

# **From Green to Clean: Restoring Pinto Lake**



**Jackie McCloud**  
**Senior Utilities Engineer**  
**October 18, 2019**



# Pajaro River Watershed



City of Watsonville

Water: Openlands Through Diversity: City Through Cooperation™

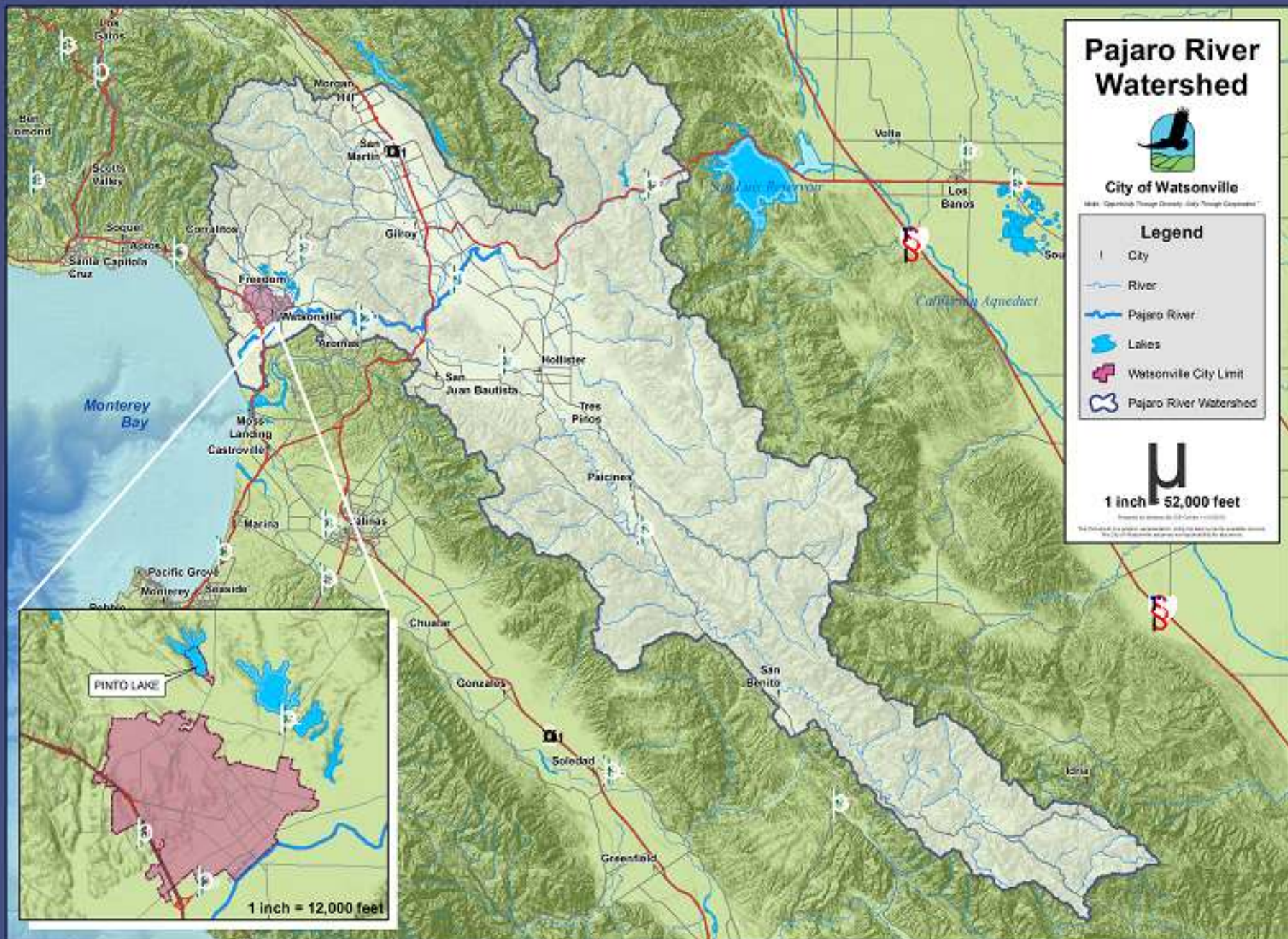
## Legend

- City
- River
- Pajaro River
- Lakes
- Watsonville City Limit
- Pajaro River Watershed



1 inch = 52,000 feet

Revised by Watsonville City Council 11/2010  
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# Pinto Lake



Massive cyanobacteria blooms occur in spring, summer and fall.

- Predominantly aphanizomenon, dolicospermum and microcystis.

OEHHA and WHO Public Health Goal of 0.8ppb.

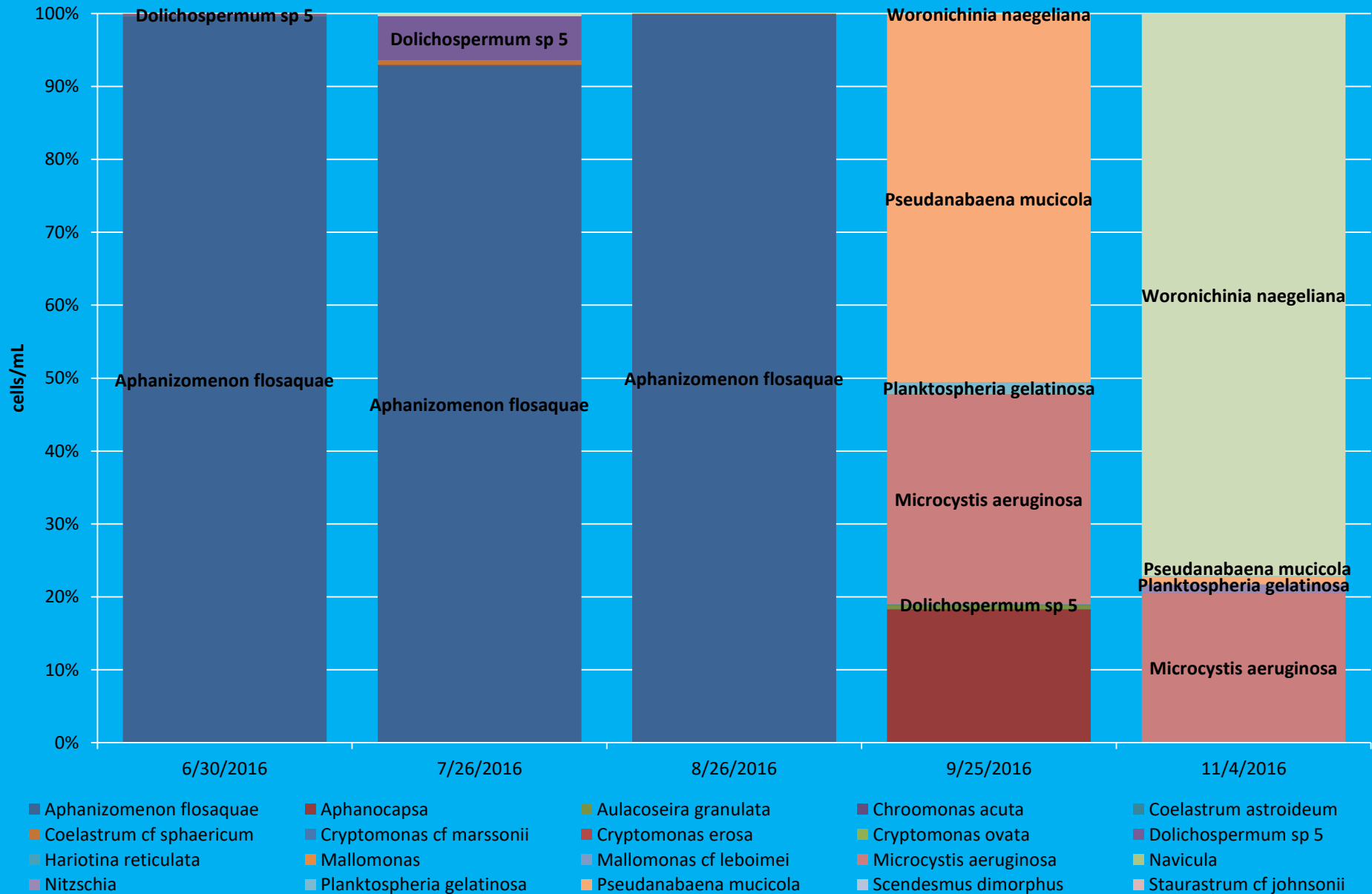
Multi agency effort to coordinate monitoring, notifications and solutions.





# Microcystis Presents itself in Late Summer

## Algae Species Composition





# In-Lake Activities

Multiple management measures implemented:

- Carp removal
- Outreach and stakeholder involvement
- Sediment Cores to determine amount of internal nutrient loading









# PARTNERS





# Alum Treatment April 2017



**City staff researched:**

- **Floating wetlands**
- **Aeration**
- **Alum treatment**
- **Other types of chemical and biological treatment**

**Alum proved to be the best solution for Pinto Lake**



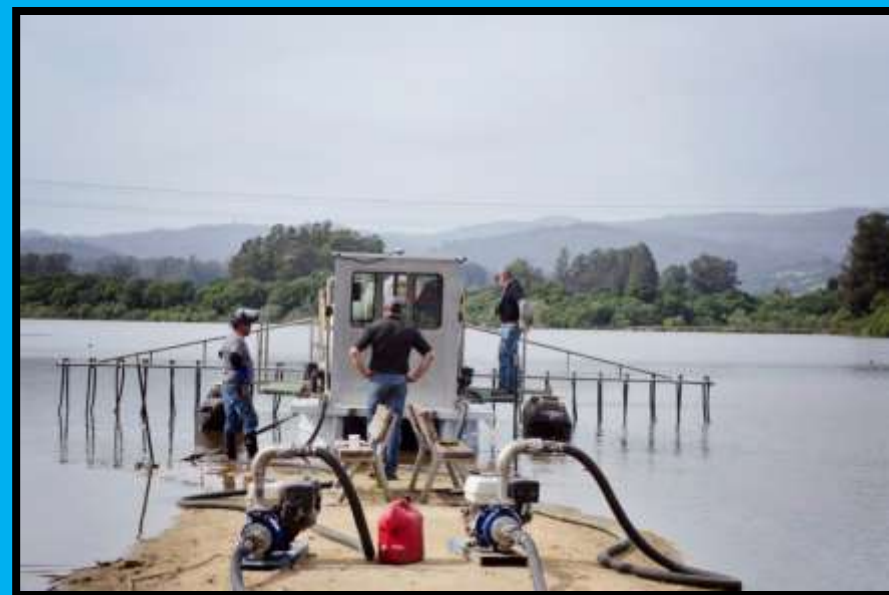


# Water Quality Testing



*Photos courtesy of Catherine Bosley, HAB Aquatics, LLC*





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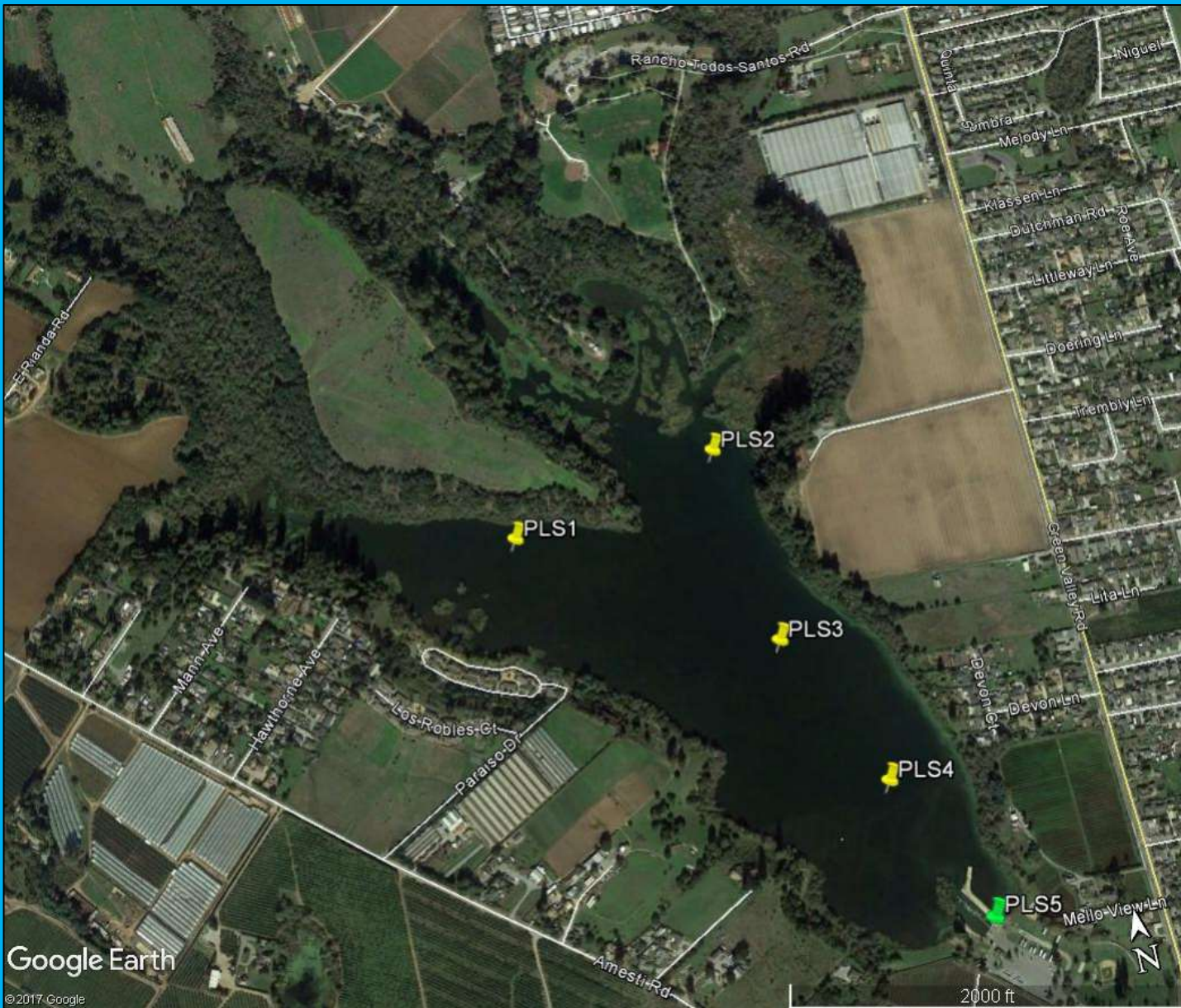


# Alum Coverage





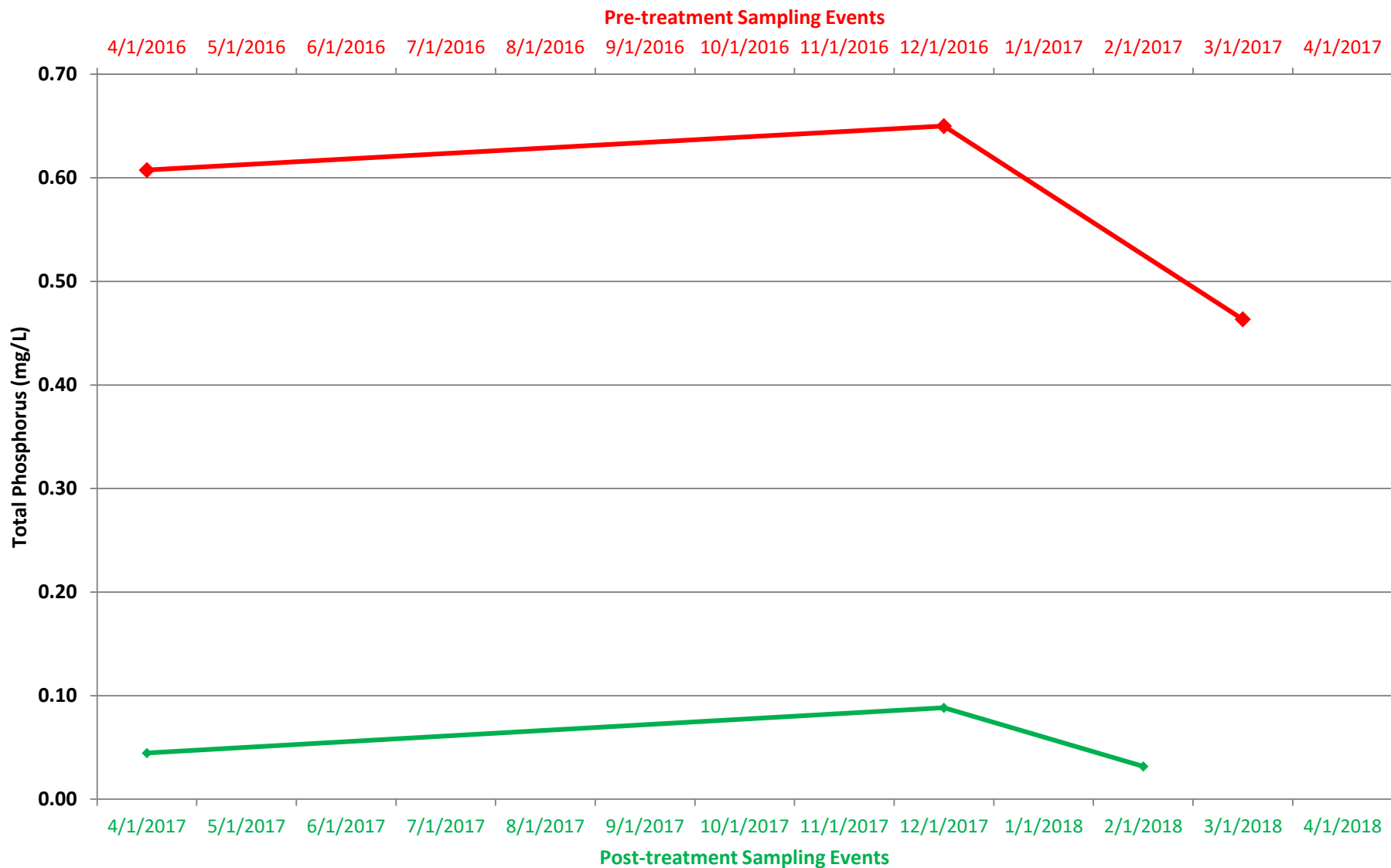
# Sampling Points in the Lake





# Post-treatment Samples Confirm Successful Alum Treatment

Average Phosphorus Concentrations Lake-wide, All Depths





# At PLS5

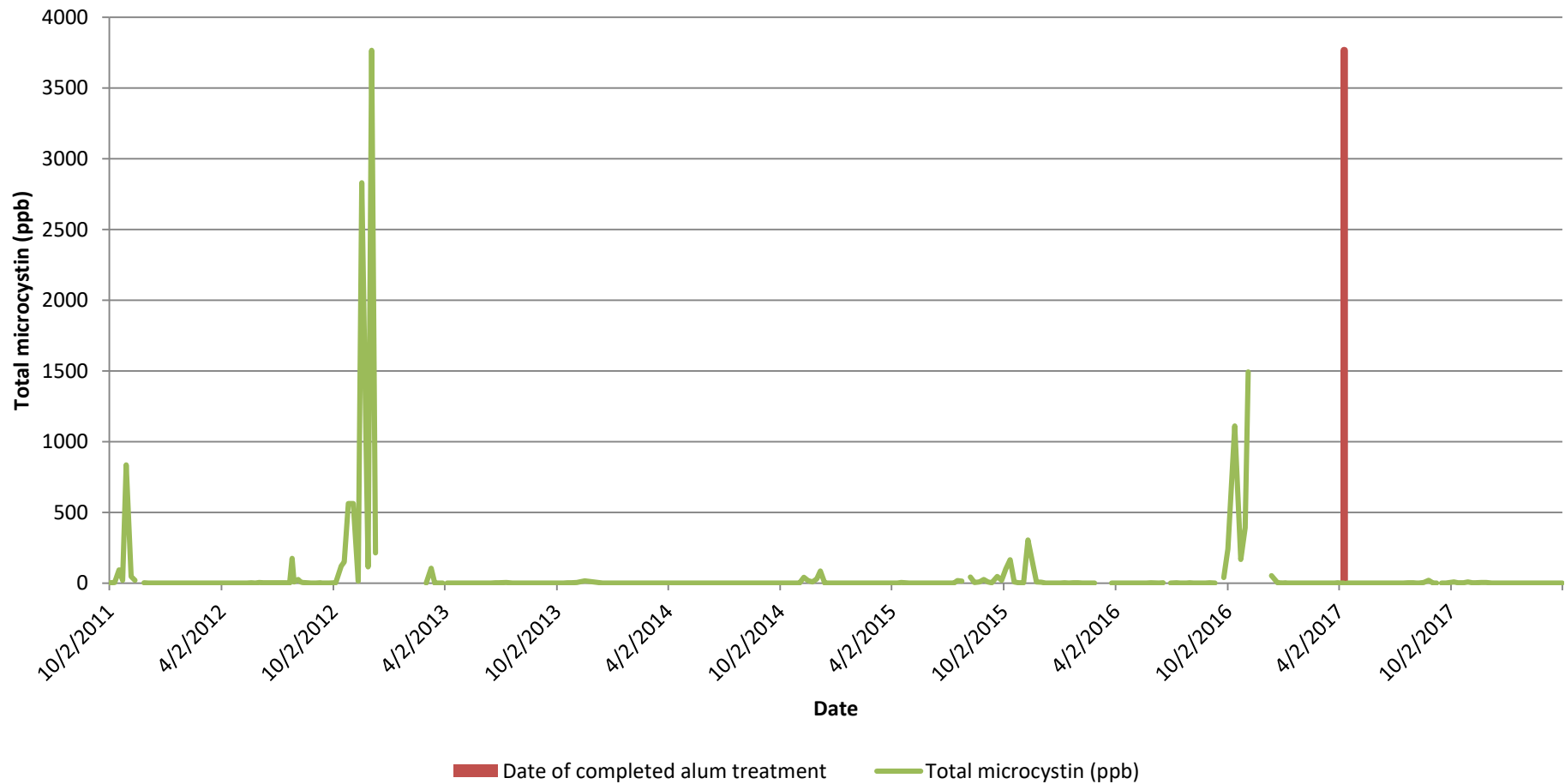


K Borchers / San Jose Mercury News



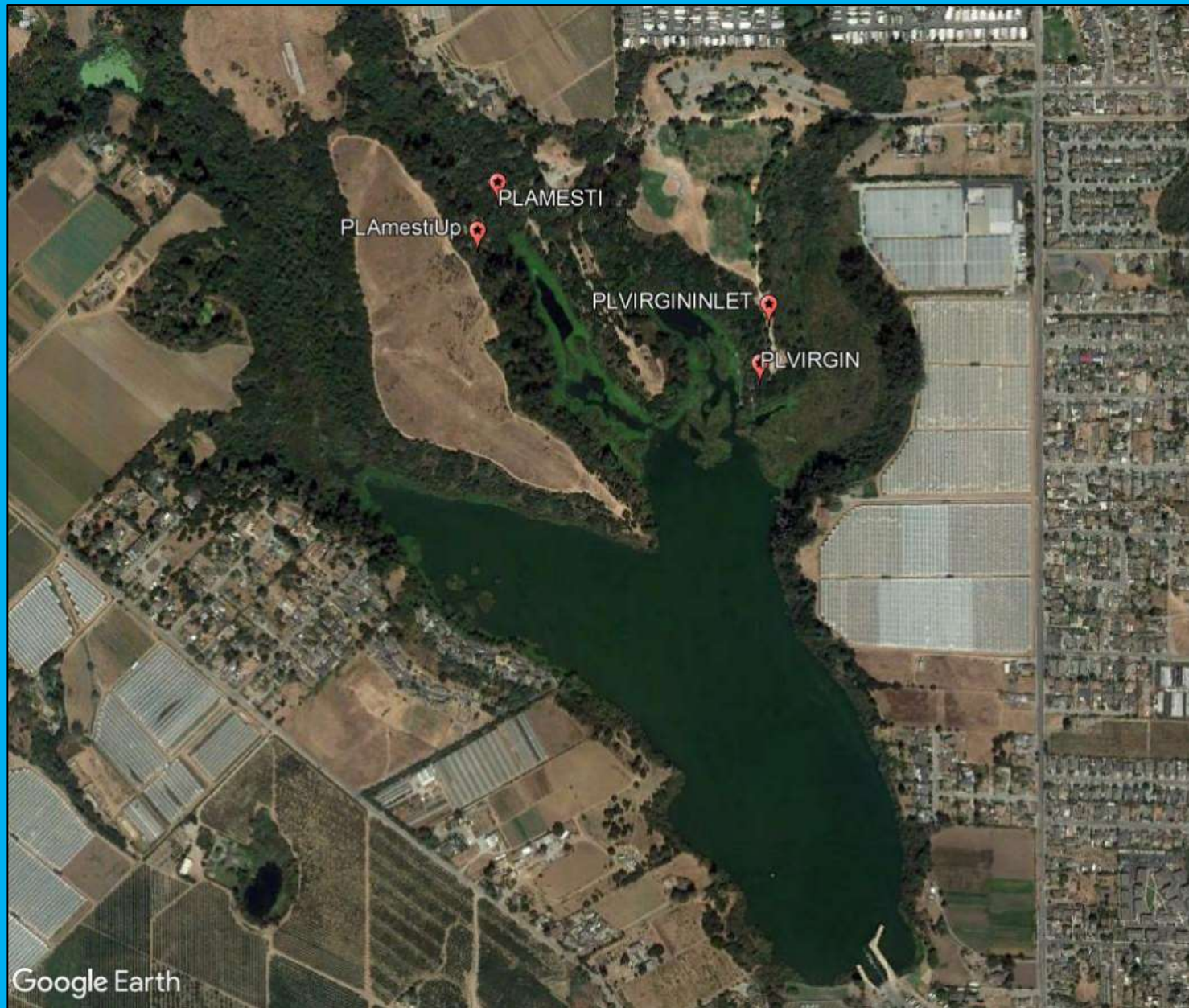


## SPATT: Total Microcystin at the Pinto Lake Dock





# Sampling Points in the Watershed





# Watershed Activities



*Rolling Dips*

**Targeted approach to  
improve Water  
Quality in: Amesti  
Creek, CCC Creek,  
Todos Santos Creek**



*Biofiltration Strip*



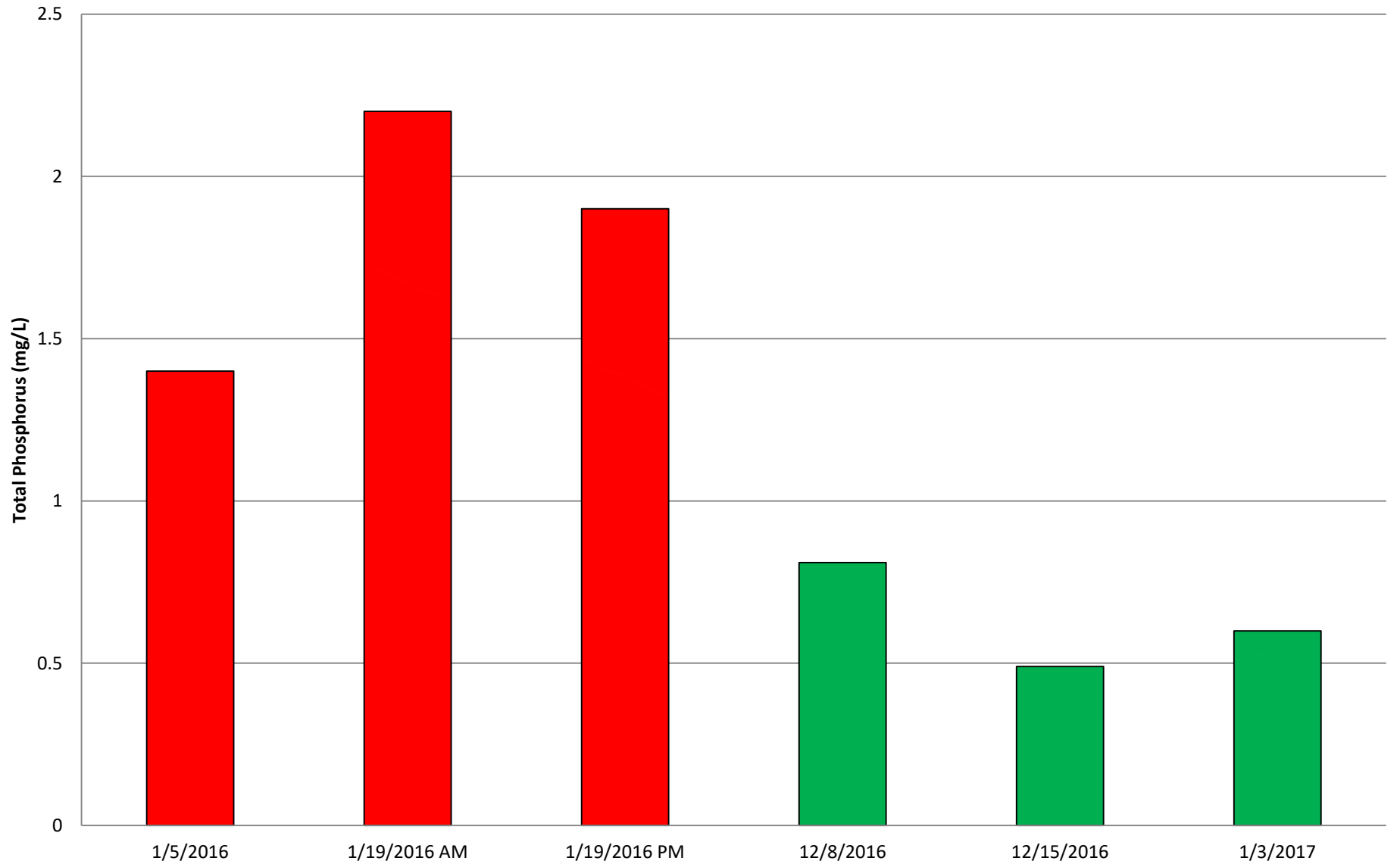
*Rolling Dips*



*Detention Basin*



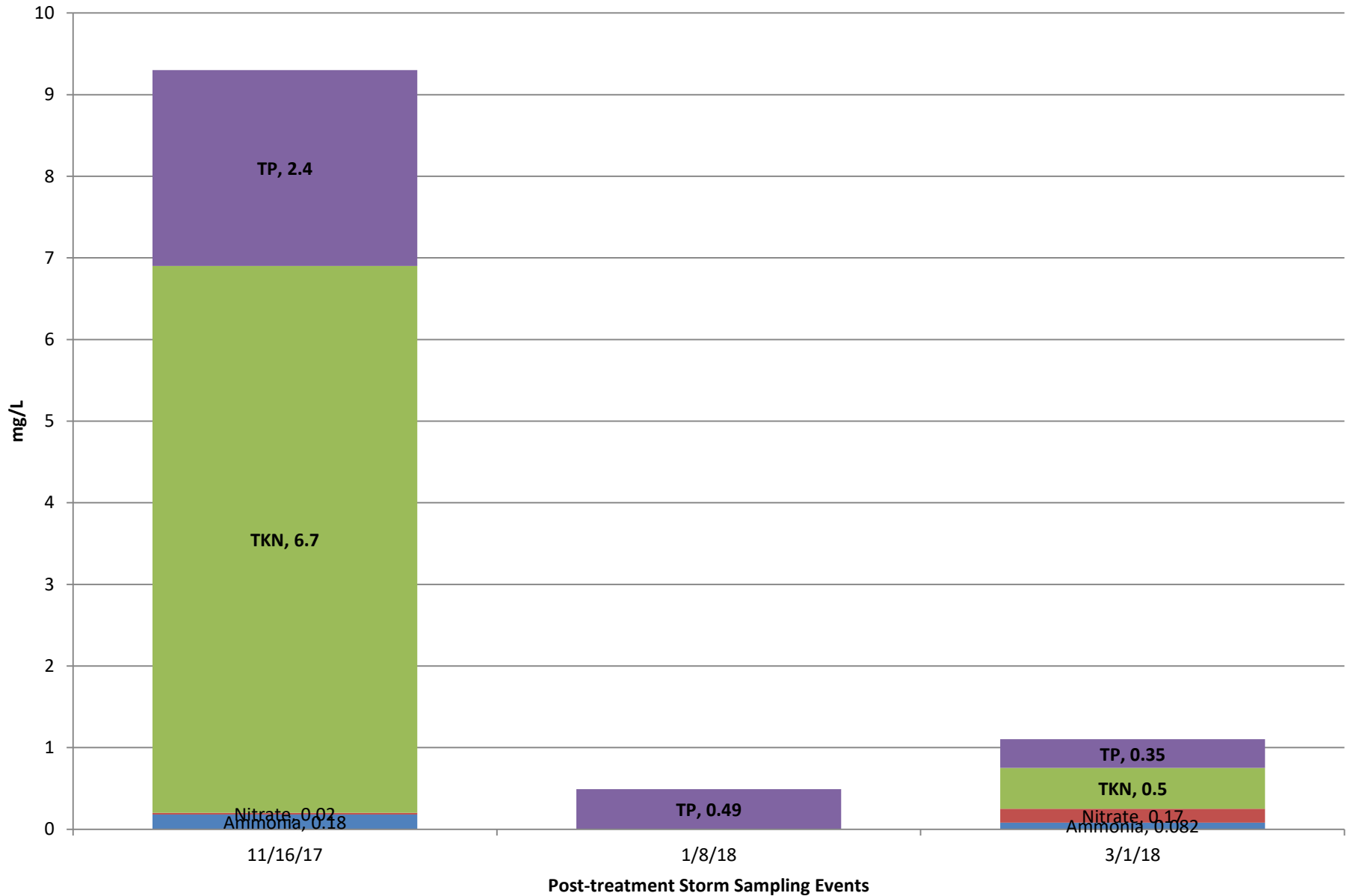
## Less Phosphorus Measured in Amesti Creek





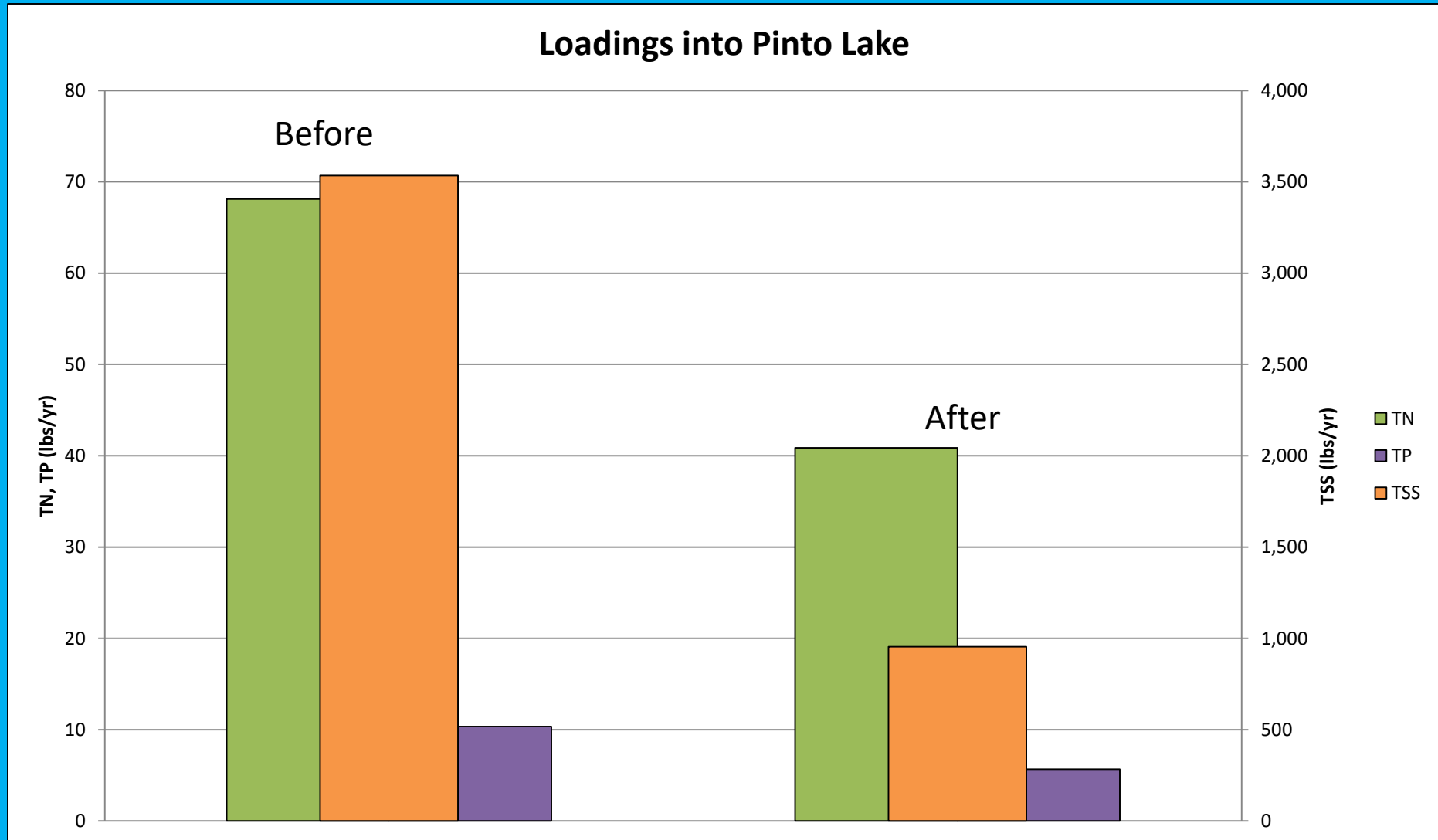
# Parameter Concentrations, Upstream of the Virgin Road Rolling Dips

Ammonia Nitrate TKN TP





# Estimated Reductions due to the County Park Pump Track Filter Strip Project





# Outreach and Education



***“Slow it, spread it, sink it”***

- On farm practices
- Residential
- Septic

Can you help us reduce toxic algae blooms in Pinto Lake? The Resource Conservation District (RCD) and the City of Watsonville are currently seeking landowners within the Pinto Lake Watershed interested in installing sediment reduction projects to improve water quality in the Lake. Approximately \$40,000 in grant funding is available for construction projects. Eligible project types include erosion control, stream bank stabilization, road repair and maintenance, and/or sediment basins. If you are interested in completing a project, contact the RCD no later than February 15, 2017.

The RCD is a non-regulatory, public agency that works with willing landowners and managers to find win-win solutions that protect and enhance natural resources while supporting working lands and private property owners.

For more information or to request funding for a project, please contact Lisa Lurie, Program Manager at the Resource Conservation District at (831) 464-2950 x27 or [llurie@rdsantacruz.org](mailto:llurie@rdsantacruz.org)

Resource Conservation District  
820 Bay Ave, Ste 136  
Capitola, CA 95010



# Community Based Science Day



Join us Saturday, **May 19 from 10:00 to 1:00**, for iSpy Science, family friendly hands-on discovery activities at **Pinto Lake City Park**, 451 Green Valley Rd, Watsonville (meet at the docks).

- Test your observation skills in the plant and animal ID and treasure hunt.
- Conduct water and soil tests with tools you make on site.
- Get up close and personal with captive native salamanders, turtles, and other critters.
- Learn fishing basics and try the casting contest.
- Hear about a day in the life of a field scientist.
- Find out how Sea Otters are connected to the lake.

**Free snacks provided by Driscoll's, Inc.**  
Please RSVP [rcdsantacruz.org](http://rcdsantacruz.org) OR 831.464.2950

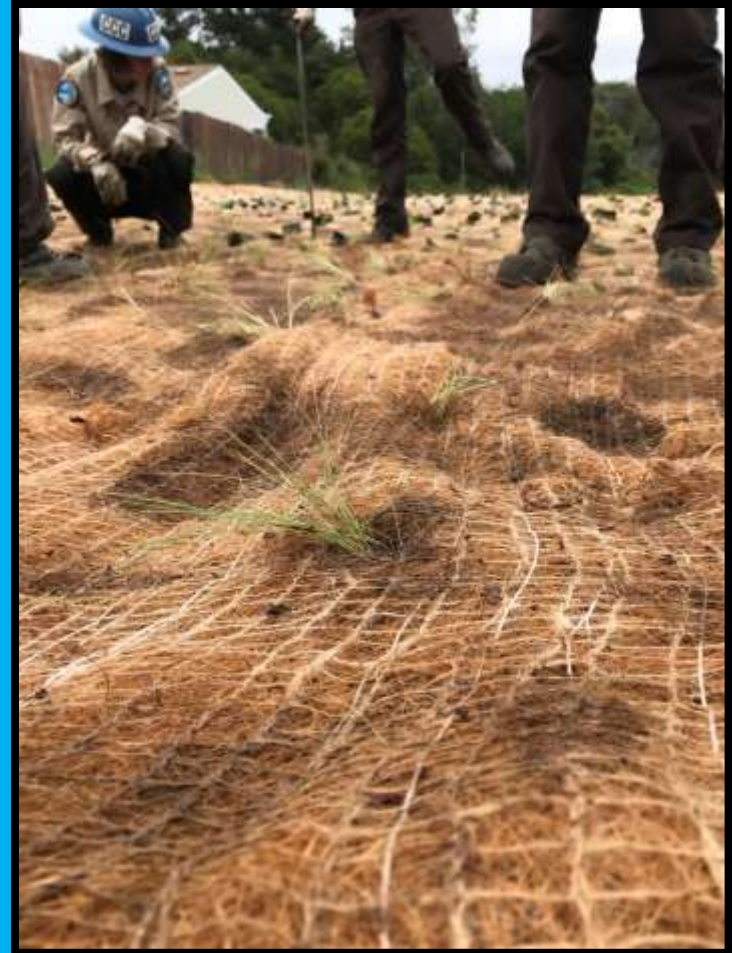
Resource Conservation District  
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Funding has been provided in part through an agreement with the State Water Resources Control Board



# Next steps for Pinto Lake



*Photo courtesy of Catherine Bosley, HAB Aquatics, LLC*



# Water Quality Investigation





# 303(d) Updated Monitoring Plan



ENVIRONMENTAL HEALTH

## County of Santa Cruz

### HEALTH SERVICES AGENCY

781 OCEAN STREET, ROOM 312, SANTA CRUZ, CA 95060-4073

Phone: (831) 454-2022 FAX: (831) 454-3126 TDD: (831) 454-4123

<http://hscsa.org>

### Monitoring Plan and Quality Assurance Project Plan

for

Pinto Lake

Date: October 26, 2016

County of Santa Cruz

Environmental Health

### The City of Watsonville Pinto Lake Restoration Project AGREEMENT NO. 14-424-293 with CCRWQCB

### Monitoring Plan

Version 3.0

Originated by:  
The City of Watsonville

(September 21, 2015)  
Edited January 3, 2016



# Thank you for your time!



**For additional information on the Pinto Lake Restoration Project:**

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**[jackie.mccloud@cityofwatsonville.org](mailto:jackie.mccloud@cityofwatsonville.org)**