CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

IRRIGATED LANDS REGULATORY PROGRAM INSPECTION REPORT

REPORT DATE: 12 July 2010
PREPARED BY: Wesley Ouimette

LOCATION & COUNTY: Discovery Bay, Contra Costa County

INSPECTION DATE: 1 July 2010

INSPECTED BY: Wesley Ouimette & Chris Jimmerson

BACKGROUND:
On 22 June 2010, staff received a complaint of sediment being discharged from agricultural fields into Discovery Bay.

On 23 June 2010 staff inspected the affected area and observed sediment-laden water discharging into Discovery Bay from a roadside canal that originated off of Marsh Creek Road. Staff surveyed the area and was able to confirm that sediment-laden water was being discharged but was unable to find a direct source of the water.

OBSERVATIONS AND COMMENTS:
On July 1 2010 staff conducted a follow-up inspection to determine the source of a sediment discharge to Kellogg Creek and subsequently Discovery Bay.

At approximately 9:45 a.m. staff started the inspection off of Newport Road where water from the drainage ditch on Marsh Creek Road enters Kellogg Creek then subsequently discharges into Discovery Bay (Photos 1-2). Staff observed turbid water flowing in the drainage ditch towards the aforementioned discharge points.

Staff followed the water courses to map out the drainage system and to identify possible discharge points that could have possibly contributed to the problem.

At approximately 10:30 am staff observed a cornfield on Point of Timber Road (Latitude N 37.91106, Longitude W 121.63249) that could potentially discharge sediment-laden water (photos 3-13). This cornfield had a series of settling ponds that capture the tail water from the operation, and then discharge into a canal that eventually connects with Kellogg Creek. The discharged water can then enter Discovery Bay (see attached map). At the time of staff's inspection no water was flowing from this operation, but staff did observe wet soil and debris from the cornfield in an adjacent canal. The water in the settling ponds also appeared to be turbid, though it has not been flowing for a while. This suggests that sediment is not being settled out of the water before it is discharged. This site could be a potential contributor to the problem.

At approximately 12 pm staff observed an actively discharging tomato field on Byron Highway (Latitude N 37.90004, Longitude W 121.64141)(photos 10-15). Staff observed sediment-laden water discharging from this tomato field into a tail water ditch which then entered an underground pipe (photos 16-19, also see attached map). Staff believes the underground pipe

then discharges into a roadside ditch on Marsh Creek Road (Latitude N 37.89629, Longitude W 121.64122). Staff obtained a turbidity reading of the tail water entering the underground pipe which was 260 nephelometric units (ntu). Staff compared this to a turbidity reading of the possible supply water to the field which was 11 ntu.

SUMMARY:
An actively discharging tomato field was identified as discharging sediment-laden water that eventually discharges into Discovery Bay. Additionally a corn field was identified as recently discharging into the drainage system, but the quality of the discharged water is unknown.

Both properties were identified as being members of the San Joaquin County and Delta Water Quality Coalition (coalition).

NEXT STEPS:
Staff has identified the landowner of the tomato field and has provided their ownership information to the coalition. Staff has also contacted the landowner and explained that their field was identified as one of the contributors to a sediment discharge that was affecting Discovery Bay. Staff explained that we will be mailing them a letter about this within the coming week.

Staff recommends sending a letter to the landowner of the discharging tomato field to inform them of the need for corrective action to reduce the sediment load in their discharge. Staff also recommends sending a letter to the landowner of the cornfield as a warning to monitor the sediment load in their tailwater.

Staff will re-visit the area to try and confirm if there are any additional dischargers contributing to the complaint.

Approved:		

Site Inspection Photo Log 1 July 2010
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Contra Costa County

Photo 1: Photo taken from a pedestrian bridge off of Newport Drive. The bridge is over a canal that originates from a roadside ditch on Marsh Creek Road and connects into Kellogg Creek.

Photo 2: Photo taken in same location as photo 1. Shows sediment-laden water that will be discharged into Kellogg Creek then into Discovery Bay.

Photo 3: Photo taken of a tailwater ditch for a corn field on Point of Timber Road (Lat. N 37.91106 Long. W 121.62349).

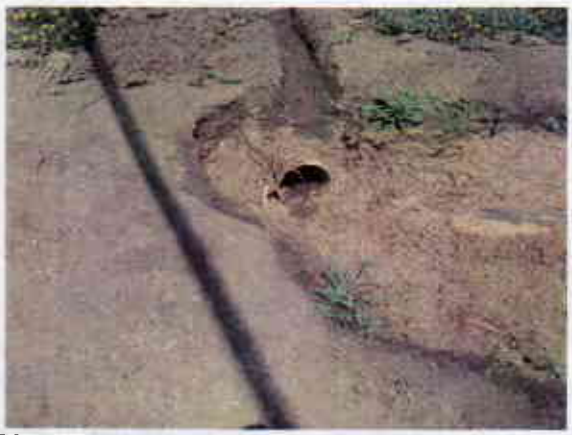

Photo 4: Photo shows part of the settling pond system for the corn field.

Photo 5: View of another pond in the above settling pond system.

Photo 6: View of another pond in the above settling pond system.

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Discovery Bay Sediment Discharge Complaint
Contra Costa County

Photo 7: View of another pond in the above settling pond system.

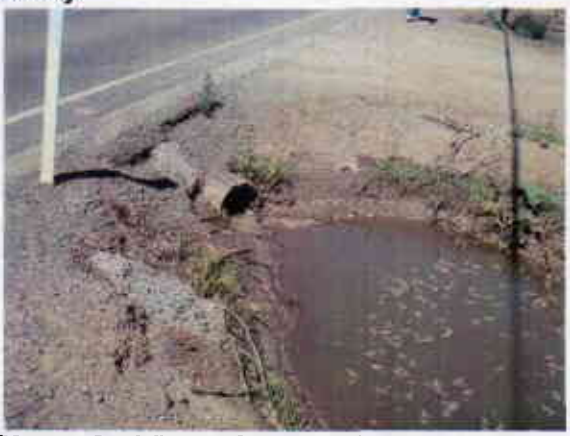

Photo 8: View of a pipe that connects to the creek on the opposite side of the road.

Photo 9: Photo shows opposite side of the road where water from the pipe in photo 8 discharges to a canal.

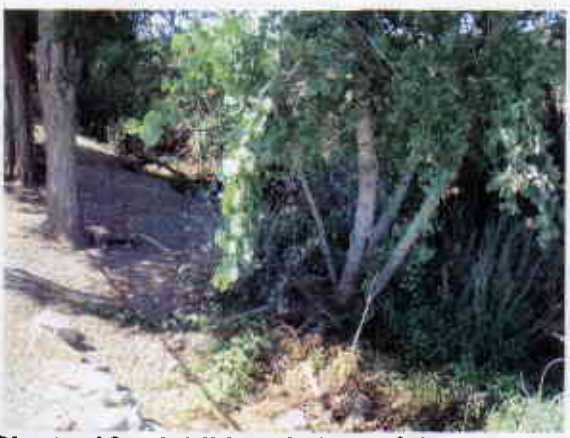

Photo 10: Additional view of the canal from photo 9.

Photo 11: Photo shows additional section of the settling pond system.

Photo 12: Another view of pond in photo 11.

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Contra Costa County

Photo 13: Close up of underground pipe in settling pond. Staff is unsure where exactly this pipe connects to.

Photo 10: Photo taken facing east off of Byron Highway (Lat. N 37.9004, Long. W 121.64141). Photo shows tomato field that is actively irrigating and discharging.

Photo13: Another view of the tailwater discharging from the tomato field in photo 10.

Photo 14: Photo shows location where part of the tailwater enters an underground pipe.

Photo 15: Photo shows another section where the tailwater enters an underground pipe.

Photo 16: Photo taken of Marsh Creek roadside ditch where the underground pipe in photos 15-16 surfaces. (Lat N 37.89629, Long. W 121.63924).

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Discovery Bay Sediment Discharge Complaint
Contra Costa County

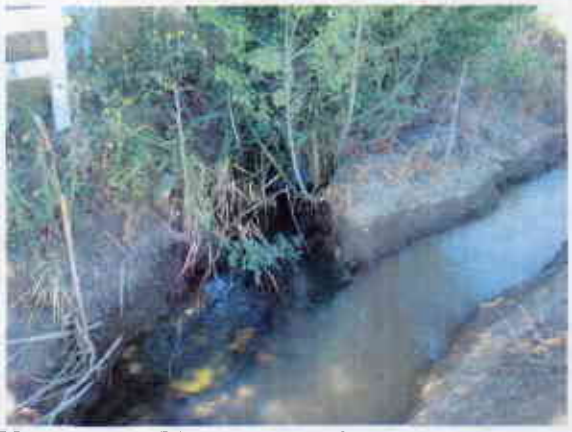

Photo 17: Photo was taken downstream of photo 16 and shows an additional input of clear water being added to the canal.

Photo 18: Photo taken down stream of photos 16-17. Photo shows continuation of discharged water in roadside ditch as it travels towards Kellogg Creek.

Photo 19: Photo shows the downstream continuation of the canal in photos 16-18. This canal connects with Kellogg Creek.

Map 1. Potential Discharge Pathways