

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION

STAFF REPORT FOR REGULAR MEETING OF FEBRUARY 8-9, 2018  
Prepared on January 18, 2018

ITEM NUMBER: 17

SUBJECT: Update on Erosion and Sedimentation Cases at Elkhorn Road and Discussion of Erosion and Sedimentation on Agricultural Lands

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This Action: Informational/Direction

**SUMMARY**

This staff report provides information on two topics:

- 1) An update on the two sites where erosion and sedimentation occurred in early 2017 at Elkhorn Road, near Watsonville and
- 2) A general discussion about erosion and sedimentation and agricultural lands as a source.

Staff will also provide a brief presentation on these two topics.

**DISCUSSION**

Erosion and Sedimentation Cases at Elkhorn Road

On February 10, 2017, Central Coast Water Board Irrigated Lands Regulatory Program staff (ILRP staff) received a complaint describing severe erosion from strawberry farms on Elkhorn Road resulting in sediment discharges to Elkhorn Slough during and after significant rain events during the winter rainy season of 2016-2017. The complainant identified two sites, Francisco Rocha Farms and Glez Farms, as having discharged sediment from their farms, and ILRP staff commenced investigation following receipt of the complaint. To date, ILRP staff has issued three notices of violation (NOVs) to each farm. Staff also conducted two site visits to each farm. Table-1 summarizes the event chronology for these two cases.

Table 1. Sequence of Events for Erosion and Sedimentation Cases at Elkhorn Road

| Date              | Site 1<br>Francisco Rocha Farms,<br>Vasquez Ranch  | Site 2<br>Glez Farms,<br>Elkhorn Ranch   |
|-------------------|--|--|
| February 10, 2017 | Complaint received.  | Complaint received.  |
| February 10, 2017 | ILRP staff contacts Natural Resource Conservation Service and California Department of Fish and Wildlife (CDFW) for information. | ILRP staff contacts Natural Resource Conservation Service and California Department of Fish and Wildlife (CDFW) for information. |

| Date              | Site 1<br>Francisco Rocha Farms,<br>Vasquez Ranch  | Site 2<br>Glez Farms,<br>Elkhorn Ranch   |
|-------------------|--|--|
| February 10, 2017 | ILRP staff contacts operator for information and coordinates with Monterey County.   | ILRP staff contacts operator for information and coordinates with Monterey County.   |
| March 6, 2017     | ILRP staff conducts 1 <sup>st</sup> multi-agency site visit with operator.   | ILRP staff conducts 1 <sup>st</sup> multi-agency site visit with operator.   |
| March 7-8, 2017   | CDFW provides public comment at Water Board meeting.   | CDFW provides public comment at Water Board meeting.   |
| July 10, 2017     | ILRP staff issues 1 <sup>st</sup> notice of violation requiring information and technical reporting.   | ILRP staff issues 1 <sup>st</sup> notice of violation requiring information and technical reporting.   |
| July 24, 2017     | ILRP staff issues 2 <sup>nd</sup> notice of violation citing failure to submit requested information and technical reporting.  | ILRP staff issues 2 <sup>nd</sup> notice of violation citing failure to submit requested information and technical reporting.  |
| October 4, 2017   | ILRP staff issues 3 <sup>rd</sup> notice of violation as a final reminder, citing failure to submit requested information and technical reporting and notifying of intent to conduct a site visit. | ILRP staff issues 3 <sup>rd</sup> notice of violation as a final reminder, citing failure to submit requested information and technical reporting and notifying of intent to conduct a site visit. |
| October 6, 2017   | ILRP staff conducts a drive-by inspection.   | ILRP staff conducts a drive-by inspection.   |
| October 19, 2017  |  | Attorney submits updated Farm Plan dated August 19, 2017, and correspondence sent to Monterey County requesting 1995 sediment basin permitting file and a meeting.                                 |
| October 24, 2017  | ILRP staff conducts 2 <sup>nd</sup> multi-agency compliance site visit with operator and landowner. <sup>1</sup>   | ILRP staff conducts 2 <sup>nd</sup> multi-agency compliance site visit with landowner.   |
| November 1, 2017  |  | Attorney submits Monterey County permit file for 1995 sediment basins.   |
| November 7, 2017  | ILRP staff issues findings to dischargers from compliance site visit and reiterates requirements of the three previously issued Notices of Violation.  | ILRP staff issues findings to dischargers from compliance site visit and reiterates requirements of the three previously issued Notices of Violation.  |
| January 2, 2018   |  | ILRP issues follow-up e-mail requesting submission of past-due requested information and technical reporting.  |
| January 5, 2018   | ILRP staff issues draft cleanup and abatement order for comment.   |  |
| January 10, 2018  |  | Operator copies ILRP staff on an e-mail to the Monterey RCD requesting response to their e-mail seeking assistance with sediment basin design.   |

Francisco Rocha Farms (Vasquez Ranch): Site conditions at this farm are considered a high threat to water quality. The farm's topography consists of steep to very steep slopes. Vasquez

<sup>1</sup> Francisco Rocha Farms had been fumigated that morning, preventing all but limited access during the site visit.

Ranch has not submitted a Farm Water Quality Management Plan (Farm Plan), and there is no indication that they have ever prepared a Farm Plan. Their sediment basin is undersized and in need of immediate maintenance. ILRP staff did not observe evidence that the operator has implemented any best management practices for sediment management. Despite ILRP staff coordination to schedule the compliance site visit, written notification of the visit, and a follow-up reminder the day before, ILRP staff was advised upon arrival that fumigation that morning prevented all but limited access to the farm. The farm has not responded in any form to ILRP staff communications or the NOVs, except to confirm and attend the compliance site visit. Given the ongoing lack of compliance and high water quality threat, ILRP staff issued a draft cleanup and abatement order (CAO) for comment on January 5, 2018. The comment period ends on February 5, 2018. After the close of the comment period, the Executive Officer will review the draft CAO and all comments and then make any necessary revisions and issue the final CAO. The risk of significant sediment discharges from this farm is extremely high as evidenced by past discharges.

Glez Farms (Elkhorn Ranch): Site conditions at this farm are a low threat to water quality. The farm's topography is fairly level, with only minor slopes. The operator has implemented multiple best management practices (e.g., furrow planting, contoured rows, vegetation allowed to grow between rows, and drip irrigation). The farm also either plants cover crops or allows the strawberry plants to fallow in the ground if they are unable to plant a new strawberry crop in the fall. Glez Farms submitted an updated Farm Plan in response to the NOVs, and submitted engineered design plans and permitting for their sediment basins. The landowners and their attorney showed ILRP staff photographs of road failures and downed trees that they contend led to the reported sediment discharges to Elkhorn Road. The landowners contend that the discharges from their farm were minimal. Their contention that the County is at least partially responsible for the sediment discharges to Elkhorn Road is plausible. These dischargers are progressing satisfactorily toward compliance. The risk of significant sediment discharges from this farm is low.

## **EROSION CONTROL ISSUES IN THE IRRIGATED LANDS REGULATORY PROGRAM**

Erosion is the weathering, detachment, transport and movement of soil particles by water, wind or gravity. Sedimentation is the deposition of sediment; sedimentation can occur when the velocity water is not great enough to keep the sediment in suspension. Factors affecting the potential for erosion include the presence of bare soil, soil erodibility, rainfall intensity, and topography.

Erosion and sedimentation can affect beneficial uses of waters of the state. For example, clean gravels free of fine sediment are crucial for spawning habitat of anadromous fish. Sedimentation can impair creeks and rivers with the beneficial use designation of cold fresh water habitat (COLD), wildlife habitat (WILD), migration of aquatic organisms (MIGR), spawning, reproduction and/or early development (SPWN), and rare threatened or endangered species (RARE).

Turbidity is a measure of water clarity. Turbidity rises with reduced clarity, which can occur when fine sediment is suspended in the water column. Clay soils contain fine sediment, therefore, increased turbidity can be indicative of erosion in areas with clay soils. There are currently 45 waterbodies in the Central Coast Region listed as impaired for turbidity or sediment on the Clean Water Act section 303(d) list; seventy-five percent of the ranches enrolled in the agricultural order are located in the watersheds of these impaired waters.

Staff receives public and municipal complaints regarding erosion, particularly during and following rain events. In the past three years, ILRP staff has received over fifty complaints from the public or municipalities. Over 70% of the complaints received involved irrigation or stormwater runoff, erosion, and sediment discharges. In some cases, the complaint does not include a clear threat to water quality; the complaint may be from a neighbor downslope of an agricultural operation who is receiving irrigation or stormwater discharge on their property. In some cases, there is a clear threat to water quality and a clear nexus with the conditions in the agricultural order.

Over 30% of the complaints received, excluding anonymous complaints, involve discharges from agricultural operations using plastic mulch; these include crops such as strawberries and cane berries. ILRP staff's experience is that most of these issues stem from plastic mulch used on hillsides. A one-inch rain event over a 10-acre parcel will produce approximately 36,300 ft<sup>3</sup> of rain, a volume equivalent to a pond approximately 85 feet on each side and 5 feet deep. A rain event on a sloped field with plastic can create a large volume of water rapidly moving off site if measures are not taken to capture the water.

The agricultural order contains several conditions related to erosion control. For example, conditions 36-39 state:

*36. Dischargers must implement water quality protective management practices (e.g., source control or treatment) to prevent erosion, reduce stormwater runoff quantity and velocity, and hold fine particles in place.*

*37. Dischargers must minimize the presence of bare soil vulnerable to erosion and soil runoff to surface waters and implement erosion control, sediment, and stormwater management practices in non-cropped areas, such as unpaved roads and other heavy use areas.*

*39. Dischargers must a) maintain existing, naturally occurring, riparian vegetative cover (such as trees, shrubs, and grasses) in aquatic habitat areas as necessary to minimize the discharge of waste; and b) maintain riparian areas for effective streambank stabilization and erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, and wildlife support to minimize the discharge of waste;*

Growers memorialize their efforts to comply with these conditions through development and implementation of a farm water quality management plan (Farm Plan). Condition 44 of the agricultural order requires that Farm Plans be kept current, on the farm, and available to staff, when requested. The Farm Plan must include:

*Description and time schedule for any farm water quality management practices...[that include]...erosion control (including stormwater management), and aquatic habitat protection to achieve compliance with this Order.*

When responding to complaints regarding erosion from agricultural lands, staff requires the grower to forward information contained in the Farm Plan addressing erosion control. Results of such requirements are mixed; some growers develop and implement Farm Plans, others do not.

## **CONCLUSION**

Staff will continue to work with the two farms identified above and use all available regulatory tools to ensure water quality protection and that these farms are in compliance with all ag order requirements.

As part of this item, staff will also provide a presentation covering in more detail the topics of managing erosion and sedimentation on agricultural lands, and the ILRP program efforts in this area.