

# CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

## INSPECTION REPORT

**ACL Complaint R5-2012-0515  
Attachment D  
19 May 2012 Inspection Report**

**INSPECTION DATE:** 19 May 2011  
**FACILITY:** Orestimba Creek Area Drain  
**LOCATION & COUNTY:** Area Drain Along JT Crow Road, Stanislaus County  
**INSPECTED BY:** Terry Bechtel  
**ACCOMPANIED BY:**

**OBSERVATIONS AND COMMENTS:**

On 19 May 2011, I was conducting routine watershed evaluations in the Orestimba Creek area. At approximately 10:30 am, I observed that the drain crossing River Road, approximately 0.66 miles south of Orestimba Creek (see map), had a low to moderate flow, and was relatively low in sediment load.

At approximately 1:00 pm, I crossed this drain again. Now it had a much higher flow rate and a significant sediment load. I followed the drain west (up-gradient). There were a number of underground drainage connections into the drain, most from the north. I did not see runoff coming from these pipes at this time, or irrigation applied to the adjacent cropland. I did observed that the sediment load appeared heavier farther down gradient toward the river.

I continued to follow the drain westward along JT Crow Road. Just east of Hwy 33 (see map) I observed a tomato field that was being irrigated (APNs 027-018-056 and 049-014-001). The drainage from the field was flowing into the area drain I had followed. The field drainage had a significant sediment load. I then checked the irrigation supply water. The field drain water had significantly more sediment load than the supply water. Water samples were collected from the irrigation supply water and field drainage. Observations and field data were recorded.

The water in the drain was flowing into the San Joaquin River. There was a significant plume of sediment flowing into the river. The flow in the drain at the river was estimated to be approximately 3 foot wide, by 3 foot deep (approximately 2 foot wide at the bottom), flowing approximately 1 foot per second, or approximately 643 cubic feet per minute (using 0.70 friction coefficient of the ditch). The distance from the field to the river is approximately 3.5 miles.

I called and spoke with Joe McGahan, the Westside San Joaquin River Watershed coalition lead to let him know what I had observed. Water samples were collected from the irrigation supply, field drainage, drainage to the river, and the river. Field data was recorded and water samples taken to the lab for analysis.

Approved:		
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**Photo 1:** Irrigation supply water at JT Crow Road just east of Hwy 33. Turbidity – 42.7 NTU



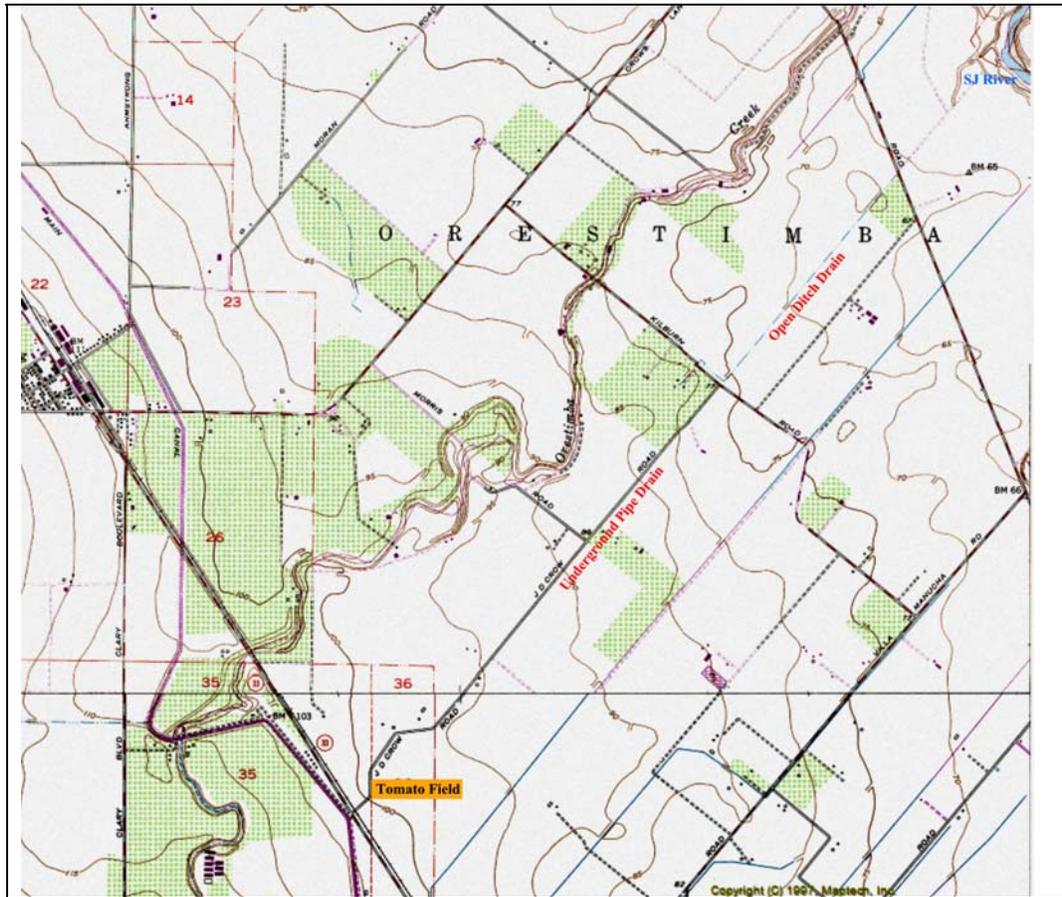
**Photo 2:** Field drainage water going into the area drain along JT Crow Road. Turbidity – 544 NTU



**Photo 3:** Flow into the San Joaquin River looking southeast.  
Up River Turbidity – 25.6 NTU  
Outfall Turbidity – 671 NTU  
Down River prox. 100 feet Turbidity – 52.1 NTU



**Photo 4:** Flow into the San Joaquin River looking northeast.



**Map:** Approximately 3.5 miles from the tomato field to the San Joaquin River

**SUMMARY:**

A tomato field tailwater was discharging sediments into an area drain that is a direct tributary to the San Joaquin River. The cropland described above contributed all or in part to the sediment load flowing into the San Joaquin River. The field discharge water turbidity of 544 NTU contributed to the increase the background water (supply water) turbidity from 42.7 NTU to the drain outfall of 671 NTUs in the Amaral Line – a 13x plus increase in turbidity. The Amaral Line is both a drain as well as irrigation supply water for down stream users.

The sediments in the outfall increased the river turbidity from 25.6 NTUs to 52.1 NTUs comparing the up-river to down-river samples. The Basin Plan in part states: “Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.” The Basin Plan also states in part “Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.” The discharge from the tomato field exceeded the Basin Plan water quality objects for both the Amaral Line receiving water as well as the San Joaquin River.

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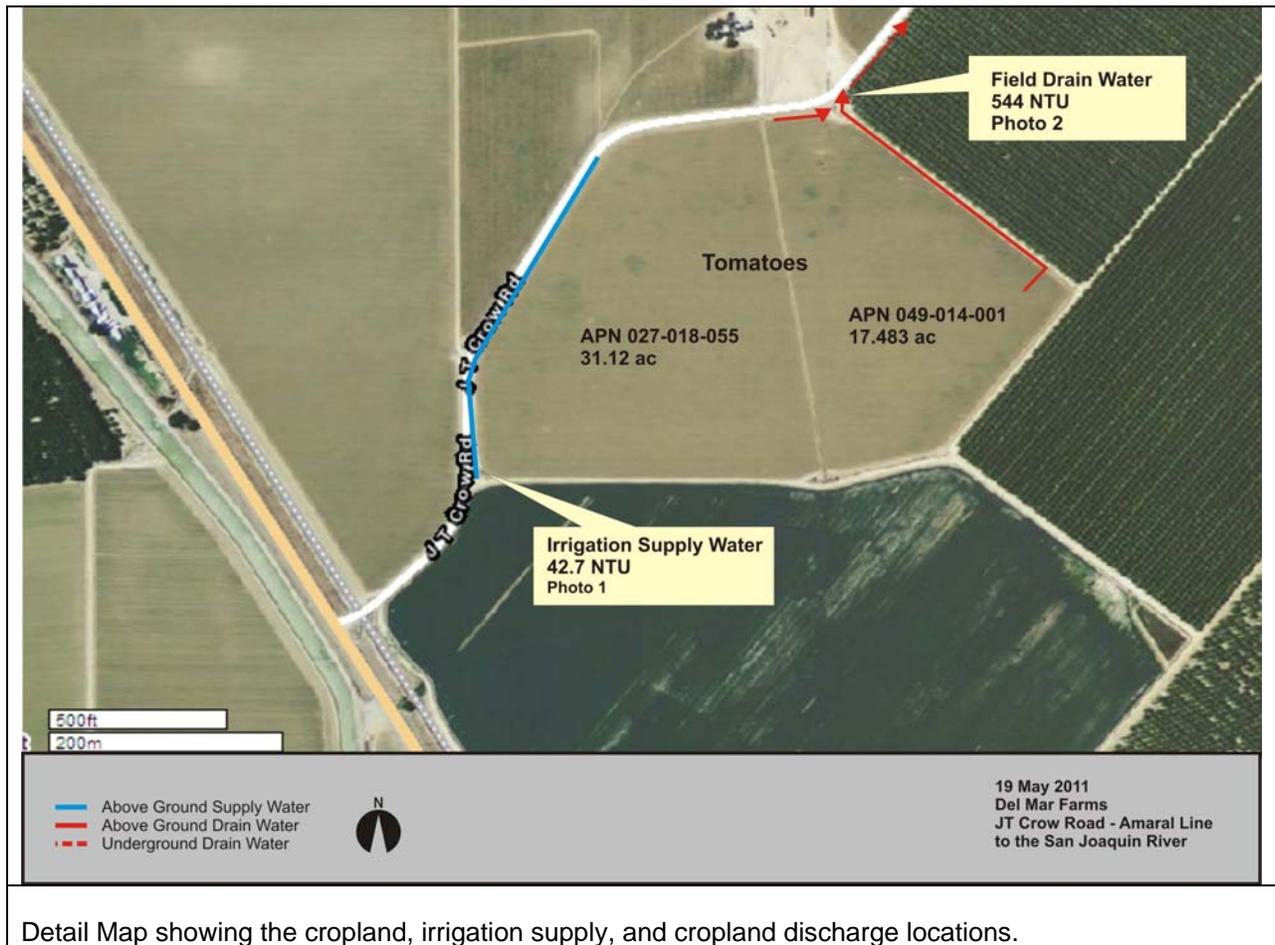
Sample Location	Turbidity (NTU)	TDS mg/L	NO <sub>3</sub> mg/L	Potassium $\mu$ g/L
Supply (Irrigation supply water to the field)	42.7	451	3.63	2,910
Field Drain (tailwater runoff from field into drain)	544	445	3.78	12,400
Up-River	25.6	108		
To River (drain outfall)	671	463		
Down River approximately 100 feet	52.1	132		



Irrigation supply water to the field (left). Field tailwater (right).



Left to right: Outfall to the river, upriver approximately 100 feet, and down river approximately 100 feet.



Detail Map showing the cropland, irrigation supply, and cropland discharge locations.

