

# **TMDL KICK-OFF MEETING**

## **Development of Nutrient & Algal Toxin TMDLs for Pinto Lake**

*Pinto Lake, Aug. 2010*

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Water Board TMDL Program  
July 22, 2014*



# Why are We Here?...

- **Backdrop:** Water Quality Problem = Special Study (TMDL)
  - *Toxicity problems (algal toxins – HABs)*
  - *Violations of dissolved oxygen water quality standards*
  - *Violations of pH water quality standards*

## ➤ **Today's Goals**

- 1) Present Background Info on TMDLs & H2O quality impairments in Pinto Lake
- 2) Engage & Inform Stakeholders & Interested Parties
- 3) Solicit your Input, Questions, & Comments

# ***Acknowledgements....***

**City of Watsonville staff, County of Santa Cruz staff, local residents, state & university researchers, and elected officials helped draw widespread attention to water quality problems in Pinto Lake**

# What the Water Board Does

## *Protect Water Quality*

- Regulate Waste Discharges
  - Calif. Water Code (State)
  - Clean Water Act (Fed)



# ***TMDLs: The bottom line....***

- 1) TMDL studies are planning tools that can recommend or propose *new* or *additional* regulatory measures for discharges contributing to a water quality impairment.**
- 2) TMDLs can recommend that *existing* regulatory measures are sufficient to achieve water quality objectives.**
- 3) TMDLs can conclude that *natural sources* are the cause of a water quality impairment, and recommend a revision of applicable state water quality standards.**

# Pinto Lake Watershed

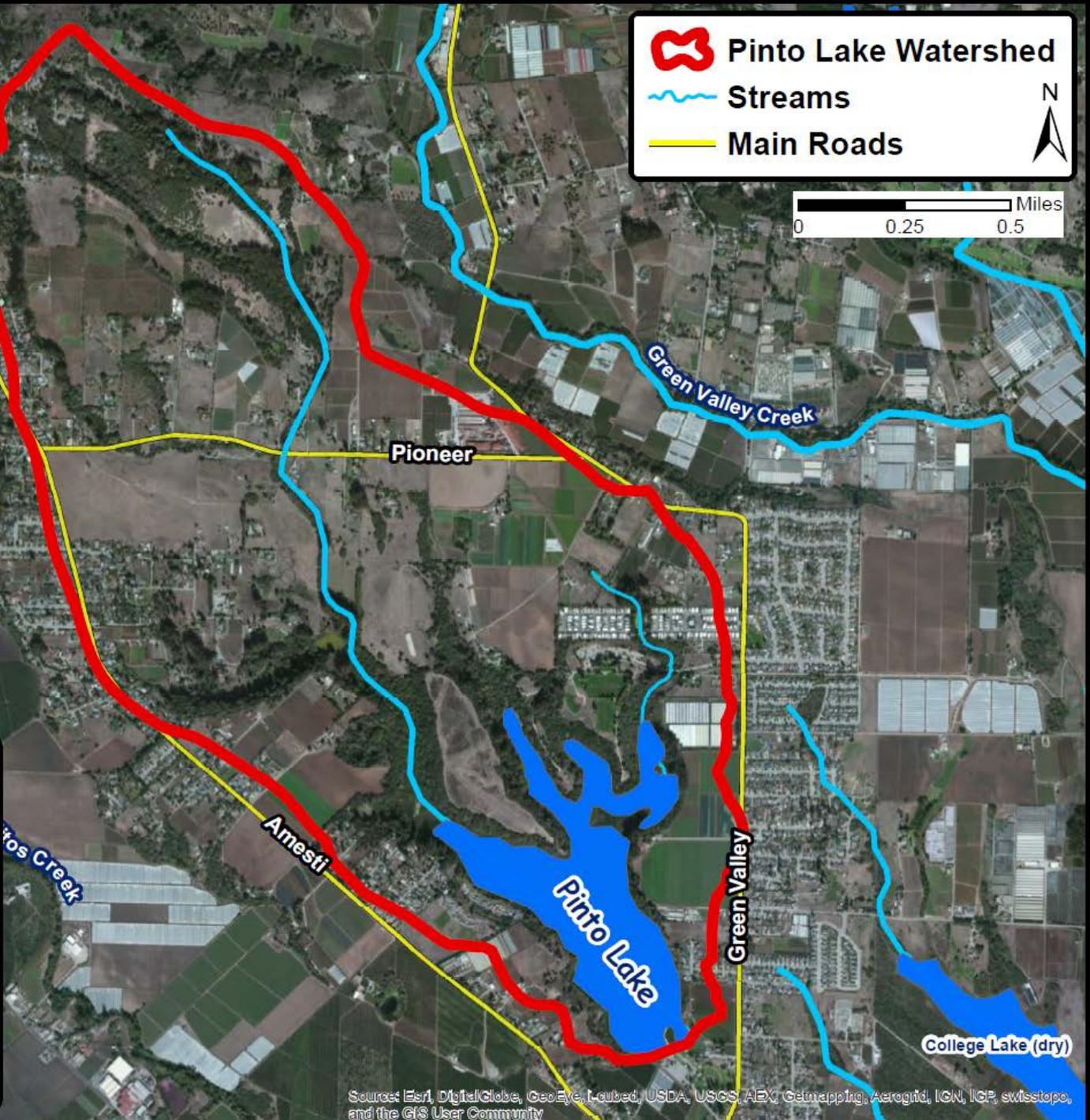
 **Pinto Lake Watershed**  
 **Streams**  
 **Main Roads**



**Map Extent**

SANTA CLARA CO  
SANTA CRUZ CO  
SAN BENITO CO  
MONTEREY CO  
Watsonville  
Monterey Bay

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Source: Esri, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

# ***Nutrient Pollution & Algal Toxins***

## **➤ What is the Environmental Problem?**

- Public health risks and nuisance (algal toxins)**
- Degradation of aquatic habitat**
- Degradation of drinking water supply**

## ***Plant growth***

**Excess algal biomass**

**Dissolved oxygen imbalances**

**Decreased biological diversity**

**Public nuisance – public health risks**

**DO crashes (hypoxia), fish kills, disruption of aquatic food web**

# ***What is a TMDL?...***

**The maximum amount of a pollutant(s) that a surface waterbody can receive and still meet water quality standards...**



***TMDL projects are strategies or plans to restore clean water.***

***The TMDL is an "informational tool" to assist the State in creating its plan to implement its water quality standards***

***U.S. Solicitor General***

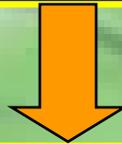
***United States Dept. of Justice***

***Guido A. Prinosolino, et. al., vs. EPA, 9<sup>th</sup> Circuit Court of Appeals, On Petition for a Writ of Certiorari, No. 02-1186, in the Supreme Court of the United States (2003)***

# Why Do a TMDL?...

## ***Federal Clean Water Act:***

States Must “List” Impaired Waterbodies  
Not Meeting WQ Standards



## ***“Listed” Waterbodies:***

States (Water Board) must address = TMDL

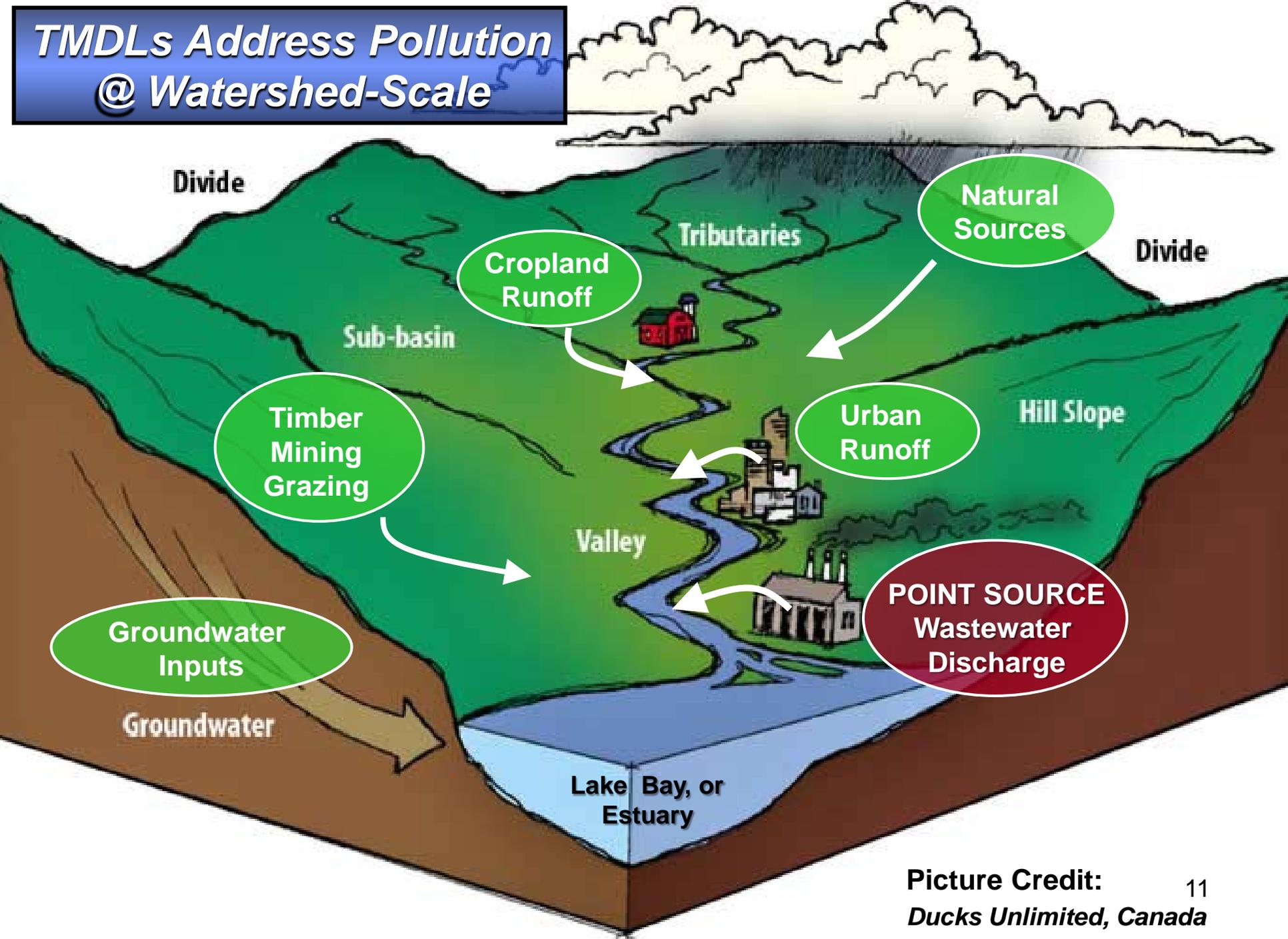


## ***State TMDL Policy***



***Basin Plan Amendment  
with  
Implementation Plan***

# TMDLs Address Pollution @ Watershed-Scale



# ***What TMDLs Do and Do NOT Do....***

## ***TMDLs Do Not / Are Not ...***

- 1) Require immediate compliance w/ water quality objectives
- 2) TMDLs are not directly enforceable (existing or future permits are)
- 3) Imply enforcement actions are imminent
- 4) Mandate specific management practices
- 5) Presume every landowner is contributing to pollution
- 6) Presume all pollutants are from human activities (natural sources too)

# *What TMDLs Do and Do Not Do....*

## *TMDLs **Do...***

- 1) Create an expectation and responsibility to achieve WQ goals
- 2) Inform permitting staff regarding permit implementation
- 3) Often rely on existing permits to implement TMDL objectives
- 4) Can propose new, or additional regulatory requirements
- 5) Create more opportunities for obtaining grant funding.

# *Pinto Lake Water Quality Sample*



Photo credit:  
City of Watsonville staff

# ***What is Causing the Algal Blooms??***

## ***What Have the Impacts Been?***

*Preliminary Investigations by UCSC , CSUMB & DFW –UC Davis Researchers...*

- ***Phosphorus (P) is most important nutrient driving algal blooms.***
- ***Probable Nutrient Sources...***
  - ***Phosphorus from lake bottom sediments***
  - ***Continuing erosion & discharge of P-rich sediments to lake***
  - ***Agricultural fertilizer***
  - ***Residential runoff and/or septic discharge***
  - ***Groundwater inflows into lake***
  - ***Natural sources; and***
  - ***Solicit Input from stakeholders (today)***
- ***Toxic Effects: Documented cases of wildlife fatalities, including the endangered California southern sea otter.***

# *What is in a TMDL Study?....*

**TMDL study: a planning tool  
to restore clean water.**

**Identify  
Probable  
Sources**

**Identify  
Waterbody  
Loading Capacity  
(TMDL)**

**Identify Pollution  
Reductions  
Needed**

**Develop Plan to  
Achieve  
Reductions &  
Restore Clean  
Water**

## ***How can stakeholders contribute to a TMDL??***

***Please submit or provide information, such as:***

- **Data, photos, or personal knowledge about the lake, about the algal blooms, and/or about land use practices.**
- **Success stories or improvements in management practices**
- **Provide informal feedback or written comments on draft reports we make available**
- **Etc., anything you think would be helpful or relevant**

### ***Staff Contact (Pinto Lake TMDL)***

**Peter Osmolovsky, TMDL lead staff**

**(805) 549-3699**

**[pete.osmolovsky@waterboards.ca.gov](mailto:pete.osmolovsky@waterboards.ca.gov)**

## ***TMDL Development Timeline (tentative)....***

- **Data Collection & Analysis – July 2014 to January 2015**
- **Stakeholder Meeting – Feb. or March 2015**
- **Draft TMDL report for Scientific Peer Review – Summer 2015**
- **Stakeholder Meeting – Summer or Fall 2015**
- **Final Draft TMDL for Public Review & Comment – Fall 2015**
- **Water Board Meeting – tentative Fall / Winter 2015-16?**

Welcome to the Central Coast Regional Water Quality Control Board |



- Cal/EPA
- State & Regional Water Boards
- Laws/Regulations
- Plans/Policies
- Programs
- Decisions Pending and Opportunities for Public Participation



- RESOURCES**
- **Email Subscriptions**
  - Data & Databases
  - Business Help
  - Public Records Center
  - Grants & Loans
  - Fees
  - Customer Service Survey
  - File an Environmental Complaint
  - Employment
  - Useful Links
  - Website Index

- Our Vision
- Board Meeting Calendar
- Basin Plan
- Drought Year Info
- Total Maximum Daily Loads
- Impaired Waterbodies
- Success Stories
- Ambient Monitoring
- Storm Water
- Watershed Management
- Enforcement
- Groundwater Assessment and Protection (GAP)
- 401/404 Water Quality
- Underground Storage Tanks
- Waste Permitting Reporting
- Agriculture

[www.waterboards.ca.gov/centralcoast](http://www.waterboards.ca.gov/centralcoast)  
**Subscribe to our "Pinto Lake Blue Green Algae" email subscription list to be notified of TMDL progress and meetings**

**ANNOUNCEMENTS**

- Information Regarding Settlement Fund Allocation
- Drought Year Information Resources (posted 1/17/14)
- State Water Board Letter Regarding Paso Robles Groundwater Basin Overdraft
- Central Coast Water Board Executive Officer Named
- The 2012 Accomplishments Report
- New! Ex Parte Communication Disclosure Form Is Now Available for Pending General Orders
- Water Board contracts with U.S. Geological Survey to test domestic wells in Salinas and Pajaro Valleys
- Water Board launches Groundwater Assessment and Protection (GAP) program webpage
- "Sampling My Private Well"
- Nitrate in Domestic Drinking Water Wells
- Current Water Purveyors Report
- More announcements ...



# ***Questions Water Board Staff Would Like to Ask the Stakeholders Today...***

- 1) Lake water quality data contacts? (County, City, who else?)**
- 2) Tributary creeks?**
- 3) Creek water quality data?**
- 4) Local groundwater quality data?**
- 5) Which areas sewerred? Which on septic?**
- 6) Lake bathymetry and depth?**
- 7) Has lake been filling up with sediment?**
- 8) Timing of blooms (mostly summer?)**
- 9) Verified or anecdotal cases of wildlife kills / human illness?**

# *Questions & Discussion...*

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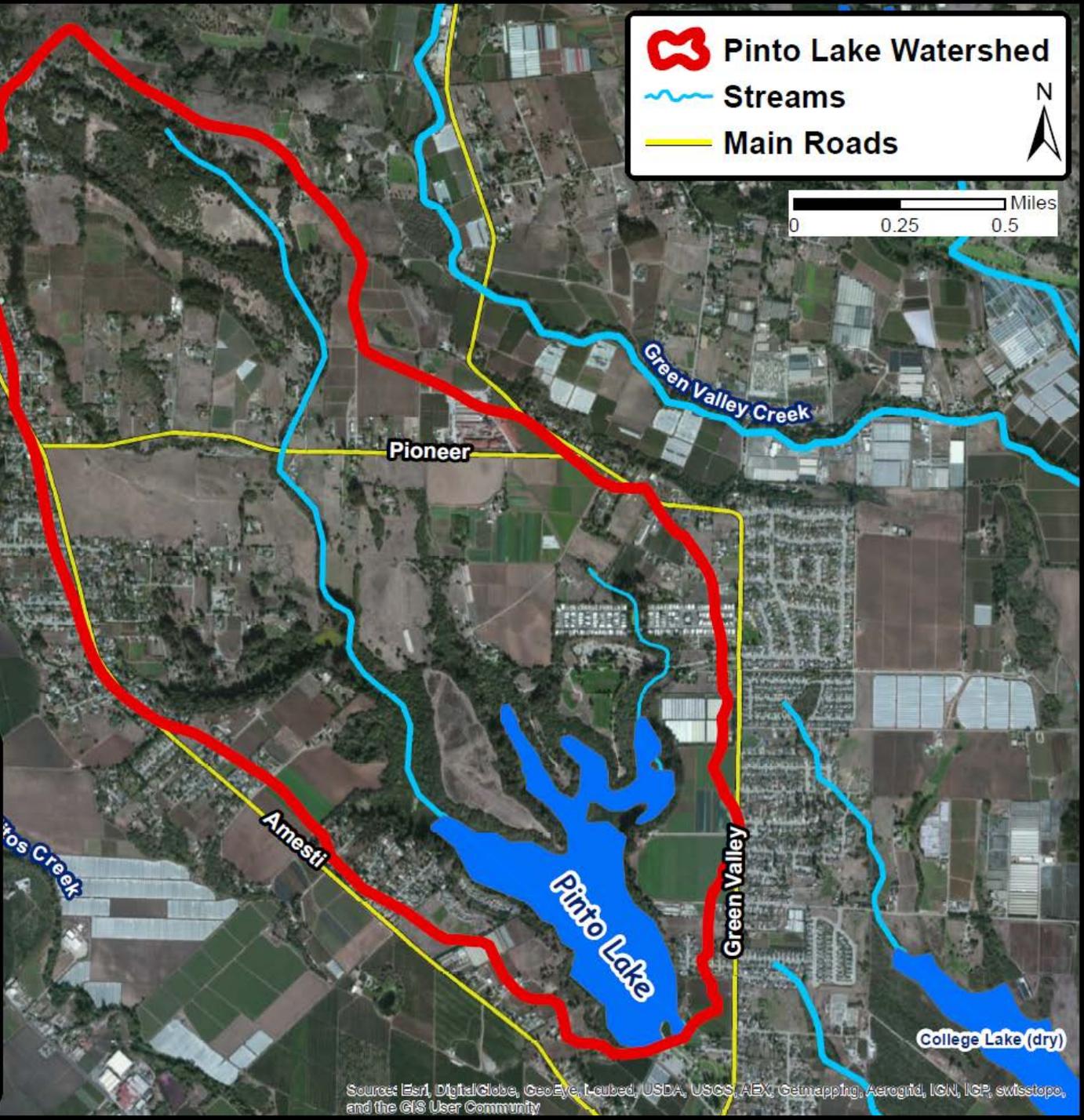
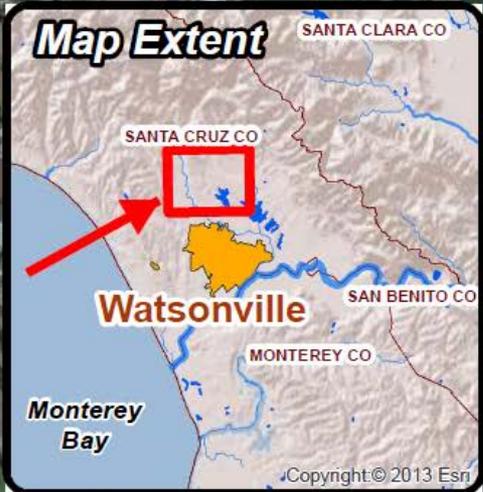
# Pinto Lake Watershed

 **Pinto Lake Watershed**

 **Streams**

 **Main Roads**

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Source: Esri, DigitalGlobe, GeoEye, I-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community