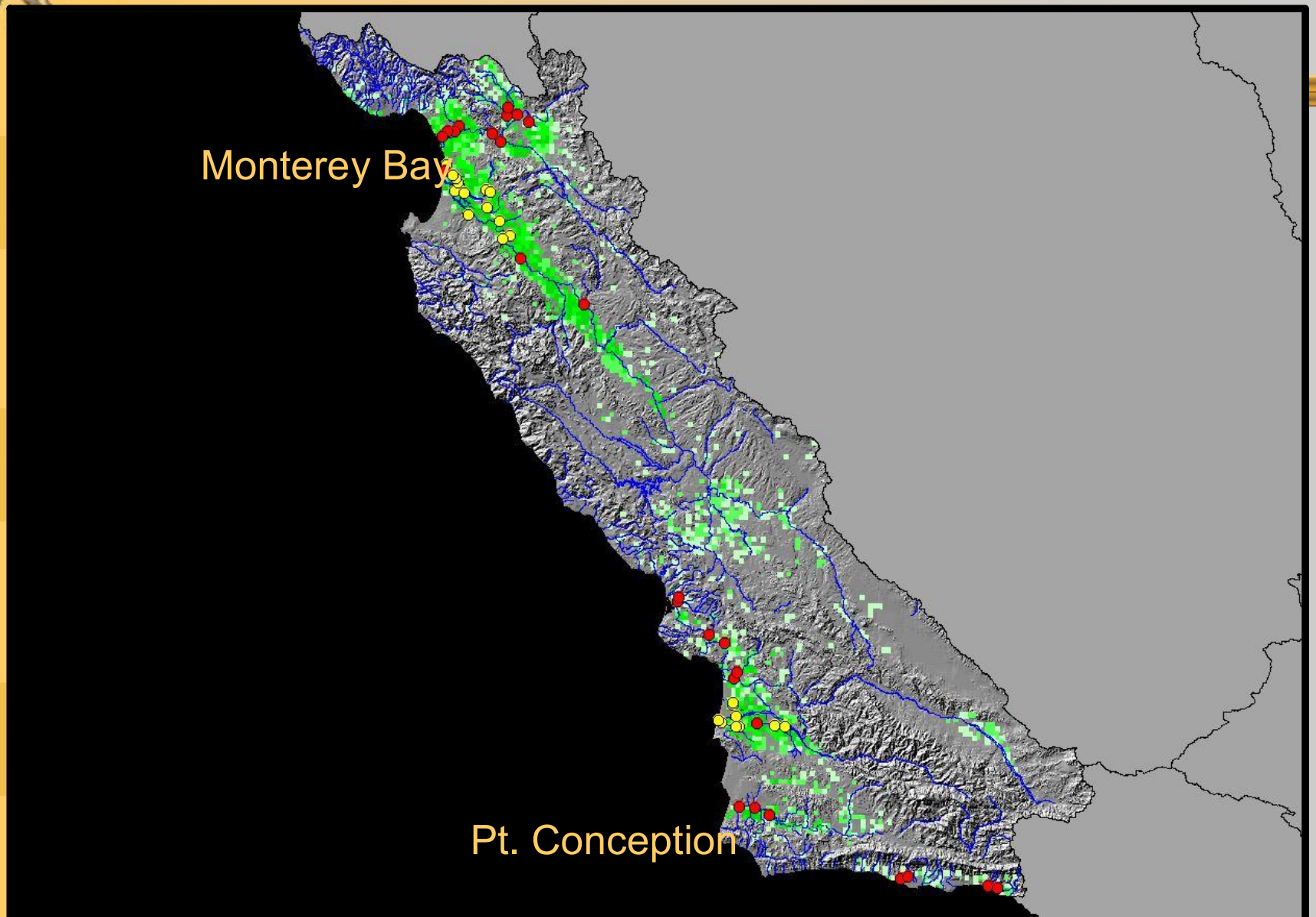
CMP Objectives

- Assess water quality in ag areas
- ID problems associated with ag activities
- Conduct focused monitoring as needed (Follow-up)
- Provide feedback to growers
- Track change over time

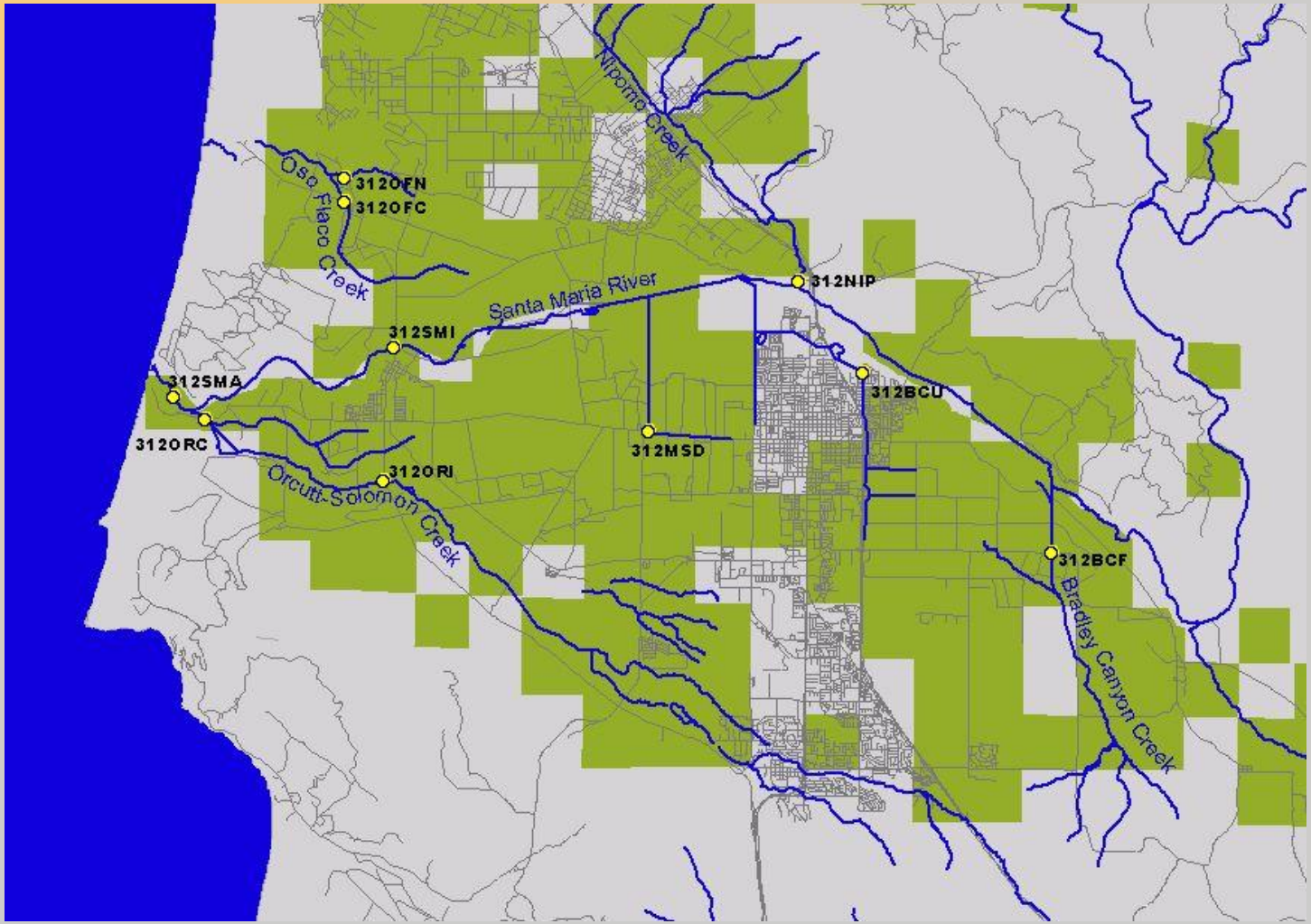
CCWQP Accomplishments

- Formed non-profit
- Applied for and received Prop 40 and Prop 50 grants
- Completed first billing
- Completed first year monitoring
- Submitted Phase I electronic data to Regional Board
- Submitted draft Phase I follow-up plan

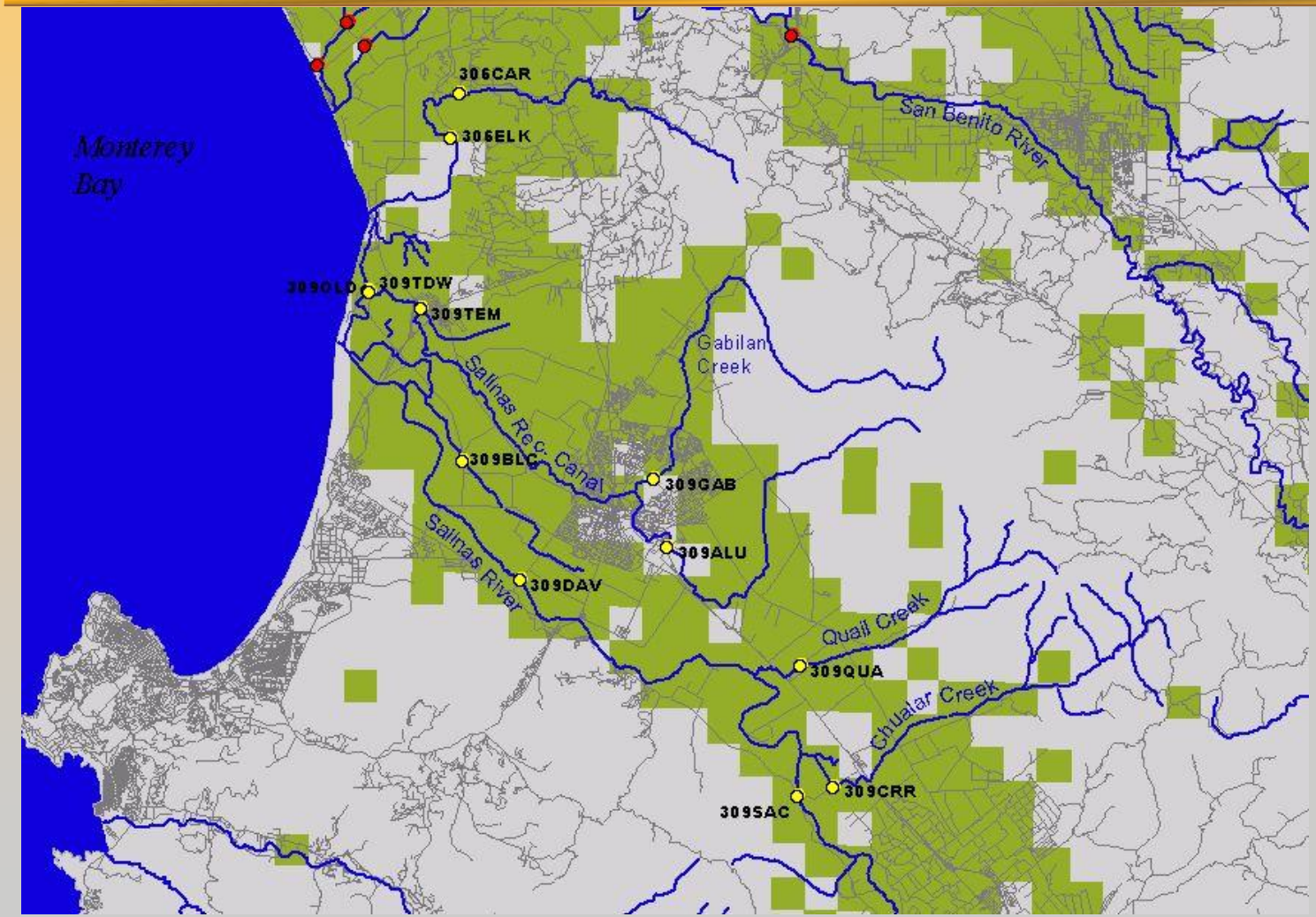
Phase 1 (yellow) and Phase 2 (red) Monitoring Sites



Phase I Santa Maria Sites



Phase I Lower Salinas Sites

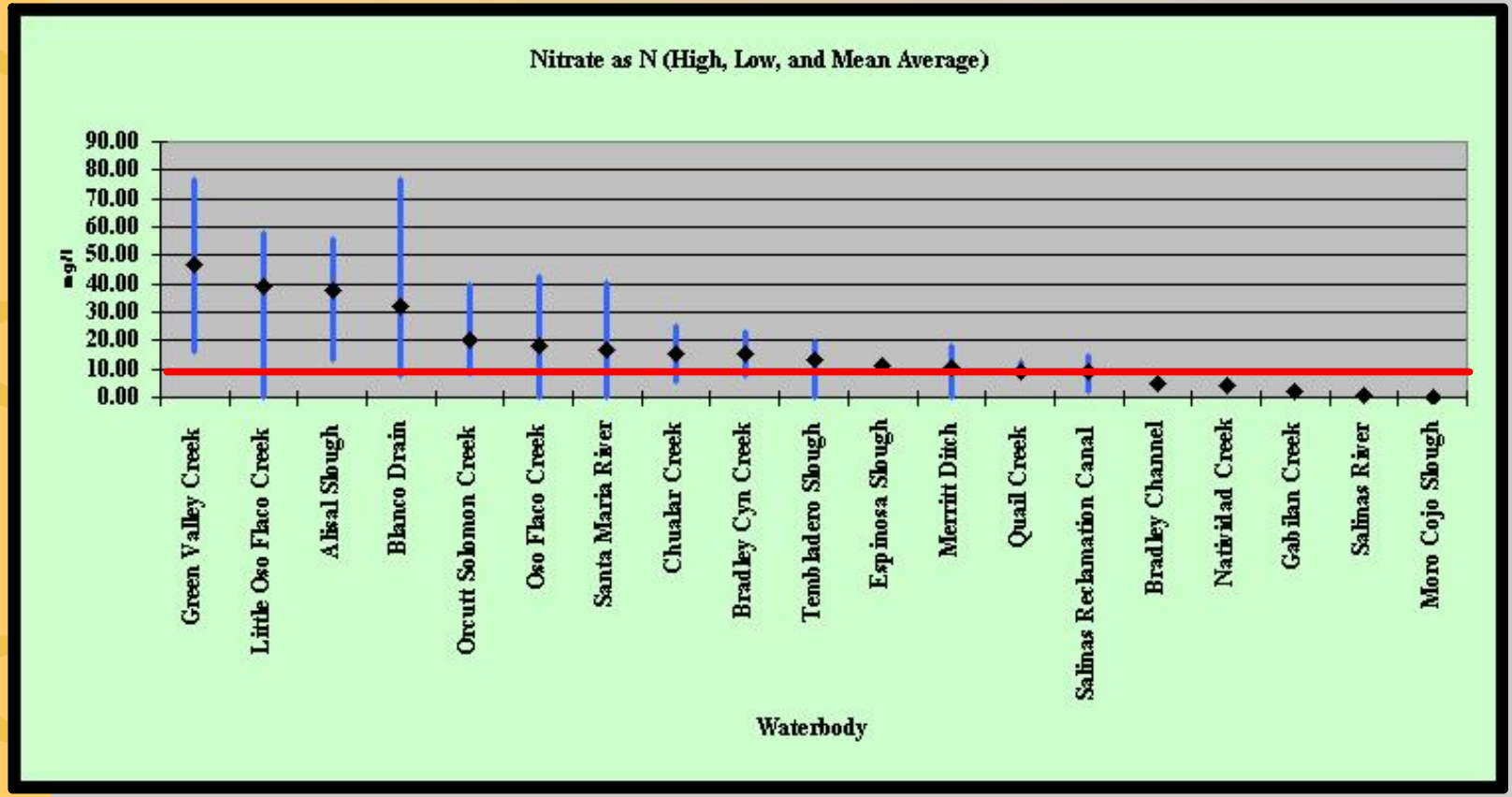


Phase I Findings

- About half of Phase I sites exceeded nitrate standard
- Many samples showed toxicity to test organisms

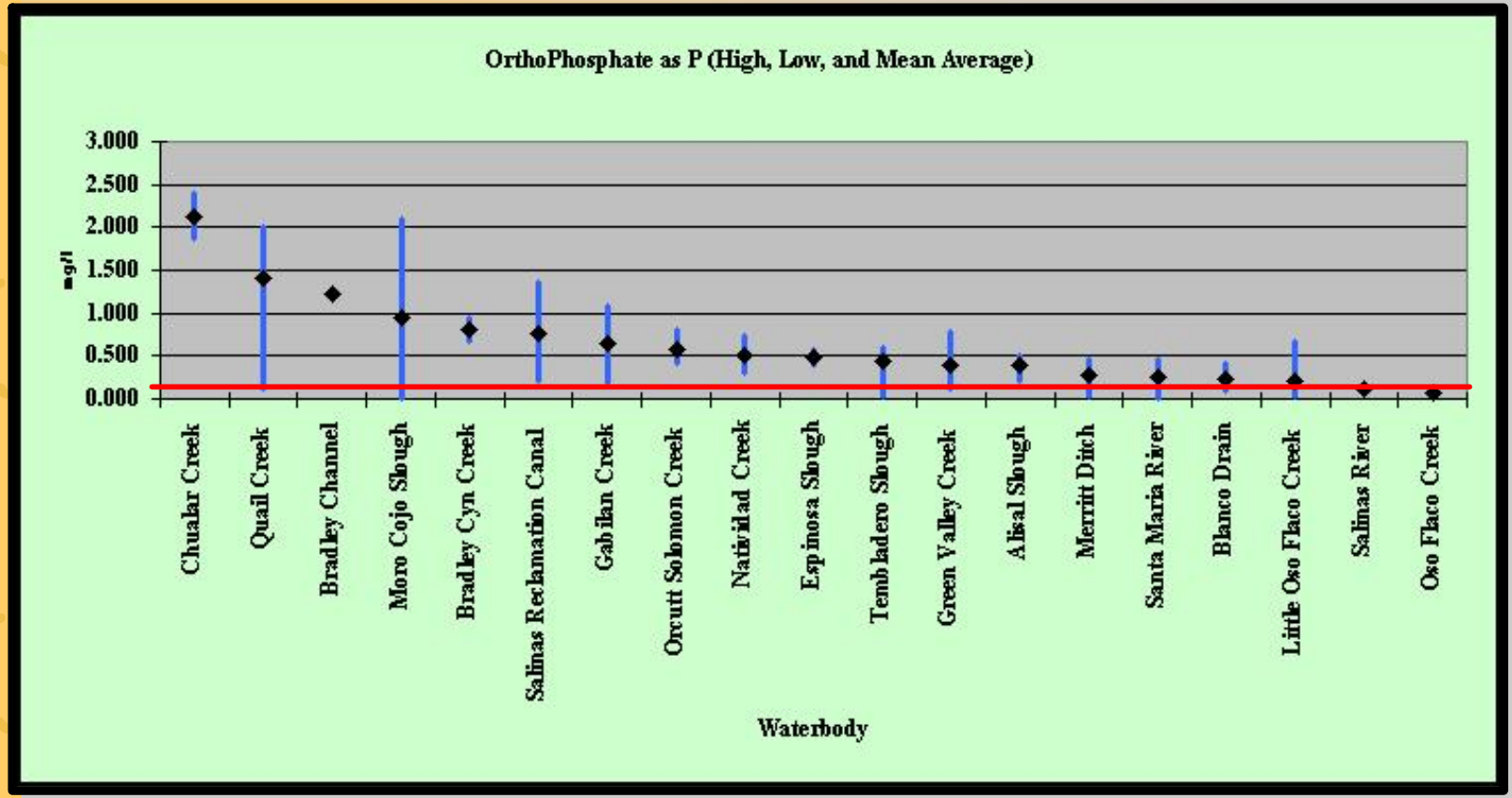
Nitrate (mg/L as N)

Mean and range by waterbody



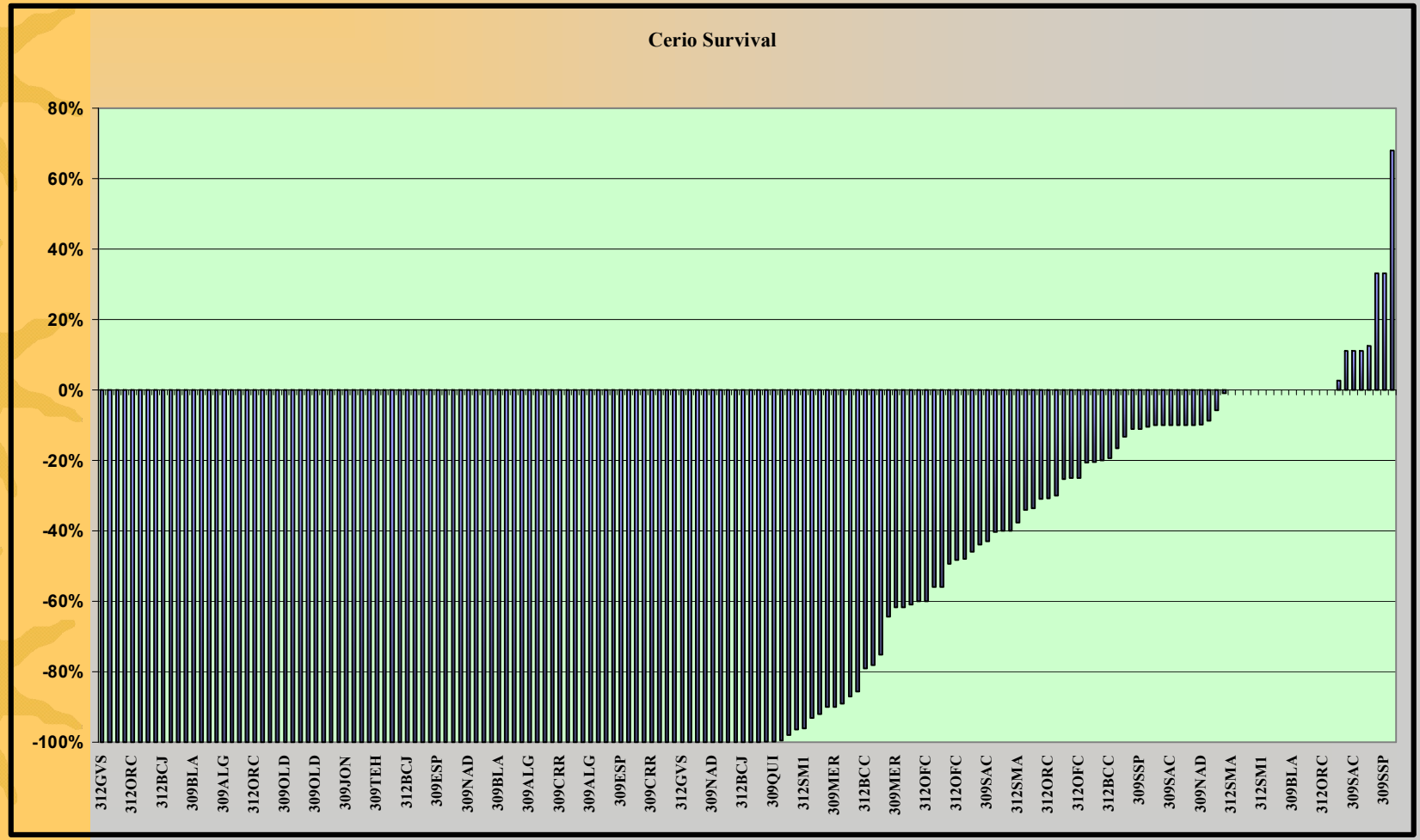
Orthophosphate (mg/L as P)

Mean and range by waterbody



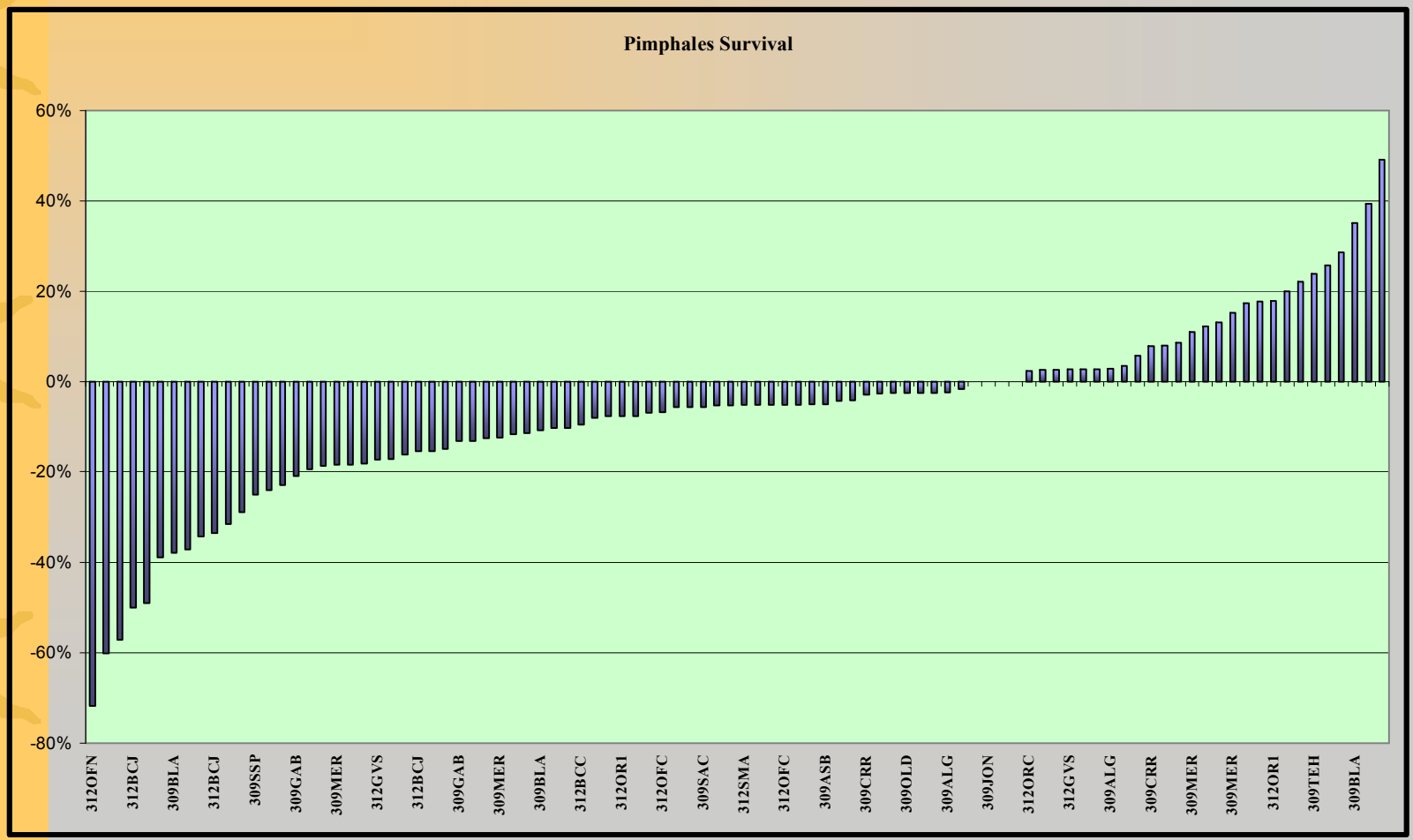
Water Flea Survival

(relative percent difference from control)



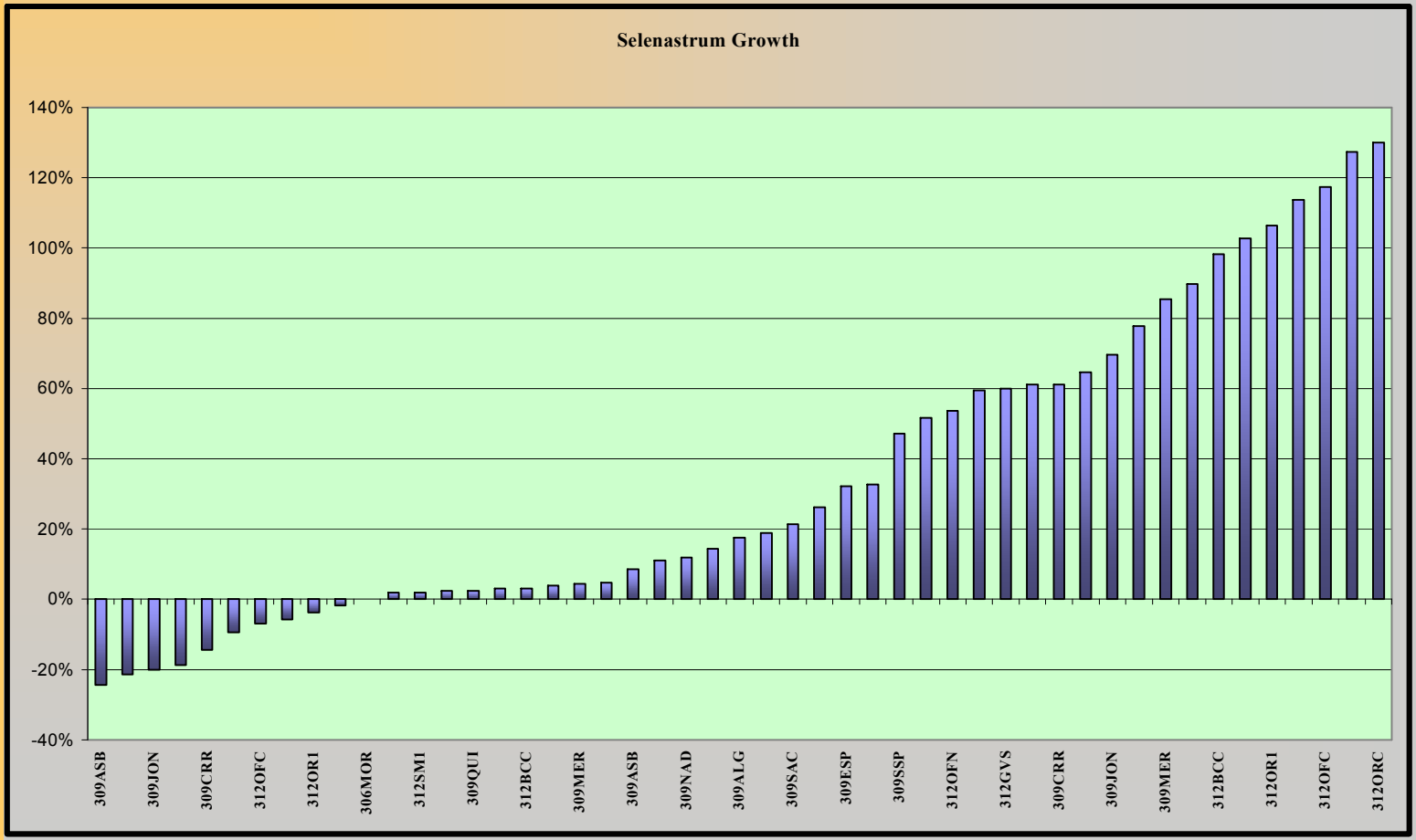
Fathead Minnow Survival

(relative percent difference from control)



Algae Growth

(relative percent difference from control)



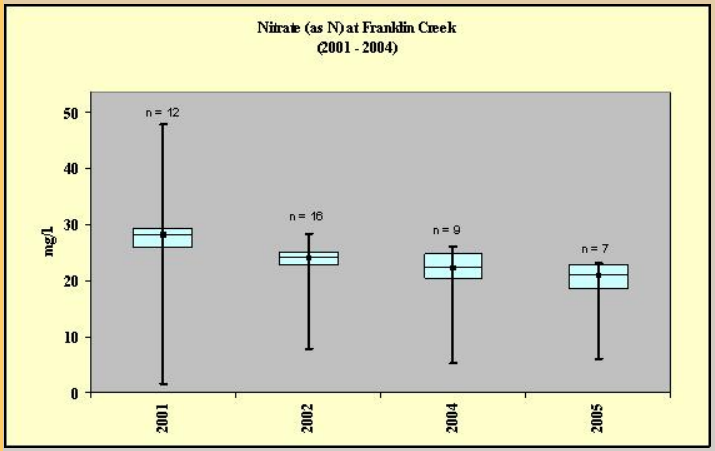
Phase I Follow Up

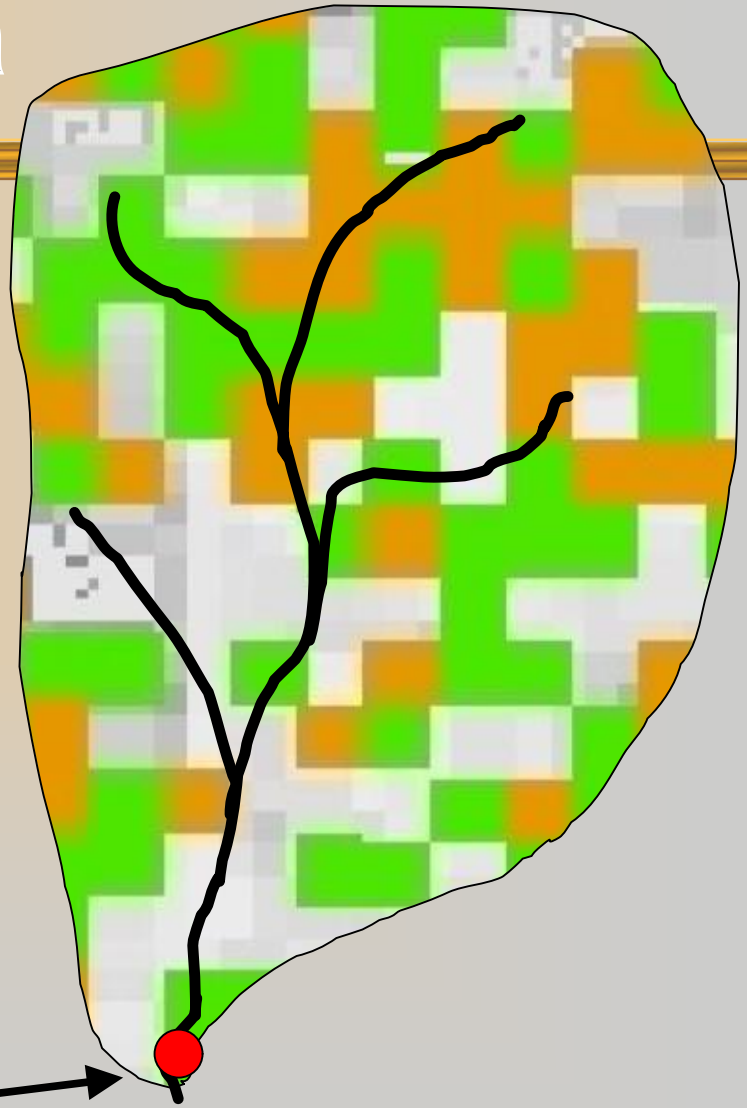
- Test all Phase I sites for organophosphate pesticides
- Work with technical assistance agencies to set up education and training
- Review management practices
- Conduct outreach
- Revise practices based on recommendations

Where will we go next?

- Geographic linkage of sub-watersheds and monitoring sites
  - Water quality trends
  - Practice implementation
  - Pesticide use data
  - Outreach

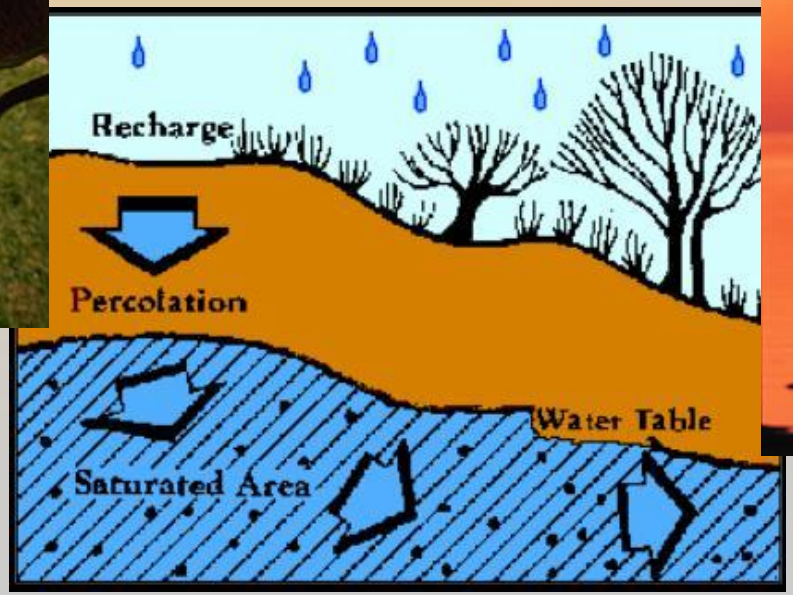
Linking land use to monitoring data





Long term site

Clean Water



Enrollment by County

County	Irrigated Acres	Enrolled Acres	Percent Enrolled
San Mateo	600	2,656	(100%+)
Santa Cruz	18,300	11,843	65%
Santa Clara	13,200	11,180	85%
San Benito	32,400	20,275	63%
Monterey	212,000	182,031	86%
San Luis Obispo	67,730	64,217	95%
Santa Barbara	93,490 (73,000?)	64,859	70% (89%?)
Ventura	600	591	99%