

Water Quality Report Card

Toxicity in Orcutt Creek Watershed

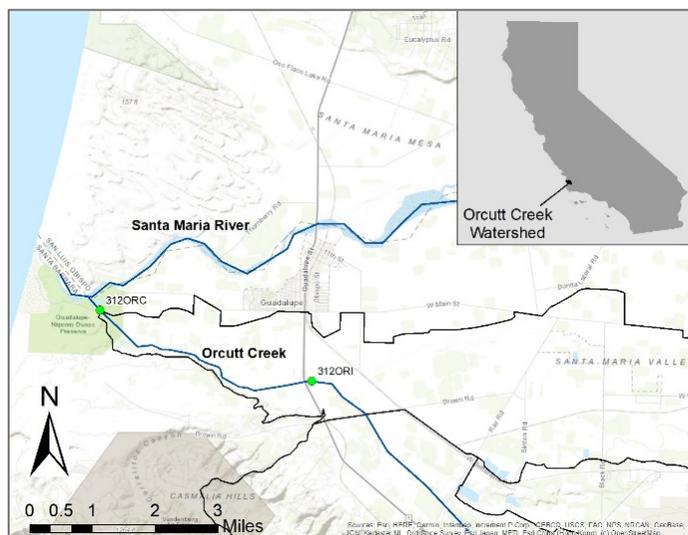
Regional Water Board:	Central Coast, Region 3
Beneficial Uses Affected:	COLD, WARM, EST, WILD, RARE, MIGR, SPWN, COMM, SHELL
Implemented Through:	WDR for the Irrigated Lands Regulatory Program
Effective Date:	January 30, 2014
Attainment Date:	2030

STATUS	Improvement Needed (see narrative below)
Pollutant Type:	Nonpoint Source
Pollutant Source:	Irrigated Crop Production

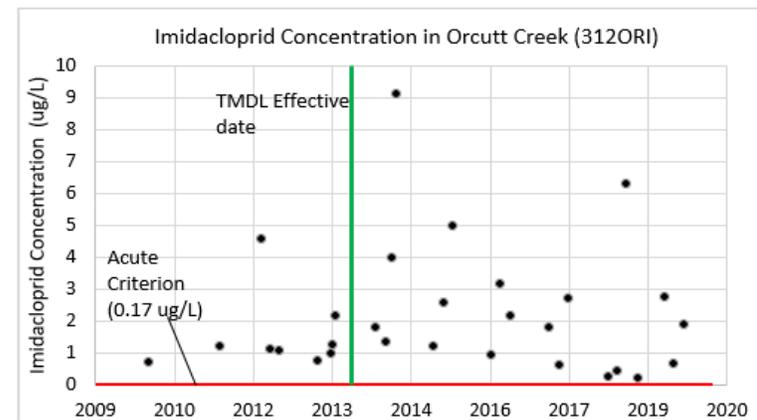
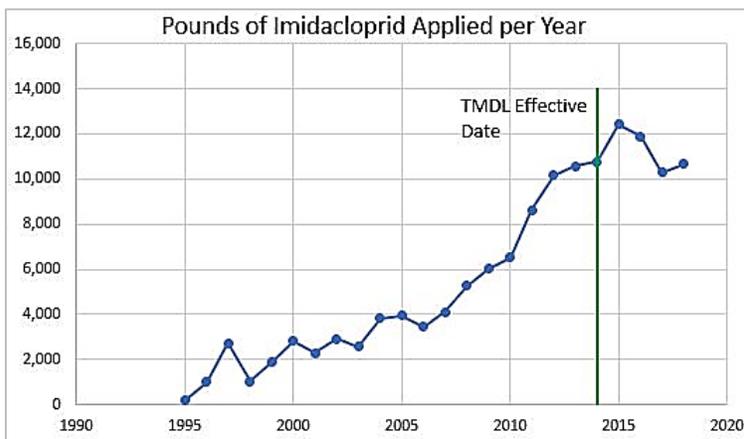
Water Quality Improvement Strategy

Orcutt Creek is a subwatershed in the lower Santa Maria River watershed in northern Santa Barbara County. Orcutt Creek was added to the 303(d) List for toxicity and several pesticides in 2010. The [Santa Maria Watershed Toxicity and Pesticide TMDL Project](#) became effective in 2014 and includes Orcutt Creek TMDLs for organophosphate (OP) and pyrethroid pesticides and toxicity to the relevant sensitive test organisms (*Ceriodaphnia dubia* (water flea, sensitive to OP insecticides) and *Hyaella azteca* (amphipod, sensitive to pyrethroid insecticides)). However, TMDLs were not established for neonicotinoid pesticides, such as imidacloprid, or for toxicity to the aquatic test organism (*Chironomus sp.*, midge). Although improvements in organophosphate pesticides have been documented in this watershed, ongoing and increasing use of neonicotinoid insecticides continue to cause toxicity, particularly to *Chironomus sp.*, in Orcutt Creek.

Orcutt Creek Watershed Map



Water Quality



Water Quality Outcomes

- Since approval of the TMDL, data indicate a reduction in use of OP and pyrethroid pesticides as well as reduced toxic effects to the relevant sensitive test organisms (water fleas and amphipods), see this [2020 report card](#).
- Imidacloprid application for irrigated agriculture use has steadily increased since 1995.
- All monitoring samples from lower Orcutt Creek station 312ORI exceeded the imidacloprid acute criterion and were toxic to *Chironomus sp.* (sensitive to neonicotinoid insecticides).
- Toxicity to *Chironomus sp.* is common throughout the watershed.
- Neonicotinoid pesticides and toxicity to *Chironomus sp.* are not addressed in approved TMDLs. However, new TMDLs are planned for 2022.

