Water Quality Inspection Report

Inspection Date: January 28, 2019

Complaint Location:
Main production area and fields at 647 Nissen Road, Ferndale, CA, Eel River Watershed. Additional cattle raising area at 3210 Goble Lane, Ferndale, CA, Salt River Watershed.

Water Quality Permit: July 18, 2012 Avelar Brothers Dairy was enrolled under the Conditional Waiver of Waste Discharge Requirements for Existing Dairies Order No. R1-2012-0003

Attendees:
- Cherie Blatt and Caila Heintz, North Coast Regional Water Quality Control Board (Regional Water Board)
- Mario and Victor Avelar of Avelar Brothers Dairy with visits from Mario's wife, daughter, and father.

Background:
On December 31, 2018, Cherie Blatt received an anonymous complaint regarding Avelar Dairy, 647 Nissen Road, Ferndale. The complainant stated that Avelar Brothers Dairy has a manure pond that was about to overflow, a wood shavings loafing lot for cows along Nissen Road that discharges to the road ditch, dead cows/dirt/garbage piles along the Eel River, and at 3210 Goble Lane (also Avelar property), storage of manure/dirt/barrels along a tributary slough in the Salt River watershed. The complainant visited the Regional Water Board office once and called Ms. Blatt approximately 13 times between December 31, 2018 and January 25, 2019, concerning the Avelar Dairy and two other unrelated properties. The unrelated properties are not discussed in this report.

Information from January 28, 2019 Inspection:
On January 8, 2019, Cherie Blatt and Jim Burke, Regional Water Board, called Mario Avelar to set up the complaint inspection and to help the Avelar's fill out their late Annual Report as part of the Conditional Waiver permit. January 28 at 10:00 AM was agreed upon for the inspection date with Cherie and Caila in attendance.

Areas A and B discussed below are on 20-acre Assessor's Parcel Number (APN) 100-102-005. Area C is on 12-acre APN 100-102-004. Area D is on 80-acre APN 100-112-007. All parcels have areas of low elevation that frequently flood or pond water during heavy rainfall and especially when the Eel River floods beyond its banks.

Annual Report
Note that Avelar Dairy's Annual Report was not submitted to the Regional Water Board by the November 30 due date in 2018. This was the third consecutive time that Cherie went to the dairy to help the Avelars fill it out.

At 10:00 AM, Ms. Blatt and Ms. Heintz arrived at Avelar Dairy, 647 Nissen Road, Ferndale. Mario and Victor Avelar greeted us and were pleasant and accommodating throughout the inspection. Ms. Blatt asked Mario if she could help him fill out his late Annual Report for his Conditional Waiver permit R1-2012-0003 since the form was due by November 30, 2018. Mario said yes, his wife came over to fill out the Annual Report form. Ms. Blatt read Mario the questions on the form, Mario answered, and his wife wrote the answers on the Annual Report form. Mario signed it. Next, Ms. Blatt said she needed to take photos of the manure pond for the Annual Report and that it was time to look at the four areas (A, B, C, and D below) in the complaint.

Area A: Manure Pond Area North of Dairy Buildings
Ms. Blatt, Ms. Heintz, Mr. Mario Avelar, and Mr. Victor Avelar walked through a barn to access the manure pond area. Mr. Victor Avelar opened the gate so that Ms. Blatt and Ms. Heintz could take close-up photos of the manure pond. The manure pond appeared to have several feet elevation of capacity. Rain gutters at dairies should collect clean roof water and discharge away from manure ponds to retain capacity in the manure pond and prevent overflow, however, the rain gutters on the buildings contained large tufts of grass in some areas, had disconnected or missing pieces in other places, and generally were observed to be non-operational. **Recommendation 1:** The roof rain gutters had plants growing in them and had sections in disrepair. The roof rain gutters must be cleaned and repaired to discharge clean rainwater away from the manure pond.

Disturbed soil and tire tracks were observed and photographed along the north side of the farm buildings from Nissen Road to the west end of manure pond berm. Water was pooled in a low spot in the field to the north of the manure pond. Several ducks were swimming on the surface of the pooled water in the field. Irrigation equipment was located on the edge of the pooled water near the east end of the manure pond. Mario stated that the water was from recent rains. An approximately one-half acre area of over 90 percent bare disturbed soil was observed north of the dairy buildings from Nissen Road to the manure pond. **Recommendation 2:** To keep soil in place and uptake nutrients, this area must be vegetated prior to the rainy season.

Area B: Wood Shavings Cow Loafing Lot Along Nissen Road
Next, we walked along Nissen Road to the wood shavings lot that is built up with fill soil, rock, and wood shavings to form a cow loafing lot at a higher elevation than the surrounding pasture. Vegetation was observed between the loafing lot and the ditch of

Nissen Road. Under a driveway of Avelar Dairy is a 32-inch diameter culvert that has a gate that opens and closes the culvert inlet. Mr. Mario Avelar said that he closes the gate on the culvert when Eel River flows are high to prevent backflow flooding his dairy. When the Eel River is at a low elevation such as on the day of the inspection, the gate is open and water from the slough flows freely from neighboring properties, the Avelar pastures, and the Nissen county road ditch to the Eel River. Regional Water Board staff observed the gate on the culvert in the open position during the inspection and did not observe any discharges from the loafing lot to the ditch. A second culvert is located under another driveway to the pasture just south of the entrance driveway. No surface water was evident between the Avelar driveway and the Eel River. Mr. Mario Avelar and Mr. Victor Avelar said that is because the water flows in the 32-inch diameter culvert, 1,350 feet long, to the Eel River. The Avelars said that the culvert was installed over 20 years ago before they purchased their property. The outlet of a metal culvert that connects to the mentioned culvert was broken and the inlet of this culvert was blocked with heavy vegetation and a small algal bloom was observed. (photos attached). The Mario and Victor said that the slough to the west of Nissen Road in this general location is clogged and does not drain to the Eel River.

Mario said the wood shavings lot contains wood chips to soak up rain runoff and the lot is sloped to drain toward the pasture. No cows were observed on the wood shavings lot and there was no evidence of rilling on the west edge of the wood shavings loafing lot, however it is possible that stormwater that contacts the wood shavings lot could discharge waste to the culvert inlet area that ultimately flows through the long culvert the 1,350 feet to the Eel River. The discharge of waste to the Eel River and its tributaries is prohibited by the Conditional Waiver of Waste Discharge Requirements. **Recommendation 3:** The dairy operators must take care to ensure that manure and sediment does not discharge to the ditch where it could flow to the Eel River.

Long term recommendation for the slough located west of Nissen Road: The slough should be studied to find out the reason that it does not flow to the Eel River and if possible, discontinue flow through the 1,350-foot culvert and route slough flow from the east of Nissen Road to the west of Nissen Road and on to discharge to the Eel River. Agencies will be contacted separately from this inspection report to study this possibility.

Area C: North Pasture Adjacent to Eel River

The complaint about the northernmost pasture along the Eel River included water quality concern about the piles of dirt, wood, and dairy debris including dead cows and plastic wrap. Aerial photos of this area as given to Josh Levine, California Coastal Commission, in October 2018, showed the piles with the above listed contents. During the January 28, 2019, Inspection, Regional Water Board staff observed a smooth lot, no piles in the pasture, some bare dirt and some new plant growth, and one burned tree stump. On the north edge of the pasture were a few piles of soil with plants such as blackberry bushes growing on them. Victor pointed to the location of the outlet of the 32-inch diameter, 1,350-foot long culvert. The outlet of the culvert was not visible through the thick brush on the bank of the Eel River but flowing water, presumably from the subject culvert, could be heard.

The Conditional Waiver required a Water Quality Plan map. The map on file for Avelar Dairy shows green pasture at this northern location, however, the inspection revealed approximately 50 percent bare soil in this pasture. **Recommendation 4:** The soil in this pasture must be protected from disturbance to prevent sediment discharges to the Eel River and should not be used as a dumping ground for wood, manure, soil, or dairy debris piles. Also, in the future soil and debris are not to be pushed up against the bank of the Eel River. This area should be fully vegetated by the beginning of the winter rainy season

Area D: Dairy Property At 3210 Goble Lane, Ferndale

The Avelar property at 3210 Goble Lane was inspected due to the anonymous complaint that manure and blue plastic barrels were stacked along a tributary slough in the Salt River watershed. During the inspection, Regional Water Board staff observed dozens of cows housed at the barn and in the corral. The area is surrounded by dairy pasture. Dirt/ manure piles with dead cow carcasses, several empty 55-gallon drums, tires, and other dairy debris were observed within or directly adjacent to the slough in the Salt River watershed. **Recommendation 5:** All manure, dirt, and dairy debris must be moved away from the slough and stabilized where it cannot discharge to waterways.

The current Water Quality Plan does not show the dairy buildings and corrals at 3210 Goble Lane as part of Avelar Dairy. **Recommendation 6:** The full parcels for the dairy barns, corrals, and storage area must be included in the maps for coverage under the dairy permit. Please certify to the Regional Water Board that this area is used for Avelar Dairy by amending the Notice of Intent, signed letter to the Regional Water Board, or by adding it to the next certified report submitted such as the Annual Report (see question regarding changes on page 1).

Surface Water Sampling Results:

As part of the 2012 Conditional Waiver, surface water sampling results are collected just south of the culvert inlet area and east of Nissen Road, during or directly after 1-inch rain storms in 24 hours. These results show:

On 12/21/12 Electrical Conductivity (EC) of 377 uS/cm and ammonia of 1.0 mg/L, pH 7.7, temperature 9.4 degrees Celsius, comment: water was clear.,

On 1/29/16 EC 372, ammonia was 0.5 mg/L, pH was 6.7, temperature was 11.6 C, comment: water was slightly turbid.

On 3/13/16 EC 334, ammonia was 0.5 mg/L, pH 8.2, temperature 11.9 C, comment: water was clear.

No other results were collected by the time of a Regional Water Board staff phone call with Six Rivers Dairy Association (SRDA) on January 8, 2019. No other samples were collected because either the Avelar station was not chosen by the 50 percent of stations randomly sampled during each 1" storm, or there was no flowing water in the ditch (stagnant water is not sampled as part of this program). SRDA said this site is not influenced by tides. This means that the EC is not influenced by salts in tide water, although during extreme rainfall and flooding, the Eel River rises and all fields in this area that are only about 10 feet above sea level do flood. Eel River flooding onto fields during high tide could increase the EC if mixed with salty ocean water.

EC results for surface water samples at Avelar Dairy are about at the 90 percent Upper Limit for the Eel River Hydrologic Unit which is 375 micromhos. Basin Plan Table 3-1 states that 90 percent upper limits represent the 90 percentile values for a calendar year. 90 percent or more of the values must be less than or equal to the upper limit in the case of EC.

The ammonia results of 0.5 mg/L as collected at the Nissen Road ditch do not show un-ionized ammonia in toxic levels for the pH and temperature. Toxic levels of un-ionized ammonia at typical pH and temperature for the area would be at or greater than 3 mg/L ammonia.

Groundwater Sampling Results:
Dairy maps submitted to Regional Water Board as part of the Water Quality Plan show two Agricultural/Domestic Wells. One well was sampled on 5/2/13 showing a result of <1.1 Fecal coliform MPN/100 ml and less than detectable Nitrate as Nitrogen where the laboratory reporting limit was 0.10 mg/L. Three more samples are required to be submitted as part of the groundwater monitoring. **Recommendation 7**: Sample representative groundwater wells at least six months apart for Fecal coliform and Nitrate as Nitrogen for a total of four times.

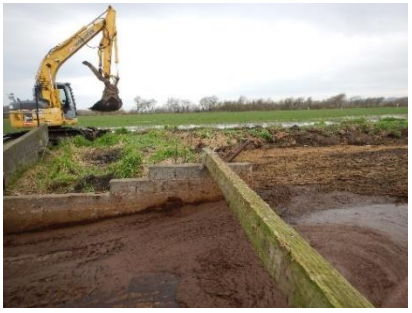
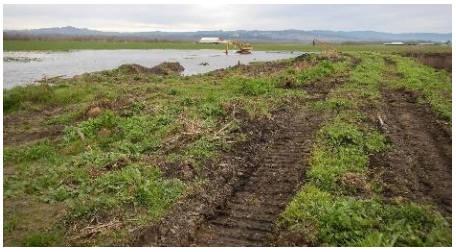
General Recommendation: Victor and Mario Avelar have been late in submitting their annual reports three of the past four years. General Recommendation: They should attend the Annual Report writing workshops each Fall in Ferndale put on by the California Dairy Quality Assurance Program (CDQAP). CDQAP mails a flyer to dairies about one month prior to the workshops notifying all dairies of the meeting. In addition, Cherie Blatt sends a reminder email to all dairies about two weeks prior to the meeting. The Avelar's attendance would help them to complete their Annual Report by the November 30 submittal date each year. In addition, they would then have the opportunity to learn about where to bury dead cattle and ask questions about proximity to watercourses.

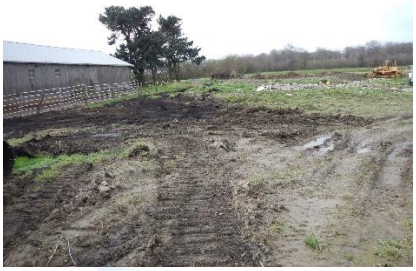
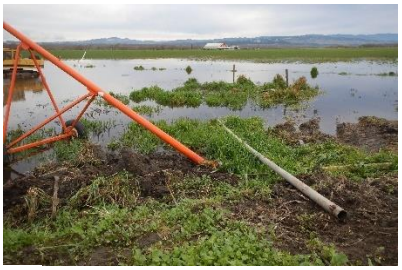
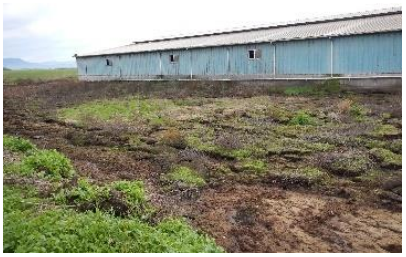
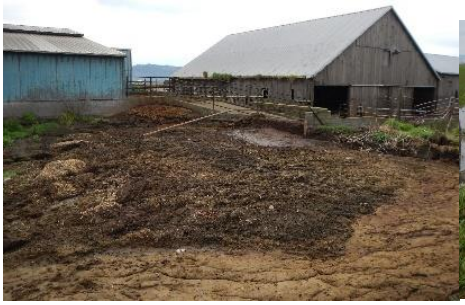
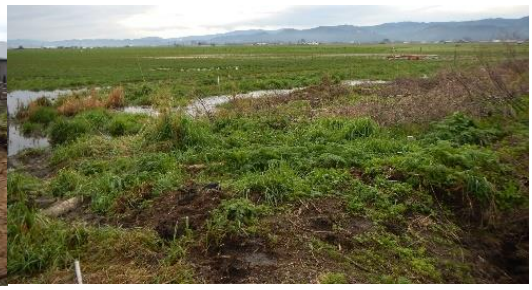
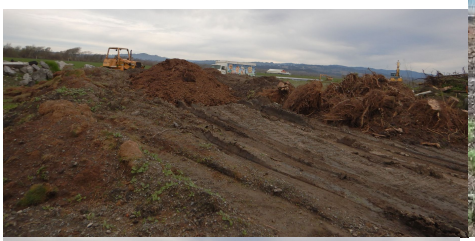
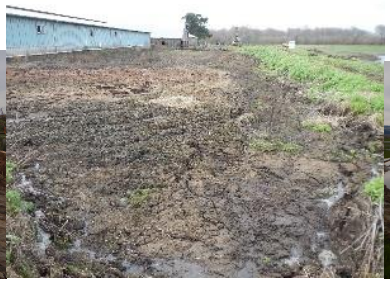
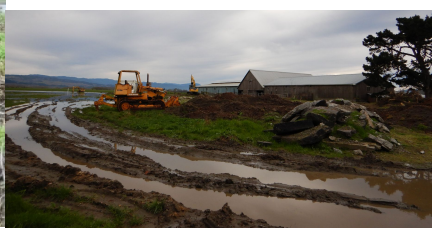
References: Water Quality Control Plan for the North Coast Basin Plan (Basin Plan) June 2018.

Photo Log: By Regional Water Board Staff on January 28, 2019

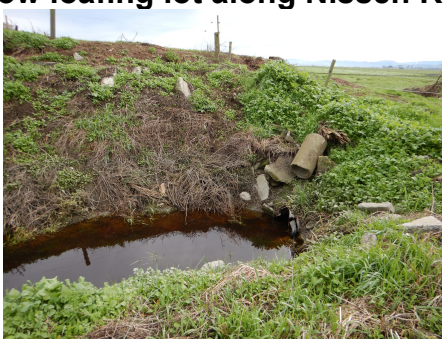
Area A: Manure Pond Area north of Dairy Buildings



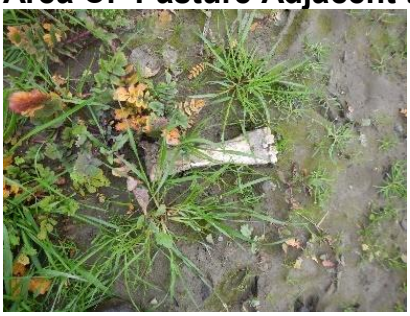
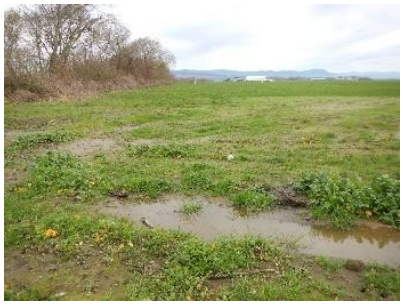
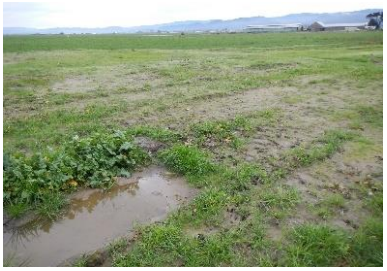
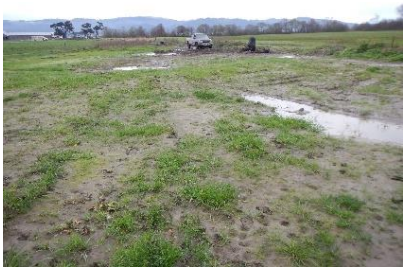
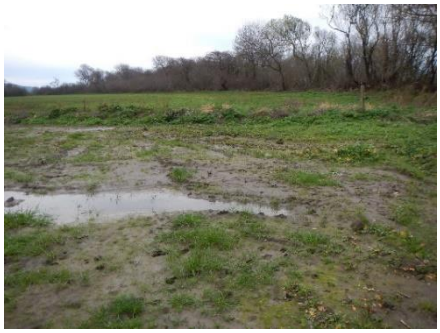
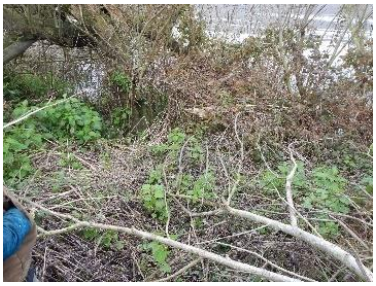
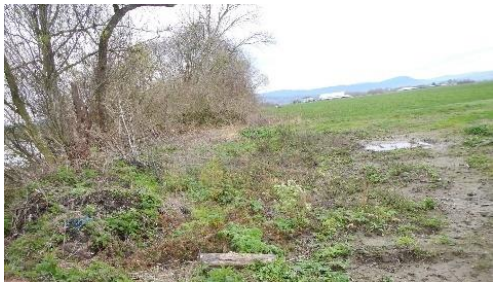
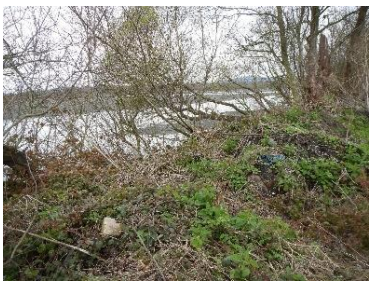




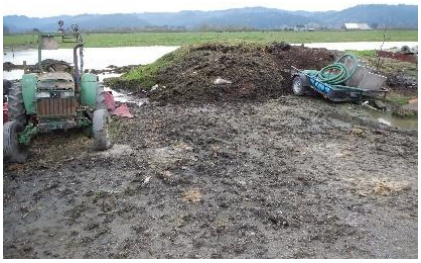
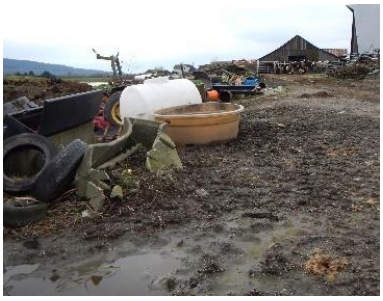

Area B: Wood shavings cow loafing lot along Nissen Road

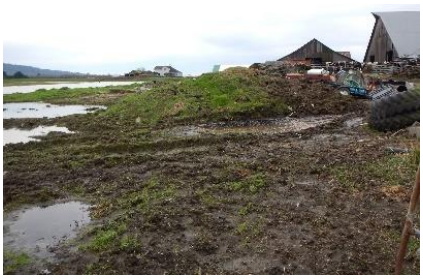



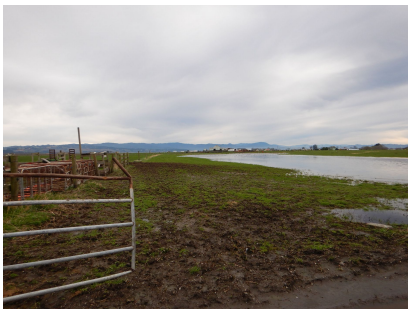
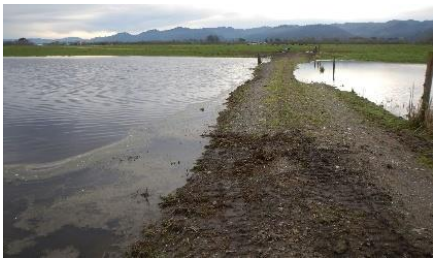
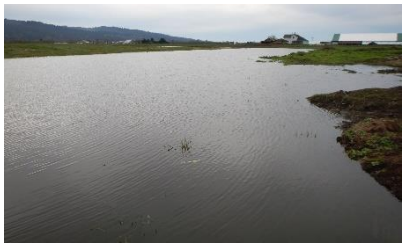
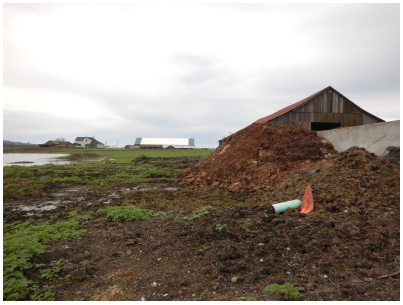
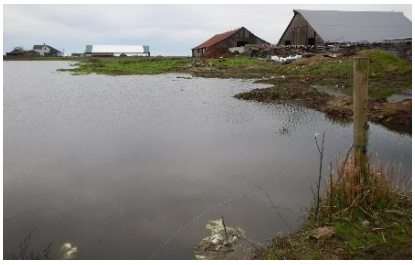
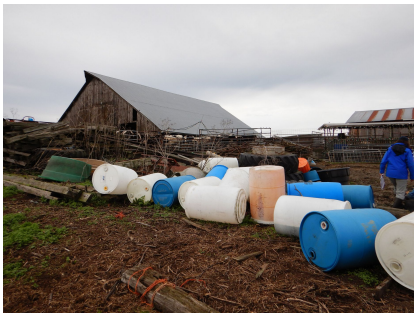

Area C: Pasture Adjacent to Eel River

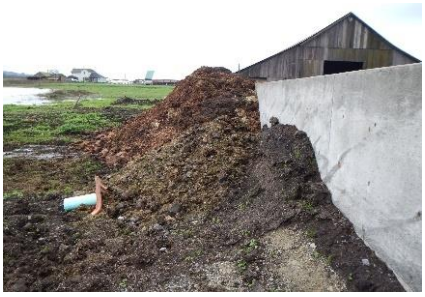
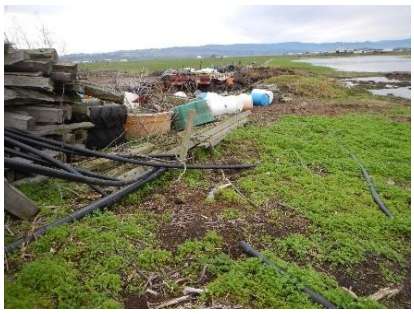
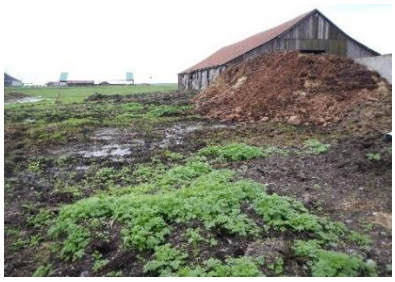
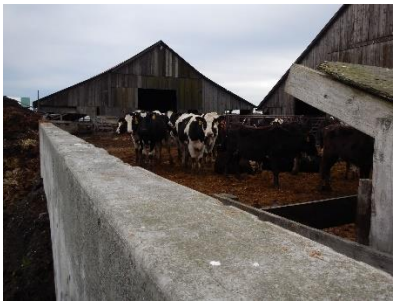
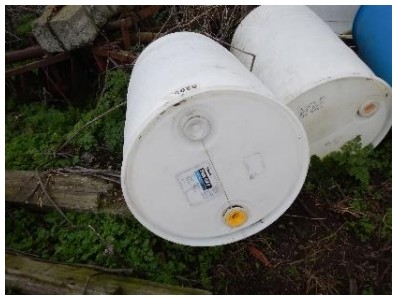
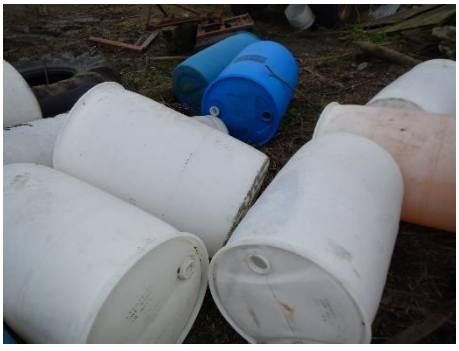









Area D: Dairy Property At 3210 Goble Lane, Ferndale



Photos of slough located south of the dairy production area as taken from Nissen Road