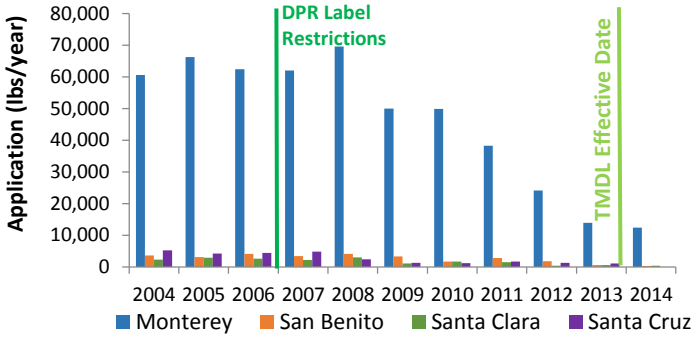
| Water Quality Report Card | | Chlorpyrifos and Diazinon in the Pajaro River Watershed | |
|---|---|---|---|
| **Regional Water Board:** | **Central Coast, Region 3** | **STATUS** | ☐ Conditions Improving<br>☑ **Data Inconclusive**<br>☐ Improvement Needed<br>☐ Targets Achieved/Water Body Delisted |
| **Beneficial Uses Affected:** | COLD, WARM, EST, WILD, RARE, MIGR, SPWN | | |
| **Implemented Through:** | Conditional Waiver of WDRs | **Pollutant Type:** | ☐ Point Source ☑ Nonpoint Source ☐ Legacy |
| **Effective Date:** | November 12, 2013 (TMDL) | **Pollutant Source:** | Irrigated Crop Production |
| **Attainment Date:** | October 2016 | | Erosion/Siltation |

## Water Quality Improvement Strategy

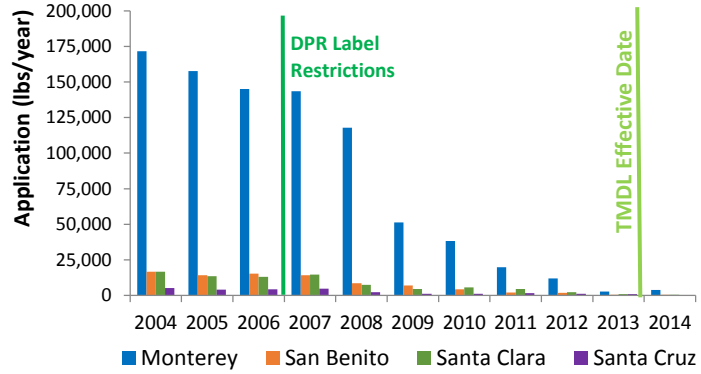
The Pajaro River Watershed encompasses approximately 832,000 acres and lies within Monterey, San Benito, Santa Cruz, and Santa Clara counties. The pollutants addressed in this report card are the organophosphate (OP) pesticides, chlorpyrifos and diazinon. These pesticides were detected in surface waters at concentrations that impair beneficial uses and have toxic effects on aquatic invertebrate organisms. Discharges from irrigated agriculture were identified as the primary source of these pesticides in the watershed. To address the impairments, the Pajaro River Watershed Chlorpyrifos and Diazinon TMDL became effective in 2013. The TMDL establishes numeric targets and load allocations for these two OP pesticides. The TMDL is implemented through the Regional Water Board's 2012 Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Agricultural Order), and the accompanying Monitoring and Reporting Program. The TMDL implementation schedule calls for achieving numeric targets for chlorpyrifos and diazinon by October 2016.

## Pajaro River Watershed – Pesticide Use by County (2004-2014)[a]

### Chlorpyrifos

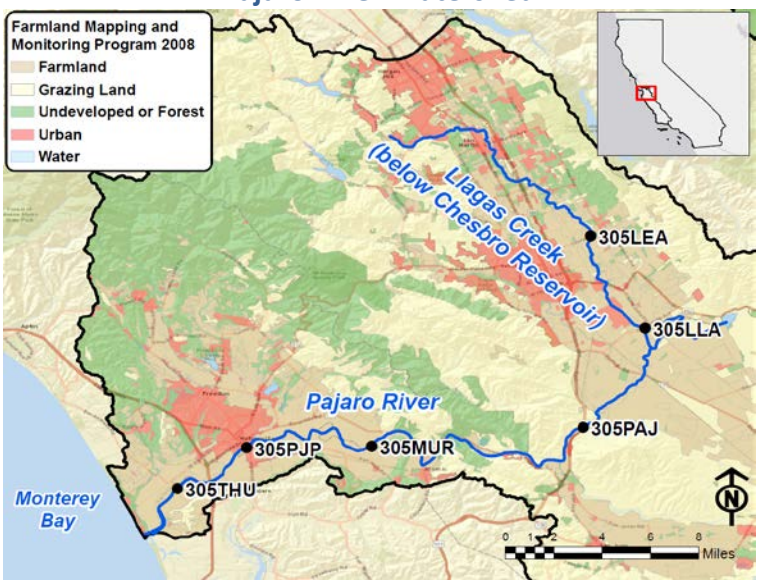



### Diazinon




[a] *Data source: CA Department of Pesticide Regulation Pesticide Use Reports (2004-2014)*

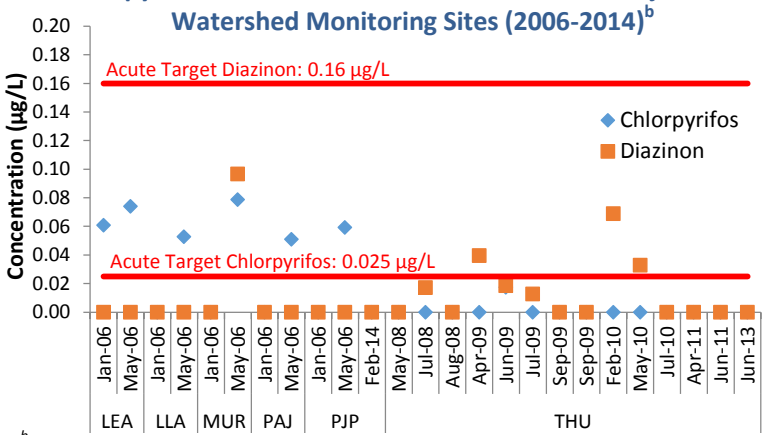
## Pajaro River Watershed




## Water Quality Outcomes

- Significant reductions in chlorpyrifos and diazinon applications have been observed in all four counties since 2008.
- A general decrease in water column concentrations of chlorpyrifos and diazinon (at some monitoring sites) has been observed since various pesticide restrictions, based on the reevaluations of pesticide products, by the CA Department of Pesticide Regulation became effective.
- Water quality data show improvements in reaching numeric targets at multiple sampling locations. However, there are a limited number of samples since the TMDL became effective in 2013.
- Toxicity was still observed at Pajaro River monitoring sites in 2014.
- Possible switch in OP pesticides (e.g., malathion) could be contributing to toxicity.
- The Regional Water Board will continue oversight of Agricultural Order implementation and monitoring efforts in the Pajaro River Watershed.

## Chlorpyrifos and Diazinon Concentrations at Six Pajaro River Watershed Monitoring Sites (2006-2014)[b]




[b] *Data source: CA Department of Pesticide Regulation Surface Water Database (SURF)*

*Released October 2016*