



TMDL MEETING

Chlorpyrifos and Diazinon TMDL Development for Pajaro River Watershed

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*Photo Credits:
Mary Hamilton
CCRWQCB*

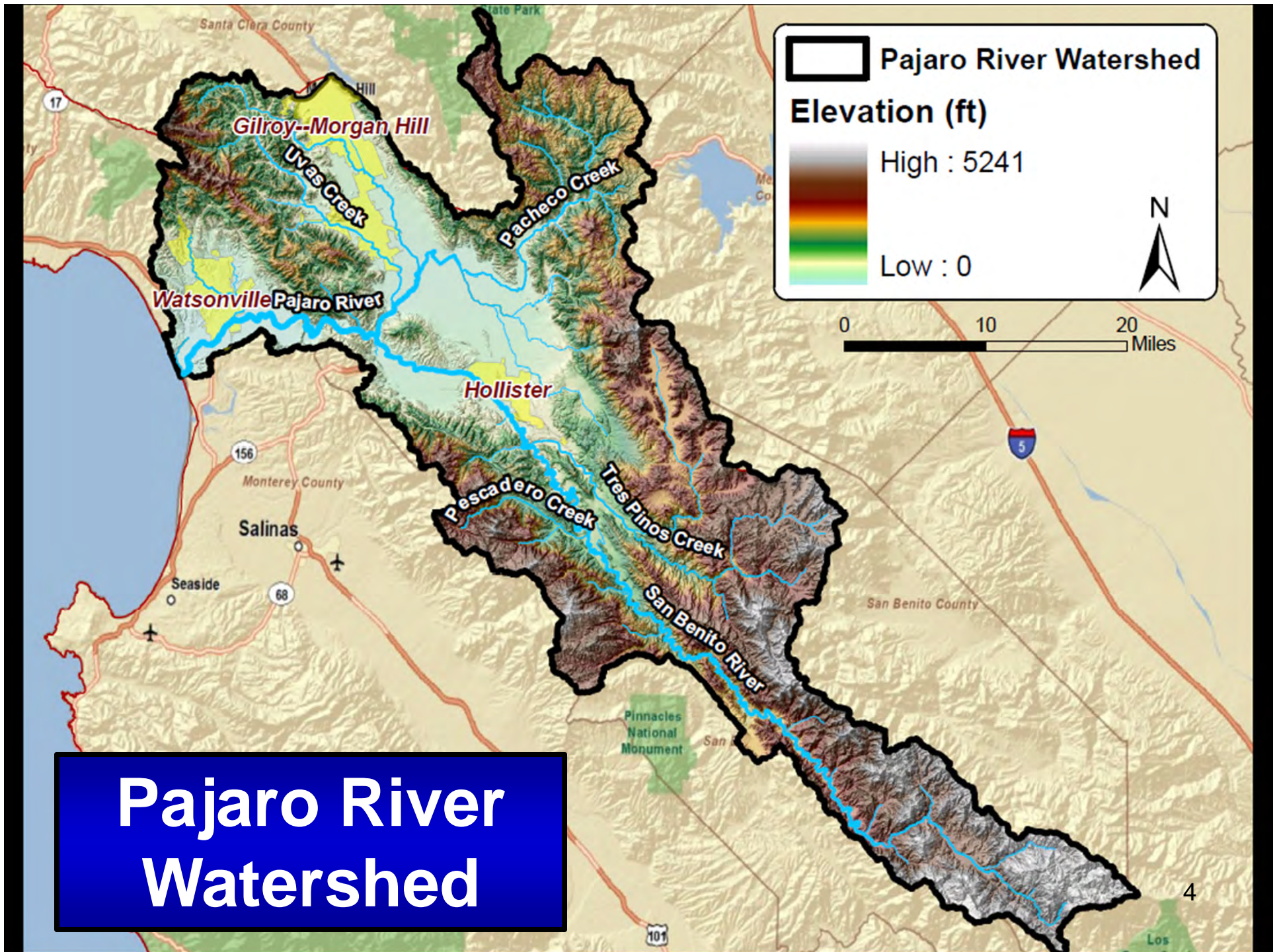


Today's meeting goals

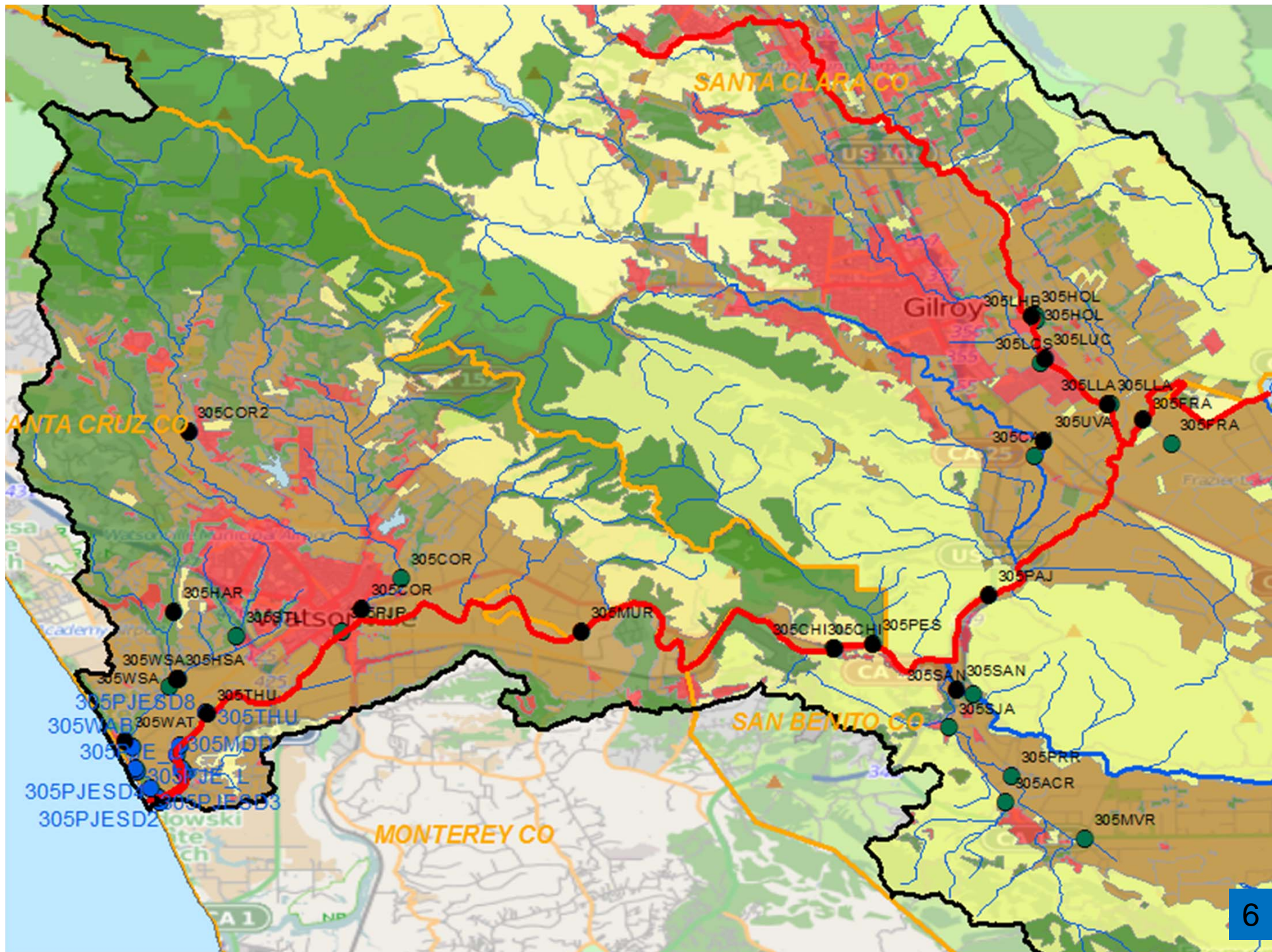
- Present data showing:
 - 1) What, where, when, and why of impairment
 - 2) Past & present usage of chlorp/diazinon
 - Different types of uses
 - 3) Implementation
 - 4) Feedback, questions, comments.

What pesticides addressed in this TMDL?

- **Organophosphate pesticides *for this TMDL* include:**
 - Chlorpyrifos
 - Diazinon
- } Used to control pests
- **Environmental Problem**
 - **Toxic to living organisms (insects, animals, people)**







When have we seen exceedances?

- **Pajaro River**
 - **Chlorpyrifos: Jan. 2006 – May 2006 and June 2009**
 - **Diazinon: Jan. 2008 – Feb. 2011**
- **Pajaro River Estuary**
 - **Diazinon: Jan. 2008 – Oct. 2009**
- **Llagas Creek**
 - **Chlorpyrifos: Jan. 2006 – May 2006**

Exceedances and crop application

- Chlorpyrifos exceedances likely due to application on:
 - Apple, corn, cabbage, broccoli, alfalfa, napa cabbage, wine grapes
- Diazinon exceedances likely due to application on:
 - Broccoli, brussels sprouts, cauliflower, apple

Why are these pesticides in the water?

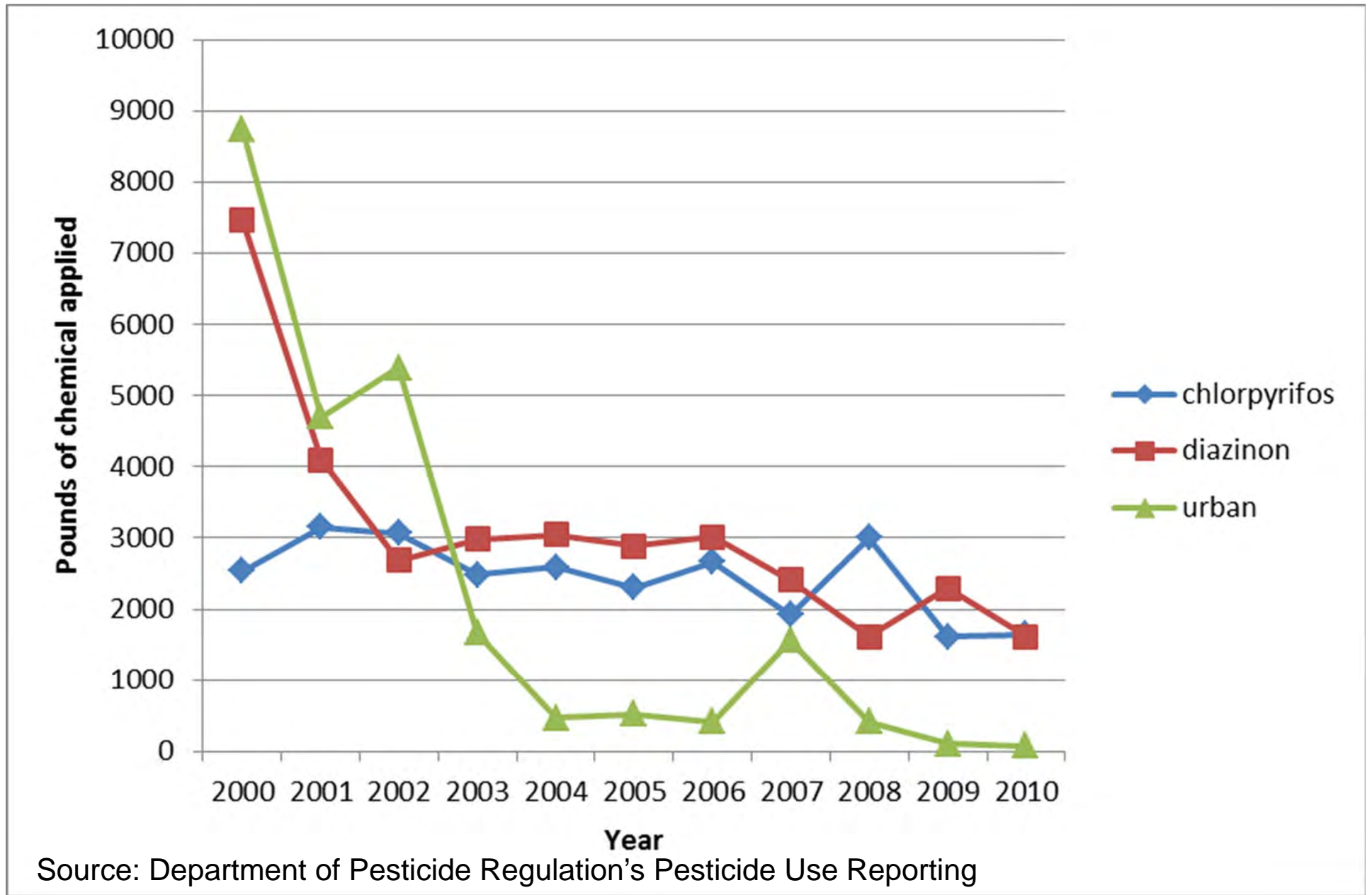
Sources of chlorpyrifos and diazinon

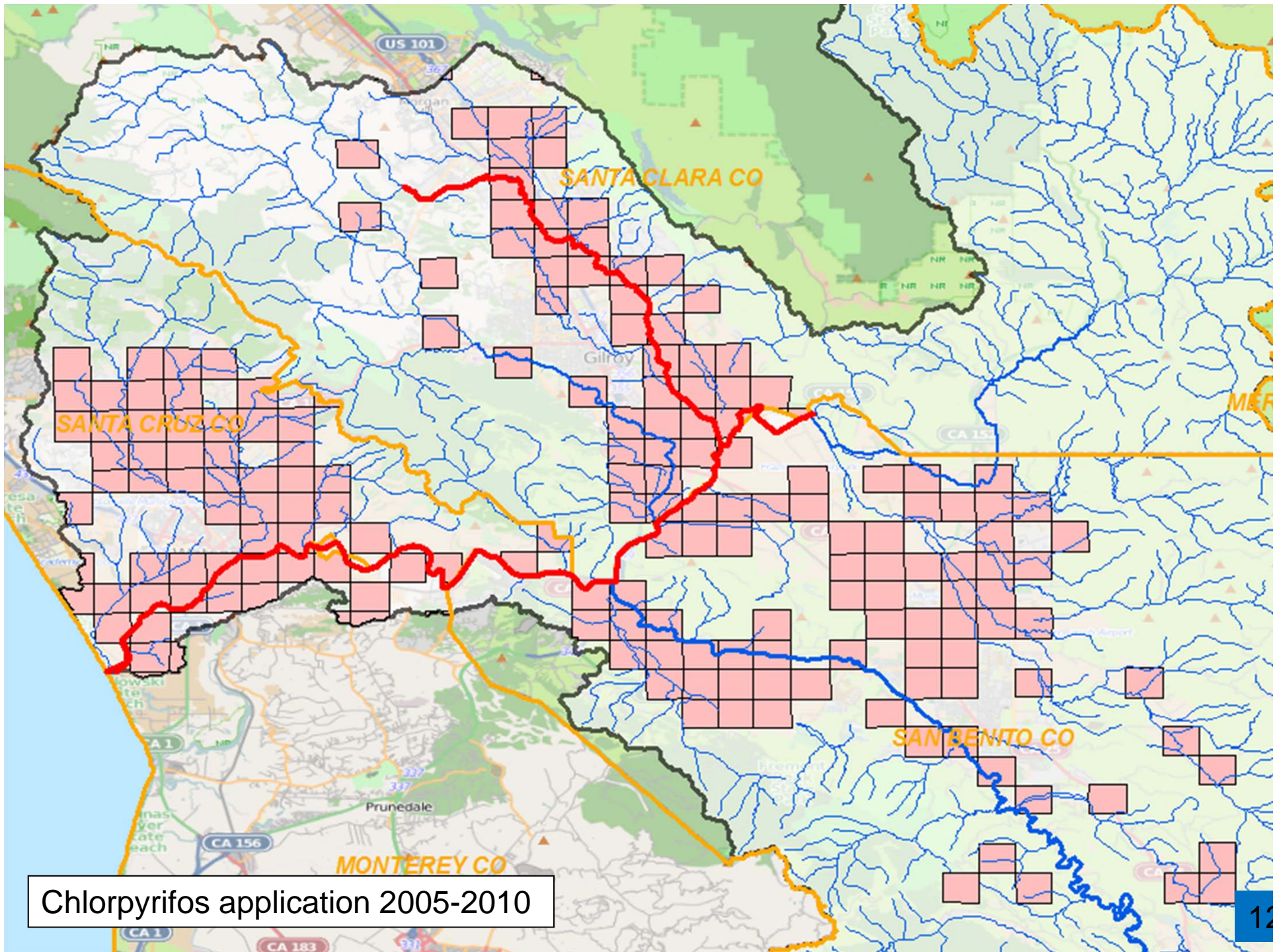
- **Urban**
 - **Structural applications**
 - **Professional landscape maintenance**
 - **Retail sale for private use ended 2001 and 2002**
- **Agricultural applications**

Urban

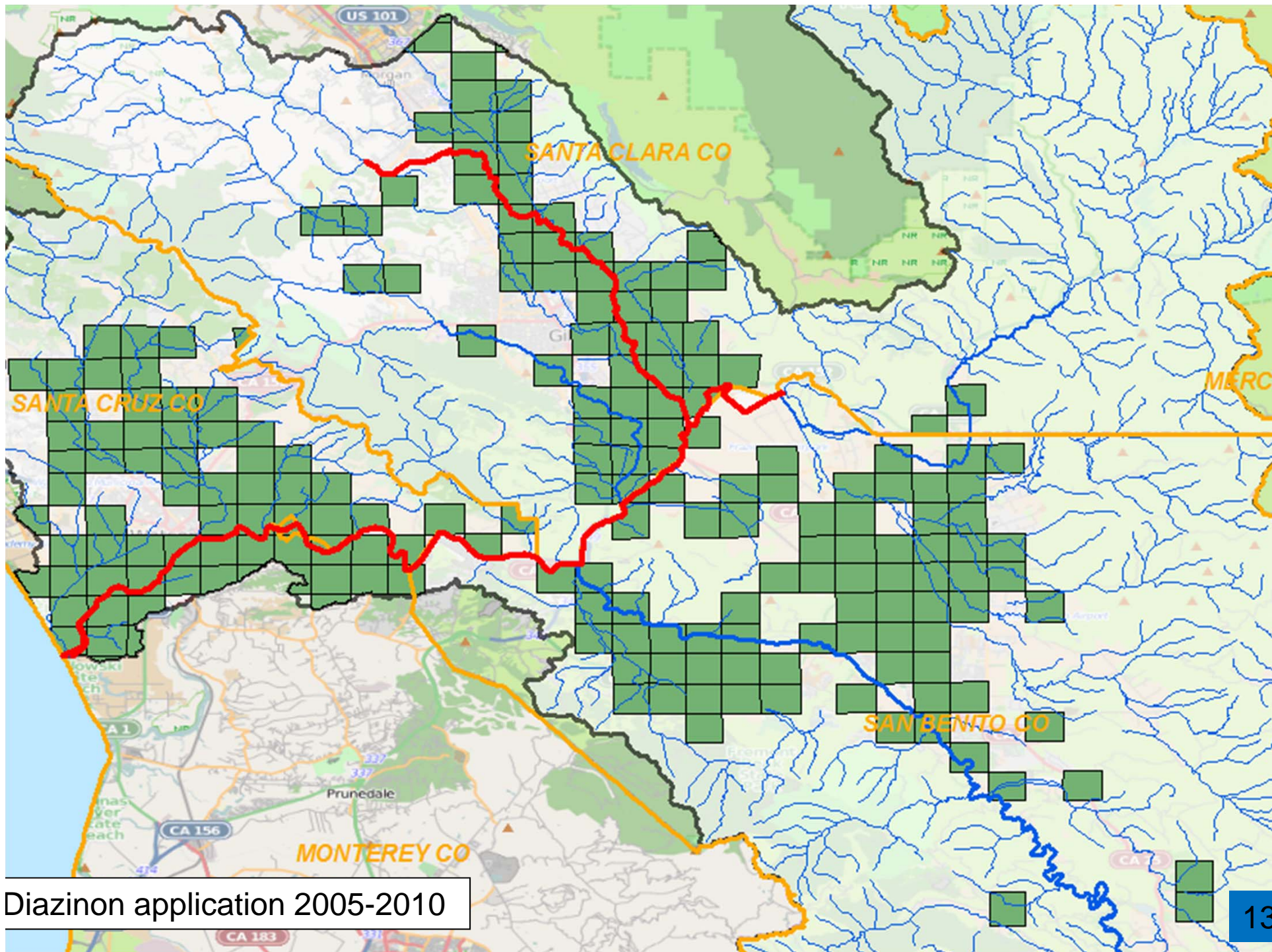
- Overall urban use in CA was less than 1% of total usage prior to 2000 ban (CDPR PUR 2010)
- 2009-2010 urban pesticides in northern CA (DPR study July 2011, Report 264)
 - Diazinon only detected 5% of the time, chlorpyrifos detected in 20% of sediment samples.
 - Problem in urban environments tending towards pyrethroids

Pounds of chemical applied in the Pajaro River Watershed between 2000-2010

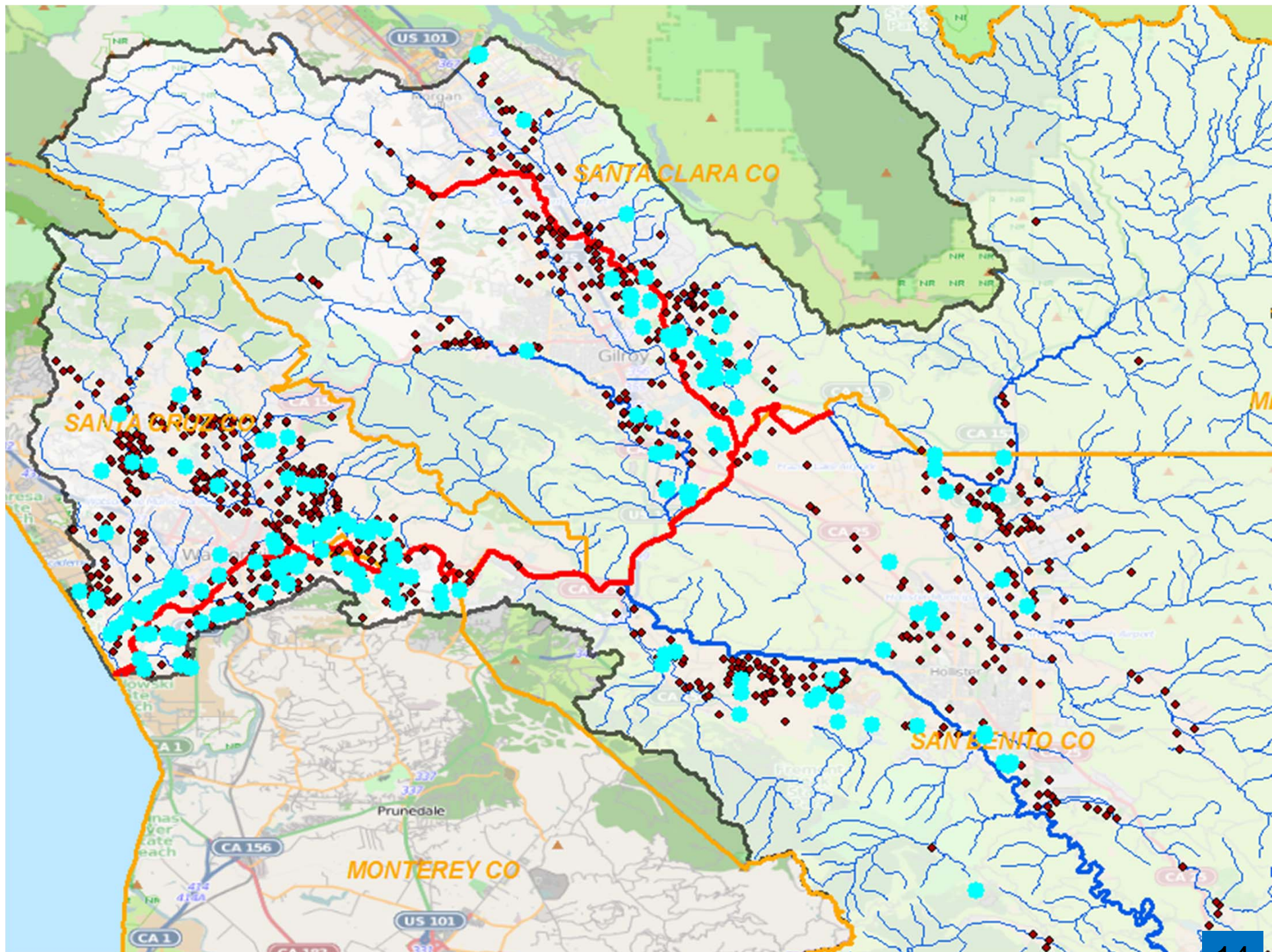




Chlorpyrifos application 2005-2010



Diazinon application 2005-2010



Implementation

- All TMDLs are required to have an implementation plan
- Regulatory mechanism to implement this TMDL is the Agricultural Order
- Not proposing any additional regulations
- Goal: Oct. 1, 2016 is date Ag Order states waters should be free of toxicity

Implementation Tools **(cannot dictate manner of compliance)**

- **Talk to technical service providers**
 - **Examples may include:**
 - **Timing of application**
 - **Method of application**
 - **Irrigation methods**
 - **Landguard**

Meeting our collective goals

- **Need for pest control**
- **Minimize crop loss**
- **No toxicity in our waterways**
 - **This TMDL chlorpyrifos and diazinon specifically, but we need to think about all pesticides in order to address toxicity**

Next Steps...

- **Additional Stakeholder Meetings & Outreach - Ongoing**
- **Public Review and Comment – January - February 2013**
- **Water Board Meeting – May 2013**

Discussion and Feedback

- **Have management practices changed significantly in last 3-4 years?**
- **What can Water Board do to help problem solve this issue?**
- **Suggestions/questions?**