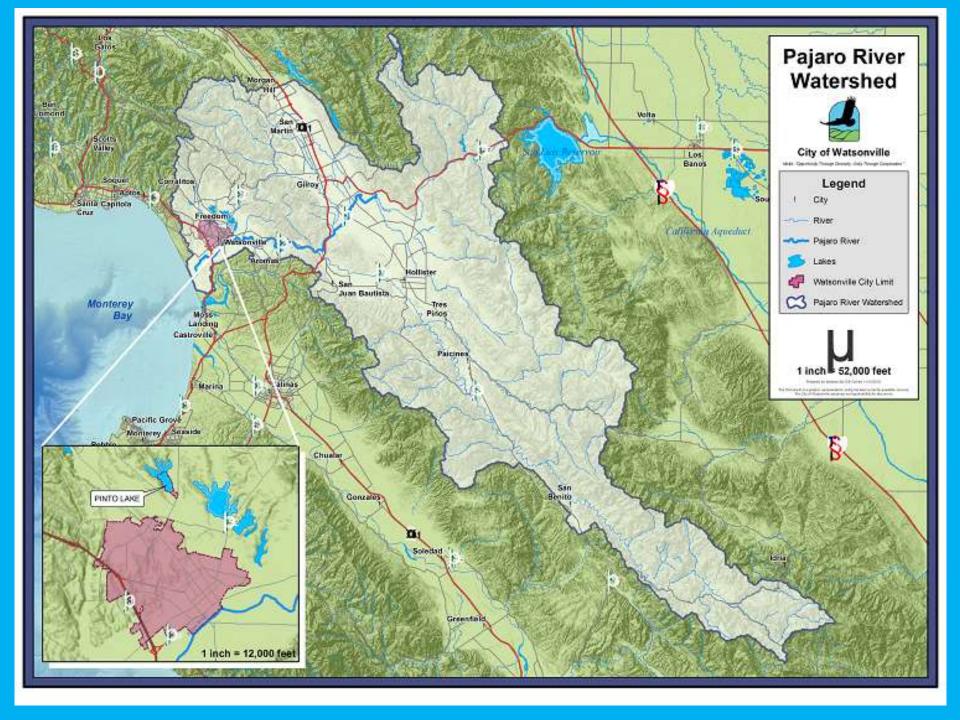
# From Green to Clean: Restoring Pinto Lake



Jackie McCloud
Senior Utilities Engineer
October 18, 2019



### **Pinto Lake**



Massive cyanobacteria blooms occur in spring, summer and fall.

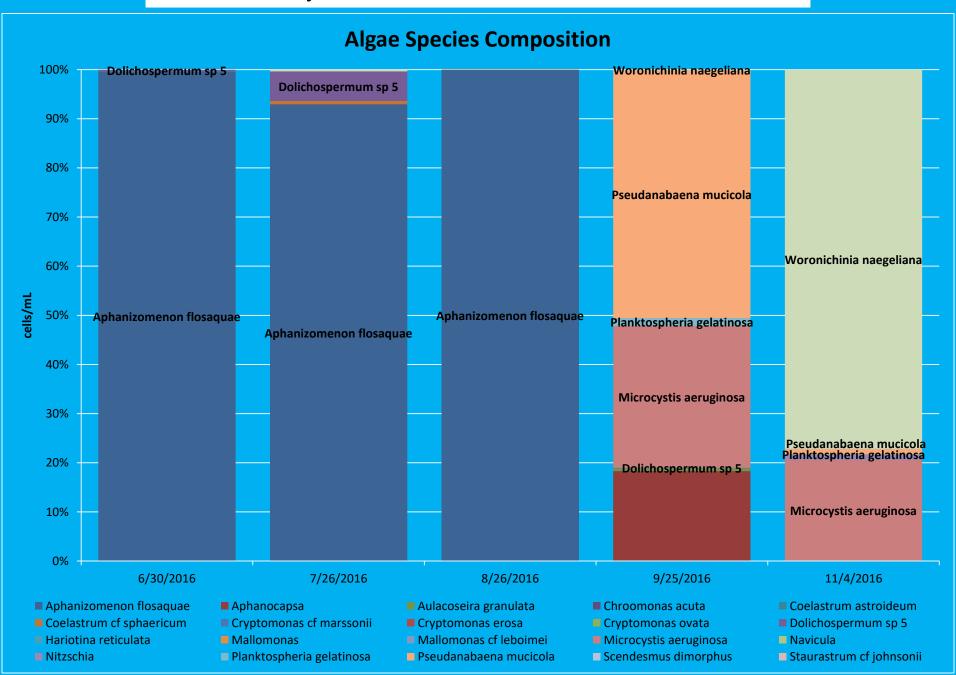
 Predominantly aphanizomenon, dolicospermum and microcystis.

OEHHA and WHO Public Health Goal of 0.8ppb.

Multi agency effort to coordinate monitoring, notifications and solutions.



#### Microcystis Presents itself in Late Summer







### **In-Lake Activities**

Multiple management measures implemented:

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



### **TAC Involvement**



#### Pinto Lake Restoration Project

#### TAC Meeting

February 8, 2018 : 10 AM - 12 PM

#### Attenders

Jacks McCoud, City of Watsonylle (Justie Hardynolificitysheetsenville org)

Errora Khaznick, Oty of Watsonville (corres Masseret Buttaufrest arreits org)

An Rettinger, Resources Conservation District of Sente Cruz County (Intelligen@lichartscruz.org)

Lina Curie, Resources Conversation District of Sents Cruz County (National Institution of the Sents County (National Institution of Sents County Sents County (National Institution of Sents County Sents (National Institution of Sents (National Insti

Pete Cemploydig, State Water Resources Control Board (sets minicionity@existhorris.cs.gov)

Rephael Kudela, UCSC (Normingham), emil)

John Hunt, UC Dawn & whort this steen edid

Sierra Wyon, County of Sonta Crue Dierra ryandhumberuncounty an).

Will Fourt, County of Santa Crist (will fourt@narrastruments.us)

Robert Ketley, Plato Legend Vol. Lettey/Dynamicson

#### Schedule

ED AM - introductions: Opportunity for TAC member to introduce themselves and their association to the project

80:10 MM - Current status on Grant and Project: sackie will review the milestones hit and the partnerships made

10:30 AM - Treatments Jackie will commarize the in-lake alarn treatment, Usa will commarize the sediment control recessors in the County Reik

10:53 - Data results: Etems will summarize the post-treatment results.

13:10 - Next steps: Jackie will discuss the autimated timeline for the remainder of the Project

11:30 - TAC member input on future librar for Pinto Lake and the watershed.

Thank you EVERYONE for your input and involvement in this critical project!

SS:208.3(38)

pathewooks(juriyofesisomille)

www.ajyofesisomille.org

Public Works and Utilities 500 Clearwater Lone Waterenville, CA 95076

Project: Pinto Lafé Facilitator: Justic Methodol			Mouting Date: \$[30](9) Place/Room: \(\gamma\)	
Namo	Organization	Role		E-Mail
Grunos, Picifaring	city of withouth	Etur	Dryan, knalyst	was between charge
Lisa Lune	REDSEC	Pryma Manyer		Hurre Cored Suntrem
John Richer	a courd Scinia Court co of Size Size Co of Size Size RWGCB	12.	Div. Break	Succession of some control of the sound of t
John Hum			AC HUNGUE	
Regle Edde	DE SINTE COM	74	CHELLO	Kodele O was exe
JACKIC MCCIMO	COVV	Cris	" Projects	
PASA Vodeen	1	Sny	William	
		-	M2 1 MOLE	
		t		
		$\vdash$		

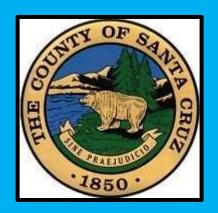
Page 1 of 1

### **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**















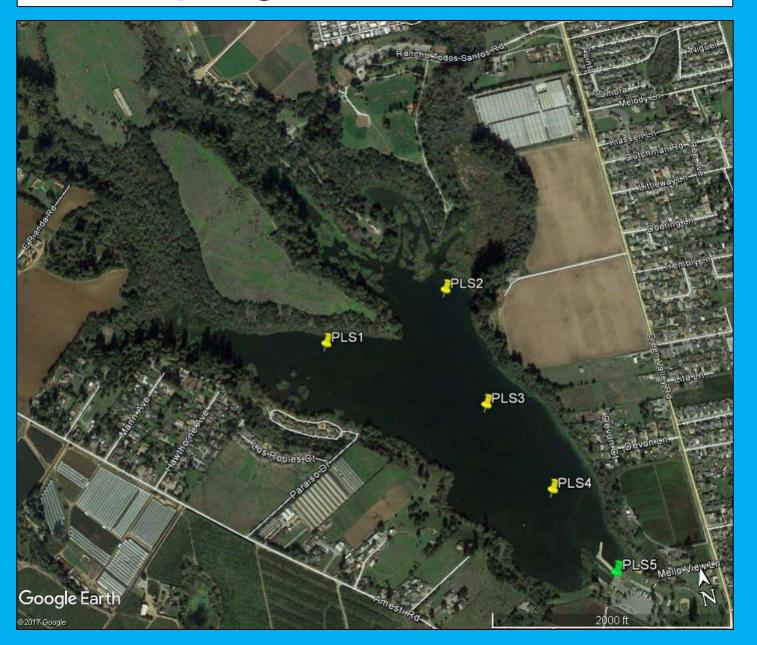


Photos courtesy of Catherine Bosley, HAB Aquatics, LLC

# **Alum Coverage**



# Sampling Points in the Lake



### Post-treatment Samples Confirm Successful Alum Treatment

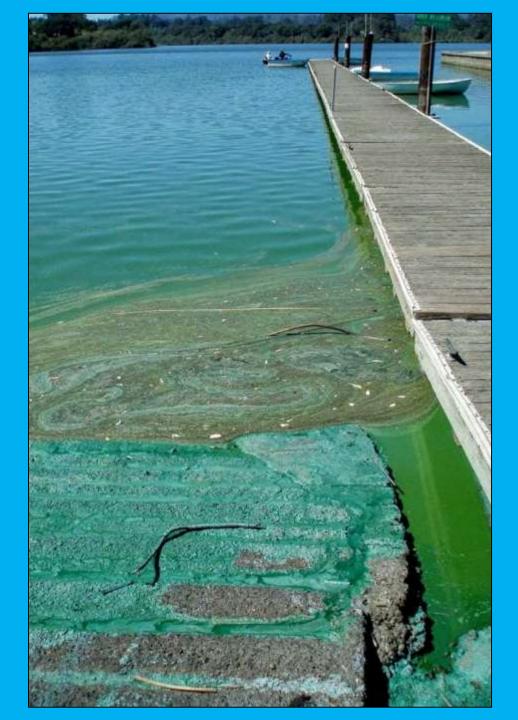


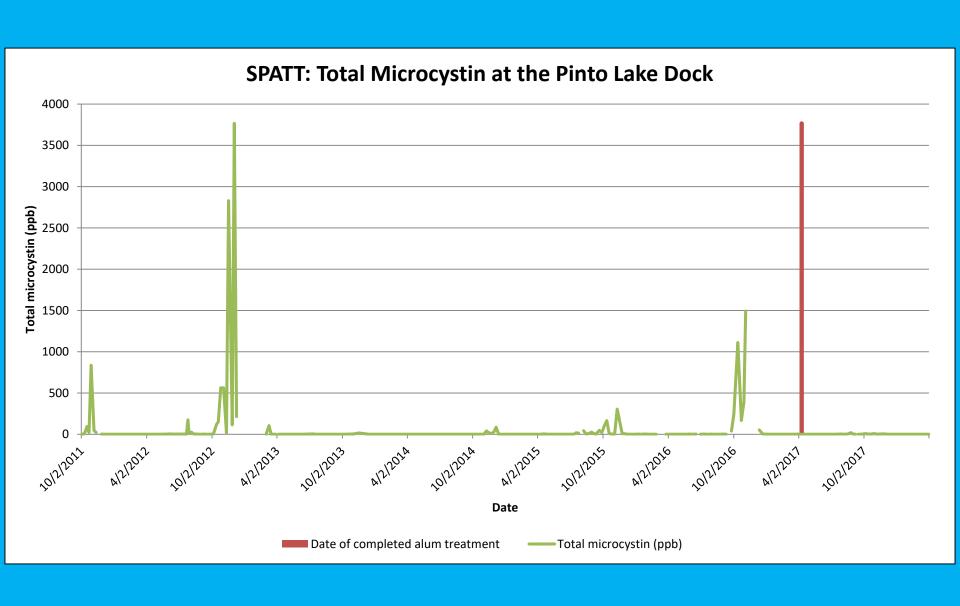


### At PLS5

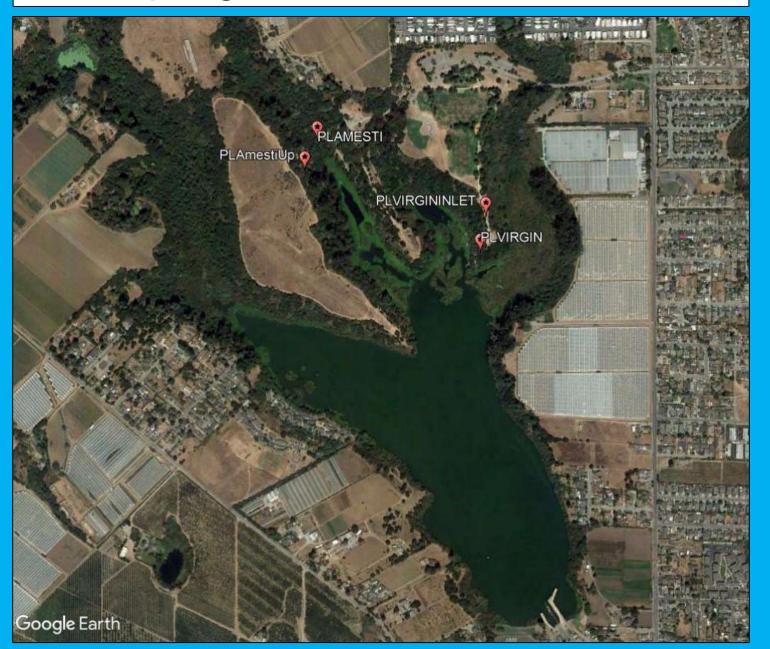








# Sampling Points in the Watershed



# **Watershed Activities**



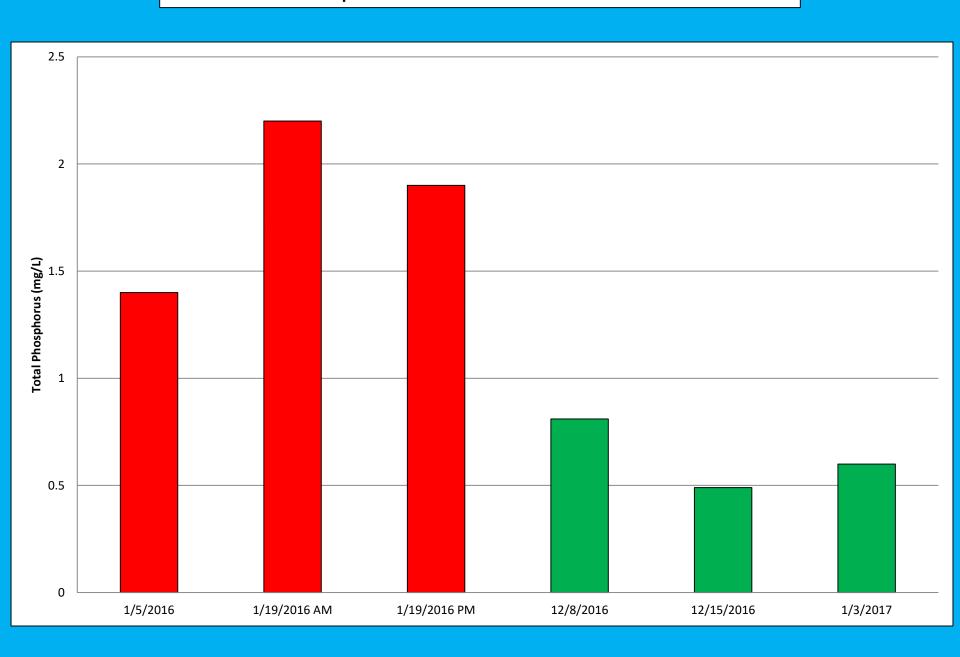
Targeted approach to improve Water Quality in: Amesti Creek, CCC Creek, Todos Santos Creek

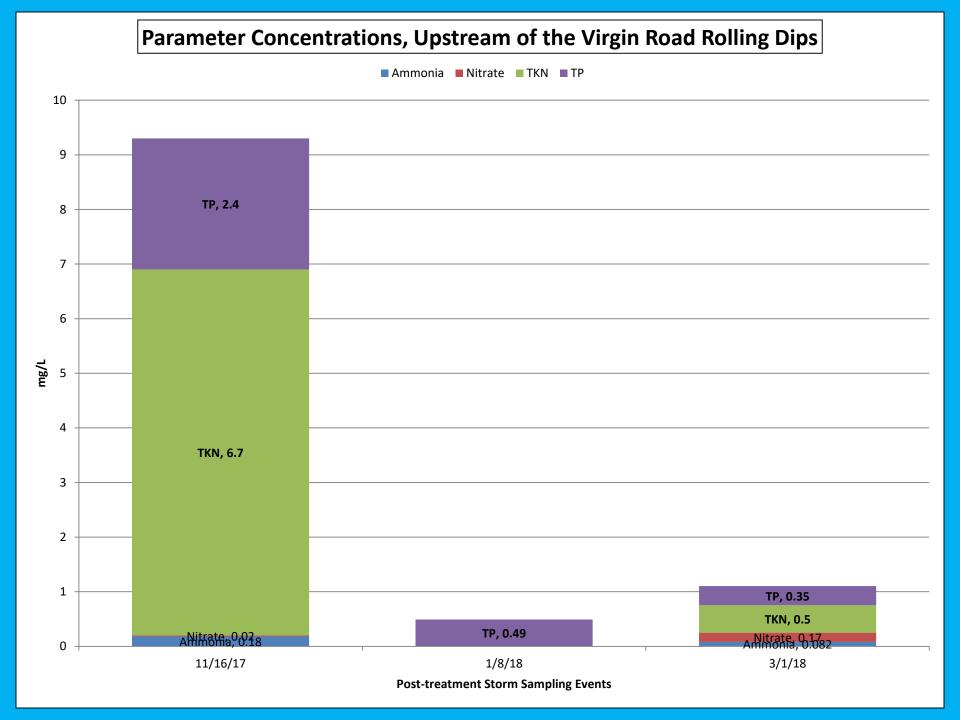




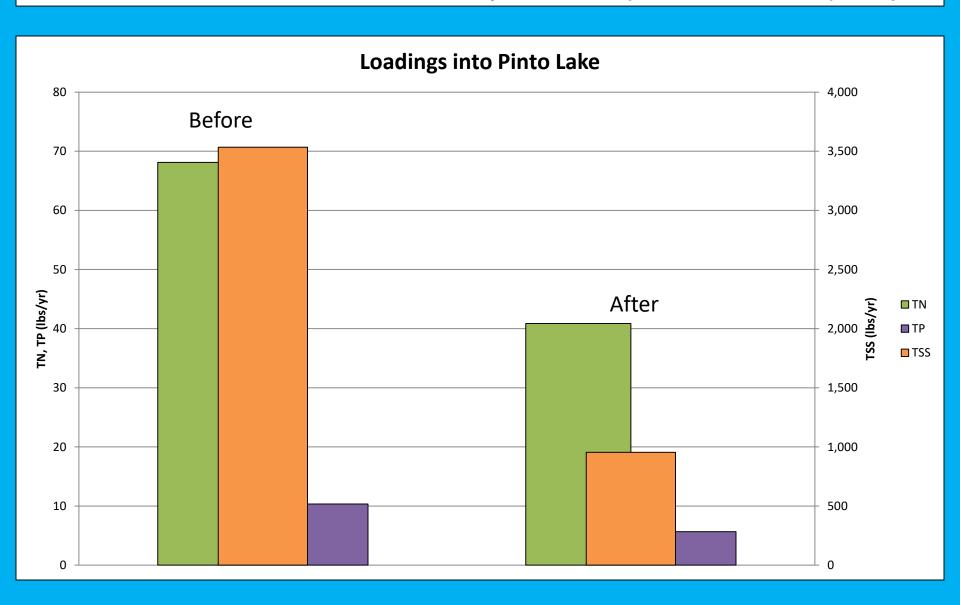


### Less Phosphorus Measured in Amesti Creek

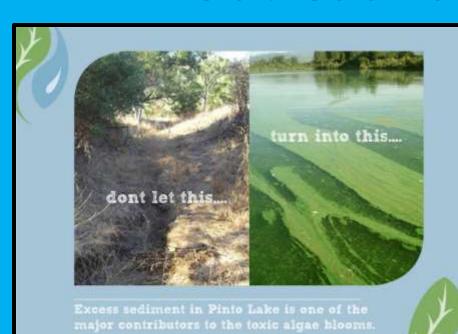




### Estimated Reductions due to the County Park Pump Track Filter Strip Project



### **Outreach and Education**



- On farm practices
- Residential
- Septic

"Slow it, spread it, sink it"

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 witer quality in the Lake. Approximately 540,000 in grant funding is available

for construction projects. Eligible project types include erosion control, steam 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#redsantacrur.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 OR 831.464.2950

Resource Conservation Disb 820 Bay Ave. Ste 136 Capitola, CA 95010



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

# **Next steps for Pinto Lake**







### **Water Quality Investigation**









### 303(d) Updated Monitoring Plan



#### County of Santa Cruz

**HEALTH SERVICES AGENCY** 

TEI DIEAN STREET, ROOM 213, SAWTA CRUZ, CA. 98982-4073 Phone: 83-1; 454-2022 PAX: (831) 454-3128 TDD: (831) 454-4123

http://www.

Monitoring Plan and Quality Assurance Project Plan

Pinto Lake

000000000

Date: October 26, 2016

County of Santa Cruz Environmental Health

Pinto Lake Mostlering Flori and GAPT

files 10/16/16

The City of Watsonville

#### Pinto Lake Restoration Project

AGREEMENT NO. 14-424-253 with CCRWQCB

Monitoring Plan

Version 3.6

Originated by: The City of Watsomille

(September 21, 2015) Edited January 3, 2018

### Thank you for your time!



For additional information on the Pinto Lake Restoration Project: Jackie McCloud (831) 768-3172 jackie.mccloud@cityofwatsonville.org