CALIFORNIA Water Boards

GAVIN NEWSOM GOVERNOR

JARED BLUMENFELD SECRETARY FOR ENVIRONMENTAL PROTECTION

San Francisco Bay Regional Water Quality Control Board

CONFINED ANIMAL FACILITY COMPLIANCE INSPECTION

General Waste Discharge Requirements for Confined Animal facilities within SF Bay Region; Order No. R2-2016-0031

Inspection Date: February 3, 2022 **Time:** 12:00 PM **RB2 Staff:** L. Taul, M. Williams **Weather:** Sunny

Inspection Type: ☒ **Yearly Compliance** ☐ **Complaint** ☐ **Revisit** ☐ **Other:**_____

Facility Information

Facility Name: Double M Dairy (Historic B Ranch) **Physical Address:** 25680 Sir Francis Drake Blvd. Point Reyes, CA 94956

Operator Name: Jarrod Mendoza **Phone #:** (707) 536-8044 **email:** doublemdairyllc@gmail.com

Owner Name (if different): Point Reyes National Seashore **Phone #:** (415) 464-5101 **email:** PORE_Superintendent@nps.gov

Type of animals: Dairy Cows **# of Animals (milking, dry, heifers, calves, mature and young stock)** 183 milking cows, 23 dry, 220 young stock as reported in 2021 Annual Report

Other onsite operations (food processing, compost, animal slaughter, etc.) None

General WDR Tier:
Tier 1 (no waste retention ponds) _____ **Tier 2 (uses waste retention ponds)** x **Tier 3 (designated higher risk)** _____

Where and how are animals held, housed, and/or confined:

Approximately 100 cows are held in the feed barn in the winter, and about 100 are kept in the fields. Confined areas consist of three corrals – two on the facility's north side and one to the south, as well as a milk barn, calf barn, feed barn, and loafing barn. The loafing barn is in poor condition and is currently unusable. Consequently, cattle are kept in a small field below the southern corral and adjacent to the loafing barn.

Type of waste containment and/or treatment facilities:

There are three wastewater ponds on the southern end of the production area. The primary waste containment is the central pond directly below the easternmost corral, milk, calf, and feed barns. Manure and wastewater from these confined areas and the second northern corral go directly into this primary pond. The primary pond gravity feeds to the easternmost waste pond via a culvert connecting the two at a specific capacity. The third wastewater pond is next to the loafing barn and collects its manure and wastewater. Stormwater from the southern corral is directed into the field adjacent to the loafing barn.

Note: During our inspection, we also observed an old but functioning septic output approximately 50 yards upgradient from a freshwater drainage. Details of the historical septic system were lost over time, and it was unclear how the system had been functioning. National Park Service (NPS) staff followed up with Marin County, who determined the system was nonfunctional. Operators are upgrading the facility's septic system, which will be completed this summer.

Records Review

Facility has a complete and updated Waste Management Plan or Ranch Plan including storage calculations and maps	❑ Yes	☑ No	Facility has an Emergency Contingency Plan	☑ Yes	❑ No
Facility has a complete and updated Nutrient Management Plan including nutrient budget calculations and land application maps and logs (Tier 2 or 3)	☑ Yes	❑ No ❑ N/A	Visual inspection records current and complete including: daily for confined areas and land application events, weekly wet season for ponds, monthly dry season for ponds and wet season rangeland, bi-annually for wet season rangeland and, before, during and after storm events	❑ Yes	☑ No
Facility has a complete and updated Grazing Management Plan (Tier 2 or 3)	☑ Yes	❑ No ❑ N/A	Water quality sampling by (group or operator name) Sonoma Marin Dairy Representative Monitoring Program (SMDRMP) Sampling completed? Yes Results: 2018-2019, 2021 exceedances Annual RDM result: Not reported in 2021 Annual Report		

Records Review Comments: The operator conducts regular pond freeboard and facility inspections, but records of these inspections have not been maintained (see Action Item 6). Issues observed with the pond system indicate that the Waste Management Plan may require updated storage calculations (See Action Item 2 for full discussion). Two of the three surface water samples collected in the 2018-2019 WY exceeded water quality benchmarks. In mid-December of 2018, specific conductance measures were too high, and a few weeks later, on January 7, 2019, Total Nitrogen, unionized ammonia, and conductivity measures all exceeded benchmarks. However, SMDRMP staff noted they collected the Jan 7th sample right below the complex. After the large storm in December of 2021, water samples exceeded conductivity benchmarks. These exceedances and site inspection findings below indicate that the facility's stormwater discharges may adversely impact surface water quality. This requires additional assessment of potential pollutant sources/areas of concern, and a plan to implement needed corrective measures (see Action Item 4).

Facility Observations

Confined Areas

Animal Management and Clean Water Diversion							
Animals are fenced out of surface waters passing through confined areas	☑ Yes	❑ No	❑ N/A	Stream crossings within confined areas and travel lanes are secure and bermed	❑ Yes	☑ No	❑ N/A
Feed sites located away from waters	☑ Yes	❑ No	❑ N/A	Standing water infiltrates within 72 hours after storm events within confined areas	❑ Yes	❑ No	☑ N/A
Buildings have effective gutters	☑ Yes	❑ No	❑ N/A	Storm water run-on is diverted from confined areas, ponds, and solid waste piles	❑ Yes	☑ No	❑ N/A
Guttered water diverted away from manured areas and ponds	❑ Yes	☑ No	❑ N/A	Storm water is diverted from silage/feed storage areas	☑ Yes	❑ No	❑ N/A
Diversion ditches are clean and not creating erosion	☑ Yes	❑ No	❑ N/A	Exposed confined areas minimized with fencing and/or roofing	☑ Yes	❑ No	❑ N/A

Comments: We inspected under dry conditions.

The loafing barn requires roof repairs, and operators keep no animals inside it. Confined areas that are in use were adequately fenced and roofed, and most exposed areas were designed and managed to minimize stormwater's contact with animal waste. We observed two areas where this was not the case that have the potential to discharge pollutants.

The first area with the potential to discharge is the field adjacent to the loafing barn where livestock is currently being held (see Photo 5). This field is ordinarily open space; however, it currently contains cattle due to the loafing barn's poor condition. This area is also adjacent to a livestock pathway and the stream (see Photo 6). The loafing barn gutters and stormwater run-on from an uphill corral are directed into the field (a manured area) where flow is directed across the field and livestock pathway and into the creek. Although the riparian corridor was fenced off and well-vegetated during our visit, the manured area receives clean stormwater from two other areas and has no Best Management Practices (BMPs) to prevent contaminated flows from entering the creek. Thus, the present design and animal management in this field pose a risk to water quality (see Action Item 3).

Secondly, we observed heavily disturbed soils and pooled water at the stream crossing/livestock pathway (see Photo 7). There were no measures to prevent soil and manure from washing off the crossing into the creek below. Based on these observations, we concluded that it is very likely the southern stream crossing/animal pathway is discharging sediment and manure directly into the stream (see Action Item 1). Both the field adjacent to the loafing barn and this stream crossing require corrective action to meet the minimum specifications of the General Waste Discharge Requirements (WDR).

Waste Management

Facility Design and Operation							
Milk barn wastewater is contained	☑ Yes	❑ No	❑ N/A	Silage and/or compost leachate is contained	❑ Yes	❑ No	☑ N/A
All storm water run-off from confined and manured areas is collected	❑ Yes	☑ No	❑ N/A	All solid waste/manure is contained	❑ Yes	☑ No	❑ N/A
If storm water not collected, corrals are managed to prevent pollutant discharges (describe below)	☑ Yes	❑ No	❑ N/A	Stockpiled manure and/or bedding is more than 100 feet from surface waters or well heads, or has alternative BMP (described BMP below)	❑ Yes	❑ No	☑ N/A
All non-manure waste products are contained i.e., waste milk, food processing waste, medical waste, etc.	☑ Yes	❑ No	❑ N/A	Animal wash rack water is contained or managed with BMPs	☑ Yes	❑ No	❑ N/A
Manure is managed on-site accordance with an NMP or transported off-site via manifest	☑ Yes	❑ No	❑ N/A	Vegetative filter strips used to separate confined areas from surface waters	☑ Yes	❑ No	❑ N/A

Comments: Nutrient Management Plan (NMP)
No silage, compost, stockpiled manure, or bedding was present. Across the facility, stormwater runoff from confined and manured areas is effectively collected in the three wastewater ponds except for the areas identified in Action Items 1 and 3 below.

Retention Pond Management (if applicable)					
Ponds are located away from waterways	☑ Yes	❑ No	Measures in place to prevent inundation or washout of ponds and corrals	☑ Yes	❑ No
Ponds have a least 2 ft freeboard	☑ Yes	❑ No	Ponds are cleaned annually prior to wet season	☑ Yes	❑ No
Pumping system is maintained	☑ Yes	❑ No	Ponds designed to contain at a minimum, all waste generated and manured storm water during a 25 yr. / 24 hr. storm (sized per WMP calculations)	❑ Yes *Unclear*	❑ No
Ponds system has capacity to hold entire winter if necessary	❑ Yes *Unclear*	❑ No			

Comments:
We observed that the berm of the second waste pond was incomplete (see Photo 4) and the pond was empty to accommodate its reduced capacity. The operator shared that they actively manage the pond system by pumping from pond to pond and spray irrigating during dry weather to mitigate limited storage. To maintain adequate freeboard, waste is pumped from the two primary ponds to the third pond. The difference between the minimum waste storage capacity required by the operation and the actual capacity of the current system was unclear. The present management indicates that the system is undersized, and the operator shared that it requires upgrading. According to the operator, the Natural Resource Conservation Service (NRCS) has completed designs for upgrading the wastewater ponds and loafing barn; however, the timeline and feasibility of this project were unclear to the operator and owner. We request additional information to understand the pond system's dysfunction and see that the issues are addressed (see Action Item 2).

Facility Observations

Pasture and Grazing Land Management

Erosion Control and Stream Protection								
Animals are fenced out of riparian corridors	☑ Yes	❑ No	❑ N/A	Stream crossings within grazing areas and travel lanes are secure, bermed, and maintained	❑ Yes	❑ No	☑ N/A
Are riparian corridors flashed grazed seasonally?	❑ Yes	☑ No	❑ N/A	Off-stream water and feeding areas are located away from surface waters	☑ Yes	❑ No	❑ N/A
No evidence of rill, sheet, or gully erosion	❑ Yes	☑ No	❑ N/A	Adequate residual dry matter is present	❑ Yes	❑ No	☑ N/A
Intensively used areas protected during winter with BMPs	❑ Yes	☑ No	❑ N/A	Sediment and erosion controlled on roads	☑ Yes	❑ No	❑ N/A
Streams have adequate riparian vegetation	☑ Yes	❑ No	❑ N/A	Streams flow and clarity appear adequate given seasonal conditions	☑ Yes	❑ No	❑ N/A

Comments: The inspection was conducted during the wet season, so residual dry matter (RDM) observations were not made, and RDM measurements were not reported in the 2021 Annual Report.

We observed that the facility's design goes beyond the minimum requirements of the General WDR by including exclusion fencing around riparian corridors, preventing livestock from directly accessing streams (see Photo 8). This measure safeguards riparian vegetation, protects bank stability, and prevents the direct discharge of manure into surface waters. According to the Grazing Management Plan, there are no stream crossings within pasturelands.

During the inspection, most of the surrounding land was well vegetated with no visible erosion well into the wet season. We observed one area of concern, the downhill portion of the pastures immediately south of the facility, called Field 9 (see "Action Item 5" on the Facility Map). On Field 9, we observed large patches of barren topsoil where livestock enter the fields, with visible rilling and sheet erosion. The operator shared that these hills develop springs in the wet season that saturate the soil throughout the winter. We concluded that in order to mitigate soil disruption, these lands should be allowed to rest in the winter after the first signs of reduced vegetation (see Action Item 5).

Land Application Management (if applicable)

Agronomic Rates and Setbacks							
Number of application acres___* Didn't record from NMP__ Amount of waste spread/yr.: liquids: ___*_____ solids: _____*_____ Crop type: grass crop							
Manure application / irrigation conducted prior to mid-October	☑ Yes	❑ No	❑ N/A	Application rates per NMP (no evidence of crop kill, ponding, uneven or heavy solids)	☑ Yes	❑ No	❑ N/A
Application areas away from waterways	☑ Yes	❑ No	❑ N/A	Application areas rotated per NMP	☑ Yes	❑ No	❑ N/A
Solid and liquid manure is applied during non-rainy or saturated conditions	☑ Yes	❑ No	❑ N/A	Solid and liquid manure is applied more than 100 feet from surface waters or well heads, or has alternative BMP (described BMP below)	☑ Yes	❑ No	❑ N/A

Comments:
Operators confirmed that pastureland is managed per the Nutrient and Grazing Management Plans. We observed well-maintained pastures, except for the southwestern pastures (see Action Item 5) and no indicators of excess nutrient concerns.

Summary

Pollutant discharges observed?	❑ Yes (see attached)	☑ No	High risk areas identified that need additional management or improvements?	☑ Yes (see attached)	❑ No
Facility requires corrective action to meet General WDR minimum requirements?	☑ Yes	❑ No	Follow-up required in next Annual Report?	☑ Yes	❑ No

Explanation:

The facility requires corrective action to meet General WDR minimum requirements. This verdict is due to its likely undersized pond system, high-risk stream crossing/livestock pathway, and the clean stormwater that is being diverted into a confined area. We observed multiple sites with a potential to discharge pollutants and observed two high-risk regions, the stream crossing and the pond system (see Action Items 1 & 2). Corrective Action Plans addressing these concerns and all other identified manure and sediment discharges must be developed and submitted to the SF Bay Water Board by November 1, 2022 (see Action Items 1, 2, and 4 for specific requirements).

Required follow-up also includes implementing additional Best Management Practices to address the six Action Items before the start of the next wet season and submitting photos demonstrating these updated management practices in the upcoming 2022 Annual Report. For example, operators can include photos of sandbags placed along the stream crossing in the Pre-Rainy Season Pollution Prevention Measures section of the 2022 Annual Report.

CONFINED ANIMAL FACILITY COMPLIANCE INSPECTION
RECOMMENDED AND/OR REQUIRED ACTIONS

Action Items	Time to Comply
Order of Importance: Action Item 1: Stream Crossing/Livestock Pathway (High Risk) Action Item 2: Retention Pond System Capacity (High Risk) Action Item 3: Field Adjacent to Loafing Barn Receiving Clean Stormwater (Medium Risk) Action Item 4: Required Follow-up for Surface Water Quality Exceedances (Medium Risk) Action Item 5: Managing Southwest Pastures for Erosion Action Item 6: Inspection Record Keeping	**For Actions Items 1, 2, and 4, submit Corrective Action Plans by November 1st**
Action Item 1: Stream Crossing/Livestock Pathway (High Risk) See "Animal Management and Clean Water Diversion" comments for initial discussion. At the stream crossing/livestock pathway, we observed heavily disturbed soils and pooled water with no measures to prevent soil and manure from discharging into the creek (see Photo 7). From the operator, we know that the water comes from Field 9 which develops springs each winter. Being at the bottom of Field 9's hills, the water naturally flows down and collects at the flat stream crossing. In the short term, a written description of updated management practices and photos of implemented pollution prevention measures must be submitted in the 2022 Annual Report. We recommend installing sandbags along the inside eastern fence bordering the crossing to prevent soil and manure from entering the stream below. These are our recommendations though the best management practices used to prevent soil and manure discharge from this crossing is up to the discretion of the owners and operators. To address a long-term solution, we request a detailed Corrective Action Plan, including an implementation timeline, be developed and submitted to the SF Bay Water Board by November 1st, 2022. To develop a long-term solution, we recommend the facility reach out to NRCS and discuss adding or altering the existing improvement project to include lining the stream crossing and entire livestock crossing in concrete, which would minimize soil disturbance, and incorporating a berm along the stream crossing to block potential discharge. A project like this would reduce erosion and make this confined stream crossing easier to manage for manure (i.e., making the path and crossing scrapable). Funding options can be sought with 319(h) grants, NRCS, and NPS. **Action Item 2**: Retention Pond System Capacity (High Risk) See "Retention Pond Management" comments for the initial discussion. The pond system is dysfunctional, and operators must determine what their current storage capacity needs are, and how the pond system must be upgraded to meet the needs of the operation and the minimum requirements of the General WDR. In the short term, active management practices are necessary to ensure the complete containment of manure and stormwater contacting manure, especially within the second pond. These measures may include spray irrigating during extended dry weather and implementing an emergency contingency plan for extreme weather events (pump truck contracts or other actions to gain capacity before storm events). A written description of updated management practices and/or photos of pollution prevention measures must be submitted in the 2022 Annual Report. To address a long-term solution, we request that a detailed Corrective Action Plan for addressing the pond systems capacity be developed and submitted to the SF Bay Water Board by November 1st, 2022. This plan must include a timeline for updating all management plans and storage calculations, completing engineering designs to upgrade the pond system, and implementing the upgrade project. We suggest contacting the CA Dairy Quality Assurance	**Submit Follow-up items in 2022 Annual Report**

Program or the Marin County U.C. Cooperative Assistance office for technical assistance, and funding options can be sought with 319(h) grants, NRCS, and NPS.

Action Item 3: Field Adjacent to Loafing Barn Receiving Clean Stormwater (Medium Risk)

See "Confined Areas" comments for the initial discussion. The loafing barn gutters and stormwater run-on from an uphill corral are directed into the field where livestock are currently confined. These flows are directed across the field, across the adject livestock pathway and into the creek. With two sources of clean stormwater being diverted into a manured area, and no BMPs to prevent contaminated flows from entering the creek, we concluded that the present design and animal management in this field pose a risk to water quality.

When this field is used as a confined area, it must be managed like a corral. The operator must identify and implement BMPs to prevent the discharge of manure and wastewater during storm events and to divert clean stormwater away from this area. At a minimum, before all storms, operators must scrape/remove waste from the confined area and install erosion and sediment controls. For example, straw cover. Before and during a rain event, operators must relocate animals to confined spaces that drain into a wastewater pond.

We recommend adjusting the stormwater diversion system to stop the southern corral and barn gutters from discharging stormwater into the field. With the stream being relatively close, an option to consider is extending the gutter system to release the clean stormwater into the stream, but BMPs are up to the discretion of owners and operators. A written description of updated management practices and photos of pre-rainy season pollution prevention measures in this field must be submitted in the 2022 Annual Report.

Action Item 4: Required Follow-up for Surface Water Quality Exceedances (Medium Risk)

See "Records Review" comments for the initial discussion. This facility has had multiple water samples exceed conductivity benchmarks and at least one sample exceed benchmarks for Total Nitrogen and unionized ammonia. These exceedances and the site inspection observations (see Confined Areas and Pasture and Grazing Land Management comments) indicate that the facility's stormwater discharges are likely adversely impacting surface water quality.

To address a long-term solution, a Corrective Action Plan must be developed and submitted to the SF Bay Water Board by November 1, 2022. The plan must include a summary of identified pollutant sources, BMPs to address unauthorized discharges, and a timeline for implementing all necessary BMPs.

Action Item 5: Managing Southwest Pastures for Erosion

See "Pasture and Grazing Land Management" comments for initial discussion.

On the lower portions of Field 9, we observed barren patches of topsoil with rilling and sheet erosion that we believe were brought on by too much animal traffic during the wet season. Due to the natural wet season springs on this land, operators must closely manage these pastures in the winter to minimize erosion and maintain ground cover. We recommend keeping cattle out of these southwestern, saturated pastures until they dry out. This measure would reduce excessive sediment and manure discharge from these lands. A written description of updated management practices for this field must be submitted in the 2022 Annual Report.

Action Item 6: Inspection Record Keeping

Per Attachment A – Monitoring and Reporting Program requirements of the General Order, operators must keep written records of when they inspect retention pond freeboard and integrity. As a reminder, the freeboard should be checked weekly during the rainy season (Oct-March) and monthly during the dry season (April – Sept.) At least 2 feet of freeboard should be maintained in all ponds always. Required pond inspections include weekly check-ups on berm integrity and writing down all instances and locations of cracking, slumping, excessive vegetation, animal burrows, and seepage. If any issues are observed, operators are responsible for addressing

them, recording all repairs, and reporting them in the Annual Report. Operators must update inspection protocols to include keeping written records of these inspections throughout the year to ensure adequate management of the pond system. Records must be maintained and kept onsite for five years, to be made available to Water Board staff during future facility inspections. Good management is especially critical at this facility as it is unclear whether the ponds are sized to contain a 24-hour / 25-year storm event.	

Facility Map

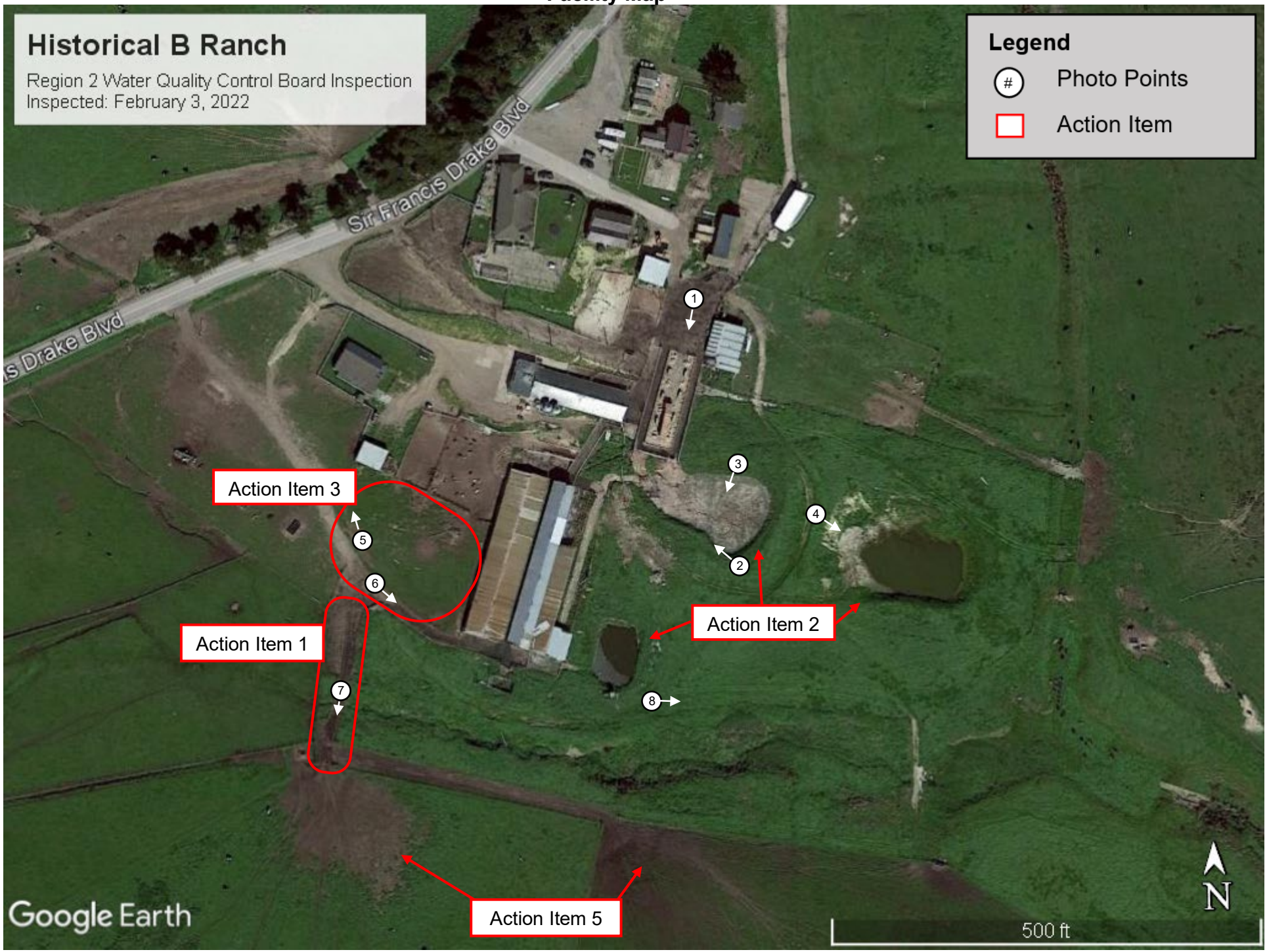

Photo Points

Photo points are referenced in the above inspection report and/or are included in this section to document the facility's conditions at the time of the inspection. The general location and direction of each photo are marked on the Facility Map.

List of Photo Points

Photo 1: Main concrete-lined corral scraped into the primary waste pond
Photo 2: The primary waste pond
Photo 3: Primary waste pond, facing west
Photo 4: Secondary waste pond with an incomplete berm
Photo 5: Cows in the field adjacent to the dilapidated loafing barn
Photo 6: Field adjacent to the loafing barn, livestock pathway, and vegetated filter strip
Photo 7: Flooded livestock pathway and stream crossing
Photo 8: Fencing and vegetated buffer by the creek

Photo 1: The main concrete-lined corral scraped into the primary waste pond.

Photo 2: The primary waste pond. The tractor and pump system are used to transfer manure from this primary pond to the third waste pond, below the loafing barn. The pond's inlet, the area where waste is scraped from the corrals into the storage area, is visible in the background.

Photo 3: The primary waste pond, facing west.

Photo 4: The secondary waste pond, empty with an incomplete berm.

Photo 5: Cows in the field adjacent to the dilapidated loafing barn.

Photo 6: From left to right of the photo, the loafing barn, visible in the background, with its adjacent field, a dirt livestock pathway, and a vegetated filter strip separating the pathway and the creek, which is to the right of this photo.

Photo 7: The flooded livestock pathway and stream crossing. See Facility Map for the location of the creek.

Photo 8: Fencing and vegetated buffer by the creek.