Name and Location of Facility Inspected Krasilsa Pacific Farms LLC Sonoma County Assessor's Parcel Numbers: 116-240-006-000, 115-210-002-000, 117-260-002-000, 117-260-001-000, 117-270-002-000, 117-270-003-000, and 117-270-006-000	**Inspection Date** January 14, 2019	**Inspection Time** 8:30 am-12:30 pm
Property Ownership Hugh Reimers, Manager Krasilsa Pacific Farms LLC 7030 Faught Road Santa Rosa Ca, 95403	**Consent Provided?** Yes X No ☐	**Notified of Inspection?** Yes X No ☐

Inspection Attendance
Hugh Reimers, landowner/developer
Cort Munselle, P.E., Munselle Civil Engineering and Land Surveying

North Coast Regional Water Quality Control Board Staff (Staff):
- Ryan Bey - Environmental Scientist (ES)
- Brian Fuller - Engineering Geologist (EG)
- Paul Nelson - EG, P.G., C.Hg.
- Josh Luders - Water Resource Control Engineer (WRCE)
- Scott Gergus - EG
- Jeremiah Puget – Senior ES (Specialist)

Sonoma County Department of Agriculture (SCACO) Staff
- Andy Casarez
- John Bishop

Weather Conditions at the Time of the Inspection: Overcast	**Facility Receiving Water Names:** Unnamed Tributaries to Little Sulphur Creek, Big Sulfur Creek, and Crocker Creek, all of which discharge to the Russian River.
Report Prepared By: Brian Fuller on February 21, 2019	

I. Background

On December 20, 2018, Andy Casarez with the Sonoma County Agricultural Commissioner's Office (SCACO) submitted a complaint to the Regional Water Board regarding a suspected vineyard development in the mountains east of Cloverdale. Mr. Casarez reported that he had received the complaint from two men who, while hunting, came upon a bulldozer operator clearing and bulldozing steep hillsides. Additional information submitted by the hunters indicated up to 150 acres had been deep ripped.

Mr. Casarez reported that the Property owner was Krasilsa Pacific Farms, LLC, and Mr. Hugh Reimers was the Property owner representative. John Bishop with SCACO reviewed the suspected vineyard site on Google Earth and estimated 40 acres had been cleared of oak trees and an unknown number of acres ripped and graded, with cleared trees bulldozed into an ephemeral drainage.

Mr. Casarez reported that he spoke to Mr. Reimers regarding the suspected vineyard development and Mr. Reimers told Mr. Casarez that he was not developing vineyards; rather, he was clearing land for grazing sheep and horses and deep ripping had not occurred. However, as mentioned below, Mr. Reimers later stated he intended to plant vineyards.

Mr. Casarez and Mr. Bishop reported to Regional Water Board staff that Krasilsa Pacific Farms, LLC, is an investment group under the direction of Mr. Reimers, and is actively purchasing vineyards and ranch properties in Sonoma County for the purpose of developing vineyards. In September 2017, Krasilsa Pacific Farms purchased the subject Property, comprised of eight parcels of undeveloped ranch land totaling 2,278 acres, from Hilary Farms Limited Partnership. A March 28, 2018, Statement of Information filed with the California Secretary of State by Krasilsa Pacific Farms, LLC identifies Hugh Reimers as the manager and notes that the type of business of the LLC is "vineyard."

The Property is located between the Russian River and Big Sulfur Creek on a steep grassy oak woodland ridge trending northwest to southeast, 2.7 air-miles east of Cloverdale (*Figure 1*). The disturbed area of the property ranges in elevation from 1,250 to 1,980 feet above sea level.

Additionally, Mr. Reimers is the former chief operating officer for Jackson Family Wines, is now the chief operating officer for Foley Family Wines, as well as the reported legal contact and landowner for R&H Ranches LLC, which is enrolled in the cannabis statewide order with WDID: 1_49CC408404. Given Mr. Reimers has had experience in developing vineyards in Sonoma County, he should be aware of required Vineyard Erosion and Sediment Control Ordinance (VESCO) permits through SCACO.

On December 21, 2018, Scott Gergus met with John Bishop from SCACO. Mr. Bishop reported that he spoke to the heavy equipment operator, Allan Nelson, with Nelson

Bulldozing, LLC. Mr. Nelson reportedly told Mr. Bishop that Mr. Reimers had hired him to perform land clearing, deep ripping, and grading on the Property. Vineyard site development routinely includes ripping soils 4 to 6 feet in depth for several reasons, including: increasing porosity and permeability of the soil, incorporating soil amendments, breaking up impermeable clay layers, and removing buried roots and large rocks. Deep ripping poses significant water quality risks, including accelerating soil erosion and slope instability. These risks increase dramatically with increasing slope and slope length.

Mr. Bishop told Regional Water Board staff that Mr. Nelson had stated that he started work on the Site in May 2018 and ended in August 2018. This is inconsistent with changes in site conditions visible in Google Earth imagery, which suggest that tree cutting had started before February 14, 2018, extensive land clearing and bulldozing had taken place over large areas of the Property by March 28, 2018, with trees pushed into the headwaters of an ephemeral drainage at the crest of the ridge overlooking Cloverdale. Mr. Bishop told Regional Water Board staff that Mr. Reimers told him that he had contacted CalFire to inquire about clearing trees damaged in the Cloverdale Pocket Fire, and CalFire said they had no concerns regarding the clearing of fire-damaged trees. A review of aerial imagery showing the fire perimeter indicates that the Pocket fire approached no closer than 500 feet from the cleared, ripped, and graded areas; the trees removed by Mr. Reimers and/or his agents were not within the fire perimeter.

On December 28, 2018, Mr. Bishop and Regional Water Board staff Scott Gergus met with Mr. Reimers to inspect the Property. During the inspection, Regional Water Board staff observed that an estimated 150 acres had been cleared, ripped, and graded; erosion prevention and control was either absent or insufficient; the areas of site disturbance/development included ripping/grading and placing fill in segments of several ephemeral watercourses; and eroded soil was actively discharging into streams. During the December 28 inspection, Mr. Reimers told Mr. Bishop and Mr. Gergus that he intended to plant vineyards on the property, and that he directed and took responsibility for all work performed, on the site. Additionally, during the inspection Mr. Reimers reportedly told Mr. Bishop that he did not want to create an eyesore from the Cloverdale/Highway 101 corridor and stopped land clearing at the ridgeline so that it would not be visible from the Highway.

On January 14, 2019, staff from the Regional Water Board and SCACO inspected the Krasilsa Property with Mr. Reimers and Mr. Cort Munselle, a registered professional civil engineer. Mr. Reimers had previously told SCACO staff that Mr. Munselle was evaluating the Property and working on erosion and sediment control.

However, in a phone conversation before the January 14, 2018 inspection, and during the inspection, Mr. Munselle told Scott Gergus that he had not been working on the Property, he had not been to the site since performing percolation tests for an individual septic system soon after the ranch was purchased in September 2017, and had not

accepted the job because of liability concerns. During the inspection, Mr. Reimers told Regional Water Board staff Jeremiah Puget that he did not want to create an eyesore from the Cloverdale/Highway 101 corridor and stopped land clearing at the ridgeline so that it would not be visible from the Highway.

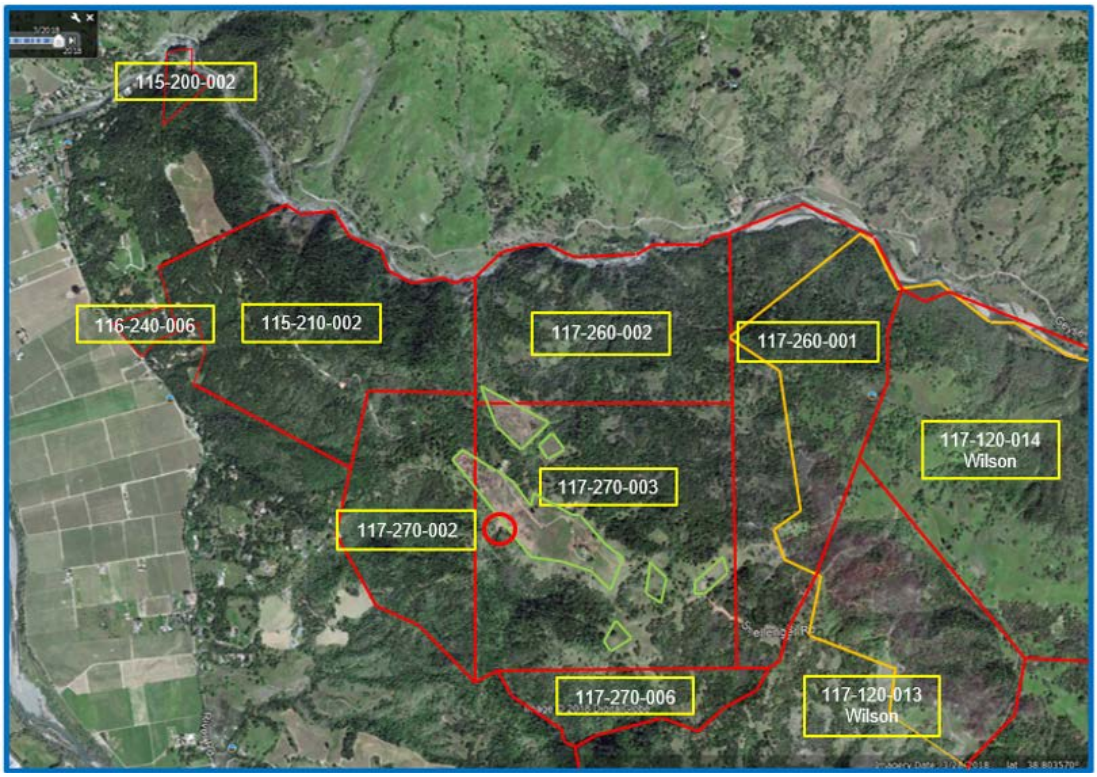

Figure 1. Google Earth Satellite Image 1. This Google Earth satellite image, dated March 28, 2018, shows the parcels comprising the Property, outlined in red with their Assessor's Parcel Numbers outlined in yellow. The green outlines show the recently ripped and graded areas observed by staff on December 28, 2018. The small red circle outlines a headwater ephemeral stream that has been filled with cut trees. The orange line extending through parcel 117-260-001 is a portion of the western perimeter of the October 9, 2017, Pocket fire.

On January 14, 2018, inspection participants accessed the site along Shellenger Road from the west and parked east of the ranch manager's house on parcel 117-270-003, RP 3 in *Figure 2*. Site inspection proceeded on foot from this location. Because the site is so large and complex, the inspection party divided into three teams.

Figure 2 shows the portions of the Property inspected by each of the following teams;

- Team 1: Brian Fuller and Ryan Bey covered the upland area west of Shellenger Road.
- Team 2: Paul Nelson and Josh Luders covered the lower area east of Shellenger Road.
- Team 3: Jeremiah Puget, Scott Gergus, Andy Casarez, John Bishop, Cort Munselle and Hugh Reimers covered the area south of the ranch manager's house.

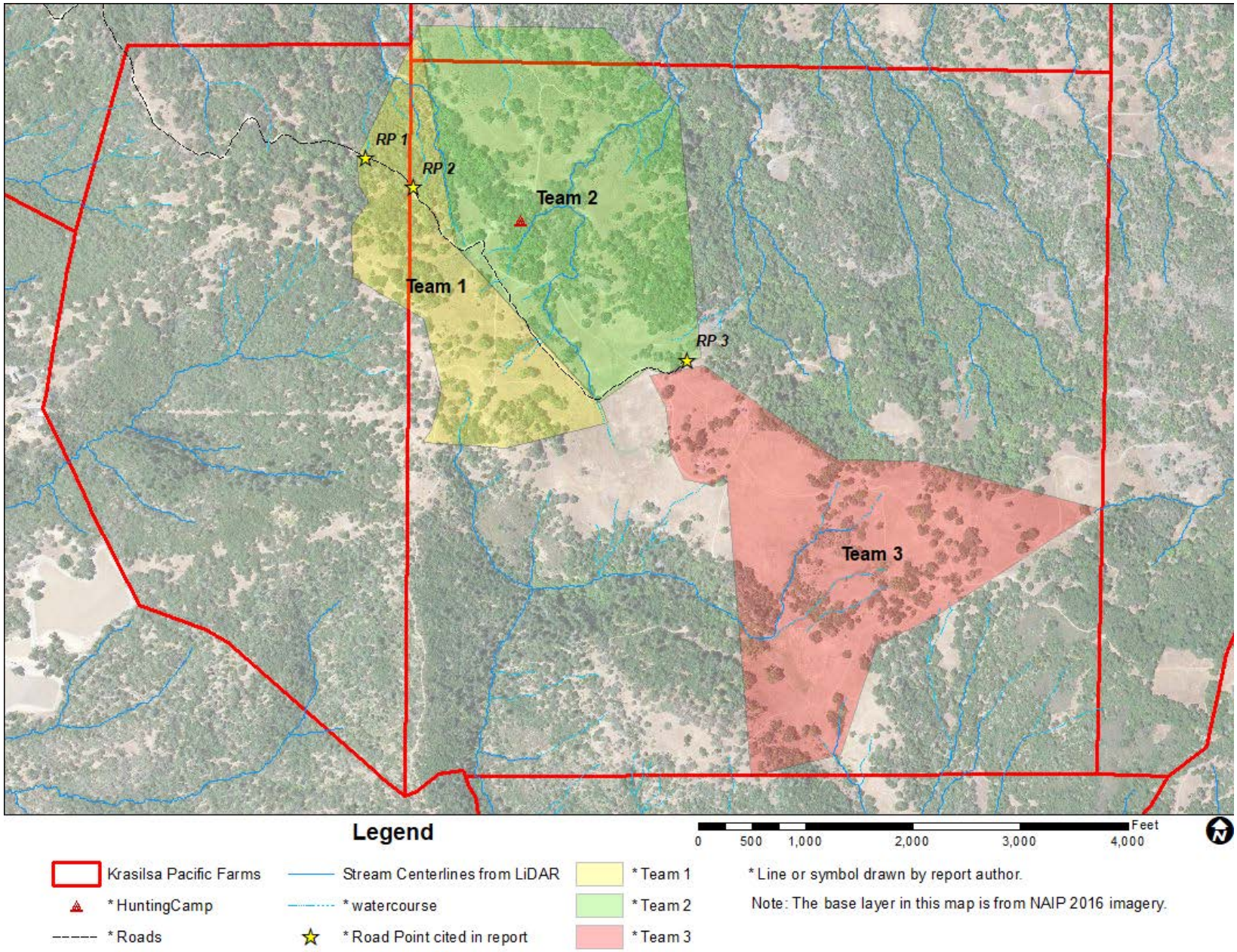

Figure 2. Map showing areas inspected by the three inspection teams.

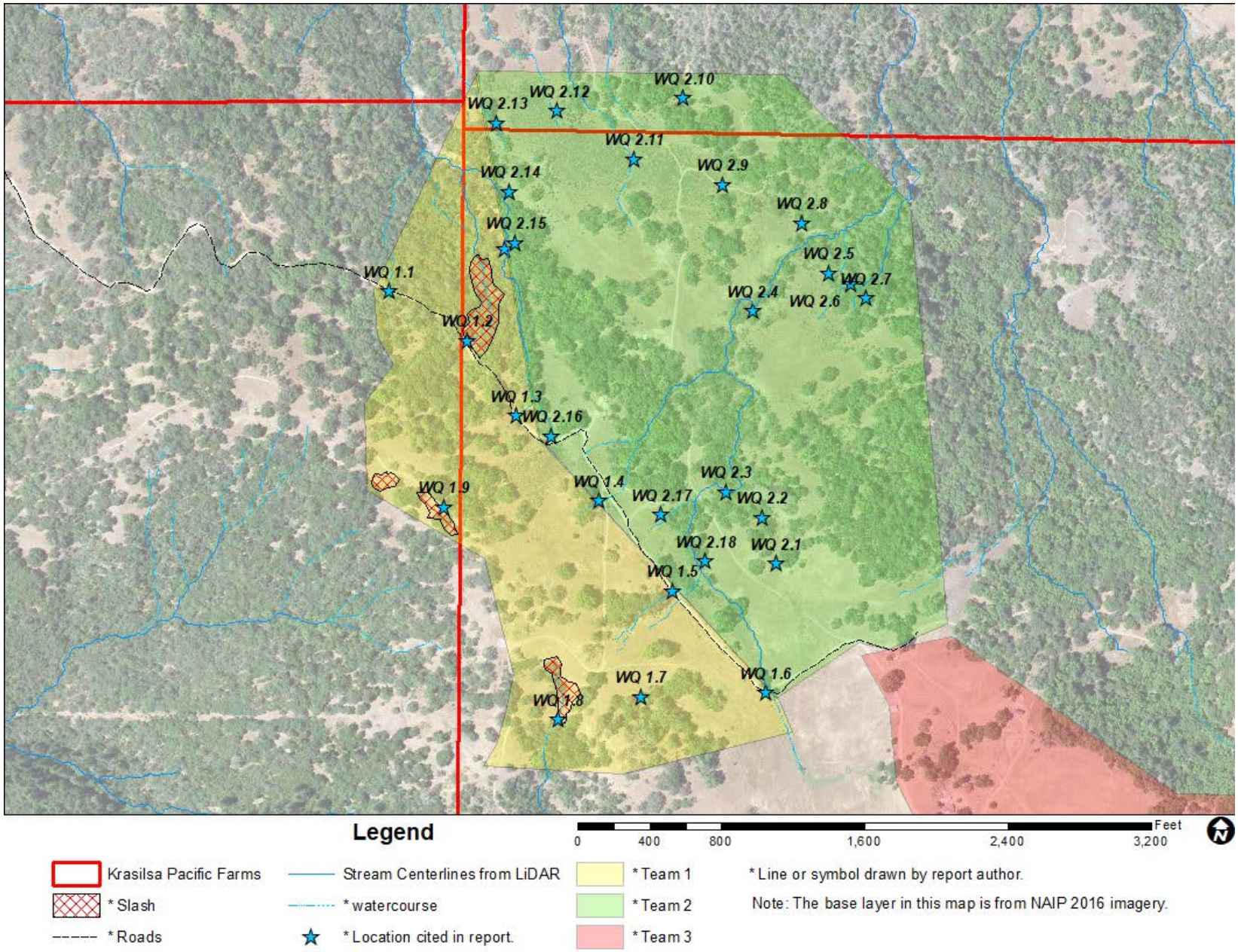

Figure 3. Map showing area covered by inspection teams 1 and 2.

II. Team 1 Observations

Ryan Bey and Brian Fuller (Team 1) covered the northeast quadrant of APN 117-270-003 and part of the eastern edge of APN 117-270-002 (*Figure 1*). Team 1 started at the southeastern corner of this area, walked west to the ridgeline, followed the ridge north until returning to the access road at WQ 1.1. Team 1 then followed the access road south and documented the failing hillslope west of the road and earthen and organic fill in the watercourses east of the road. Team 1 grouped their observations into four categories of water quality concerns: Roads, watercourses and watercourse crossings, hillslopes, and sediment delivery and deposition.

Roads:

Road conditions were variable throughout the Team 1 area. From the county road to RP 1 (*Figure 2*), the road surface appears to have been recently topped with rock. Small rills indicate that surface flow is causing limited road surface erosion, but in general, the road surface appears stable. The segment of road between RP 1 and RP2, to the east, is not similarly surfaced, but does not appear to have been adversely impacted by heavy equipment or vehicles. The segment of road running from RP 2 to RP3 showed evidence of use and impacts by heavy equipment and vehicles, likely during the period when ripping and grading activities were occurring. This segment of road is not constructed or maintained in a manner protective of water quality. Staff observed the following deficiencies and/or features of concern:

- Berms on both the inboard and outboard road edge preventing sheet flow drainage off the road
- A lack of rolling dips and/or waterbars to relieve roadside ditches
- Insufficient rock to prevent road surface erosion and sedimentation associated with stormwater runoff and the level and type of vehicle usage

Rills, ruts, and depressions in the road, likely formed by surface flow eroding the road-surface, were filled with water (Photo 1). Without improvement to road drainage features, the roads will likely continue to erode. Furthermore, portions of the road are hydrologically connected to adjacent watercourses, enabling the fine sediment eroded from the road surface to be transported to receiving waters.

Photo taken by: B. Fuller, 14 January 2019

Photo taken by: B. Fuller, 14 January 2019

Photo T1-1a: Poorly drained road between WQ 1.4 and 1.6, along the road segment between RP2 and RP3, Photo T1-1b: Berm preventing road surface flow from draining into inboard ditch along the road segment between WQ 1.4 and 1.6.

Staff observed earthen spoils apparently associated with road construction/reconstruction and/or maintenance activities along and below the road's outboard edge (Photos T1-2a and T1-2b).

Photo taken by: R. Bey, 14 January 2019

Photo taken by: R. Bey, 14 January 2019

Photos T1-2a and T1-2b: Northeast side of the road between WQ 1.2 and 1.3, showing perched fill associated with road construction/reconstruction and/or maintenance pushed over the road's outboard edge.

Surface flow has begun eroding this perched fill and depositing fine sediment into downslope watercourses (Photos T1-3a and T1-3b).

Photo taken by: R. Bey, 14 January 2019

Photo taken by: R. Bey, 14 January 2019

Photos T1-3a and T1-3b: east side of road near WQ 1.3 showing eroded perched fill draining downslope into an adjacent watercourse.

The inboard ditch along the road appeared to have been recently constructed or reconstructed (Photo T1-4a). Earthen spoils associated with roadwork had been placed on the road, forming a berm between the road and the inboard ditch (Photo T1-4b). Surface flow from the hillslopes above the road drained into the inboard ditch. There appeared to be an insufficient number of ditch relief culverts to effectively drain inboard ditch flow captured from both the hillslopes and road. Long portions of the inboard ditch drain into adjacent watercourses.

Photo taken by: B. Fuller, 14 January 2019

Photo taken by: R. Bey, 14 January 2019

Photo T1-4a: Looking southwest towards WQ 1.6 at recently a constructed inboard ditch (note bucket scar marks) and photo T1-4b: Looking northwest from WQ 1.6 at the berm between the road and ditch.

Ditch relief culvert inlets and outlets were insufficiently armored, leaving them vulnerable to erosion and failure during periods of high volume and high velocity flows (see Photo T1-5).

Photo taken by: R. Bey 14 January 2019

Photo T1-5: unarmored ditch relief culvert inlet near WQ 1.3.

Culvert inlets are poorly maintained and, in some locations, partially blocked, leaving them at risk of failure (Photo T1-6).

Photo Taken by: R. Bey, 14 January 2019

Photo T1-6: straw wattle partially blocking a ditch relief culvert inlet on the southwest side of the road between WQ 1.3 and 1.4.

Watercourses and watercourse crossings:

Watercourses above the road had been altered (see Photo T1-7) and/or filled with sediment during ripping and grading.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-7: Looking east towards WQ 1.6 at the site of a formerly natural watercourse channel altered during ripping and grading activities.

In some locations, erosion control materials have been placed around and in altered watercourses, likely in an attempt to prevent ongoing erosion of the ripped upslope hillslopes and adjacent banks (see Photo T1-8).

Photo Taken by: R. Bey 14 January 2019

Photo T1-8: Looking east from road near WQ 1.2 at an altered watercourse spanned by straw wattles, apparently intended to prevent ongoing hillslope erosion.

Staff observed fine sediment deposits and debris in channels below culvert outlets (Photo T1-9). Culverts at watercourse crossings had not been installed to channel grade and outlets were shotgunned with insufficient armor to prevent scour and erosion of the channel below the culvert outlets (Photo T1-10). Culvert inlets and outlets were either unarmored or contained insufficient amounts and sizes of armor to prevent erosion (Photo T1-11).

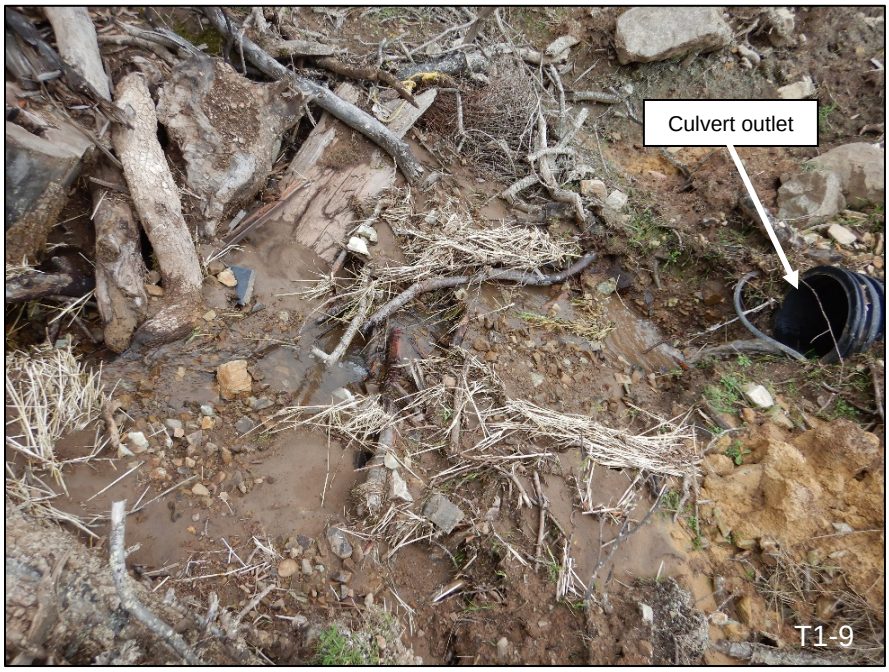

Photo Taken by: R. Bey, 14 January 2019

Photo T1-9: Fine sediment and assorted debris in the watercourse channel below a culvert outlet draining a watercourse under the road at WQ 1.2.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-10: Shotgunned culvert outlet at the watercourse crossing between WQ 1.3 and 1.4. Note lack of rock armor below the culvert outlet and fine sediment deposition in the watercourse channel.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-11: Plastic culvert installed in perched fill and not to grade at WQ 1.3. Note lack of rock armoring and erosion of material downslope of the culvert outlet. Also note rills forming from erosion on unconsolidated fill adjacent to the culvert outlet.

Culverted crossing inlets were partially blocked with erosion control material (straw wattles) and debris and sediment, leaving them vulnerable to plugging during periods of high flow (Photo T1-12). If the inlet plugged, flow would be redirected onto the road and would likely erode the road's surface and perched fill below the road's outboard edge

It is unclear whether watercourse crossing culverts are correctly sized to accommodate 100-year flood flow, with debris and sediment loads. Undersized culverts have a higher risk of plugging and failure. Failure will likely result in crossing failure, road surface erosion, and sediment deposition into watercourses, including perched fill below the road.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-12: Watercourse crossing culvert, at WQ 1.2. The inlet is mostly blocked by straw wattle and debris and sediment accumulated in the inboard ditch

Hillslopes:

The hillslopes above the road had been ripped and graded. As part of site development, trees, predominantly oaks (*Quercus sp*.), California Bay laurel (*Umbellularia californica*) and other hardwood species, and shrubs had been removed (Photos T1-13a, T1-13b, T1-13c, and T1-13d). Debris and woody material associated with site development and vegetation removal, including stumps, boulders, rock, and other earthen material, had been pushed by heavy equipment into adjacent watercourses (Photo T1-14). Staff documented four large piles of slash, shown in *Figure 3*, covering a total area of 1.7 acres. The slash pushed in the watercourse at WQ 1.2 buries 400 feet of channel length and covers 0.9 acres. The slash pile in the watercourse at WQ 1.8 is 300 feet long, covering 0.4 acres.

Photo Taken by: R. Bey, 14 January 2019

Photos T1-13a: Trees and vegetative materials pushed into watercourses at WQ 1.8.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-13b: Trees and vegetative materials pushed into watercourses at WQ 1.2.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-13c: Trees and earthen material removed during activities at WQ 1.9.

Photo Taken by: R. Bey, 14 January 2019

Photos T1-13d: Trees and earthen material removed during activities south of WQ 1.1.

Photo Taken by: R. Bey, 14 January 2019

Photo Taken by: R. Bey, 14 January 2019

Photo T1-14a: Bulldozer tracks at the top of the slash pile in the watercourse at WQ 1.8, Photo T1-14b: shows evidence of ripping and grading activities at WQ 1.9, overlooking Cloverdale (South West).

Exposed soils had been seeded, but germination density was sparse and root strength insufficient to prevent surface erosion (Photo T1-15).

Photo Taken by: R. Bey, 14 January 2019

Photo T1-15: Sparse vegetation and rills formed from surface erosion, extending over 100 feet downslope, South of WQ 1.1.

In some locations, loosened, bare soils had moved or been transported down the slope, leaving gullies up to 15 feet wide, 30 feet long, and up to 3 feet deep. Staff observed assorted erosion control measures that had been installed on the hillslopes, including straw and straw wattles (Photo T1-16). Some gullies had been lined with filter fabric and filled with clean drain rock (Photo T1-16).

Photo Taken by: R. Bey, 14 January 2019

Photo T1-16: Filter fabric and clean drain rock in a gully, apparently intended to prevent continued head-cutting and expansion, with straw for surface erosion control on the hillslope west of WQ 1.6.

Staff observed other gullies without any erosion control measures or devices. Failed and eroded materials had migrated downslope toward the road (Photo T1-17).

Photo Taken by: R. Bey, 14 January 2019

Photo T1-17: Taken from WQ 1.7, looking east at a newly formed gully with failed earthen material migrating downslope toward the road.

Gullies from the hillslopes above the road drained into inboard ditches that either drained onto slopes below the road or into a watercourse (Photo T1-18).

Photo Taken by: R. Bey, 14 January 2019

Photo T1-18: Gully, on the hillslope above the road between WQ 1.3 and 1.4, draining toward the road and into the road's inboard ditch.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-19: Looking northwest from WQ 1.7 at wattles in trenches on the hillslope above the road.

Several trenches did not contain wattles, and functioned as ditches, intercepting hillside surface flow. The off-contour trenches that drained steeply downslope were wider and deeper than on-contour trenches because of ongoing erosion (Photo T1-20). Trenches were connected and drained into the road's inboard ditch. The inboard ditch drained into ditch relief culverts or drained directly into watercourse crossings.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-20: Shows a gully on the hillslope above the road between WQ 1.3 and 1.4, presumably formed when runoff concentrated in an off-contour wattle trench. The trench width and depth were increasing downslope along the off-contour wattle trench.

Sediment delivery and deposition

Staff observed evidence of ongoing transport and deposition of earthen material and debris into watercourse channels, particularly in those channels, below the road. Unstable and perched fill also shows signs of continued erosion, and evidence of transport and delivery into downslope watercourses (Photos T1-21, T1-22, T1-23)

Photo Taken by: R. Bey, 14 January 2019

Photo T1-21: Eroded fine sediment draining toward a watercourse located in the top right of photo at WQ 1.5.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-22: Fine sediment in a watercourse at WQ 1.6.

Photo Taken by: R. Bey, 14 January 2019

Photo T1-23: Sediment and debris from ripping and grading activities deposited in a watercourse below the road at WQ 1.2.

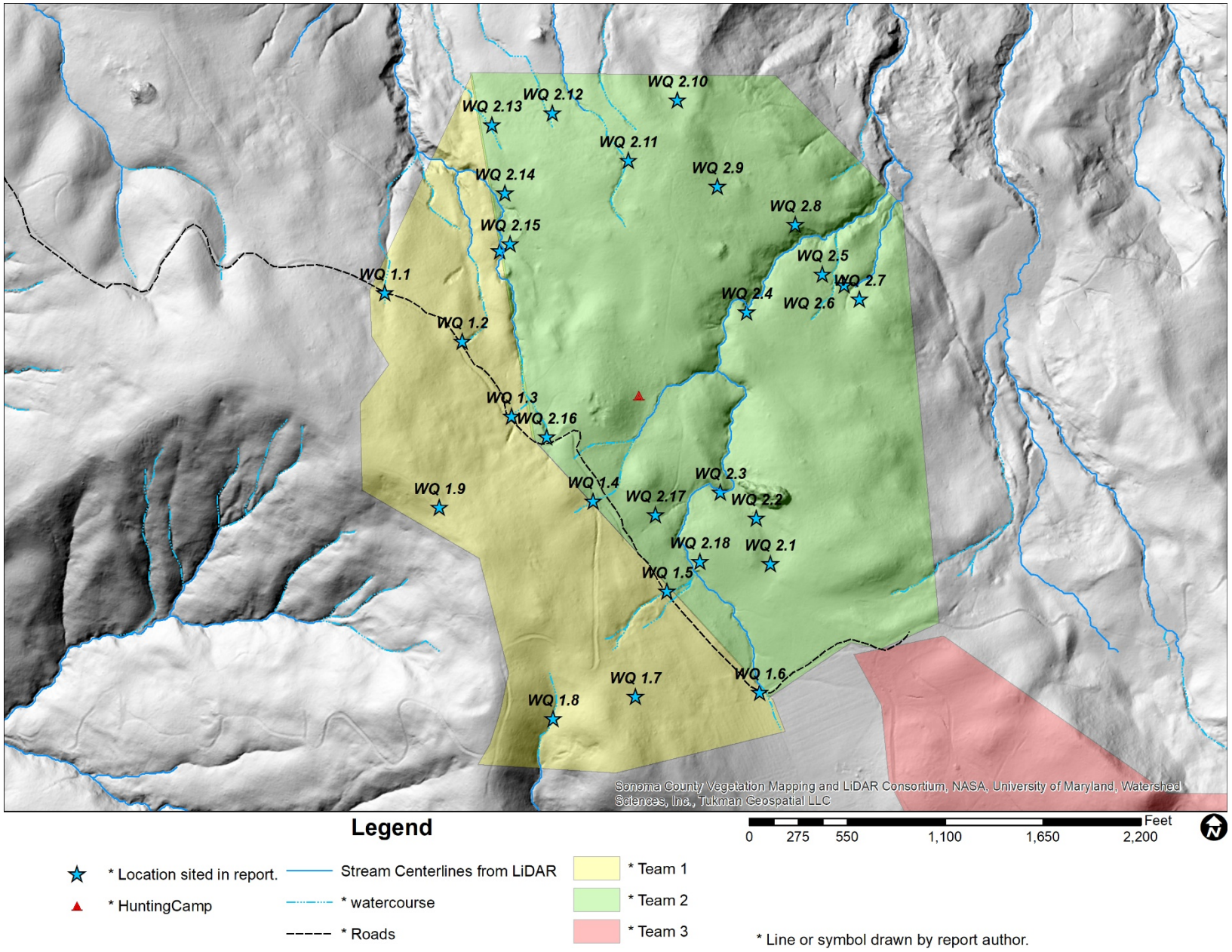

Figure 4. Map of Team 2 inspection locations.

III. Team 2 Observations

Team 2 covered the northwest quadrant of APN 117-270-003 and the southern edge of APN 117-260-002 (Figure 4). Team 2 walked the perimeter of the disturbed area to identify locations where watercourses were compromised by grading activities.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-1 and T2-2: Show slash/debris pushed by heavy equipment into the headwaters of an ephemeral stream, looking north from Location WQ 2.1- 2.2. Free water is present in heavy equipment tracks and flowing beneath the slash pile. Soil and debris pushed into the watercourse poses a threat to water quality.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-3 and T2-4: View looking northwest along the graded stream channel showing sidecast material at edge of bank (Location WQ 2.3). Heavy equipment tracks are visible within the stream channel.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-5 and T2-6: View of slash and soil/rock, and trees pushed to the edge of the bank of the ephemeral stream looking north at Location WQ 2.4.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-7 and T2-8: View looking east at recently graded/disturbed slopes in the northeast meadow below the hunting camp (Location WQ 2.5). No visible erosion control measures (straw, seeding, wattles, etc.). Largely bare, disturbed soils in this area are exposed to the elements, susceptible to erosion from raindrop impact and surface runoff, and deliverable to downslope streams and drainages.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-9 and T2-10: View of northeast meadow (Location WQ 2.6) looking north along the trend of rills in the area of a former ephemeral stream. Sediment deposits are visible at the base of the hill. This feature poses an ongoing threat to water quality and instream habitat as it continues to erode, and runoff continues to transport sediment downstream.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-11 and T2-12: View of slash pushed into the headwaters of an ephemeral stream at Location WQ 2.7.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

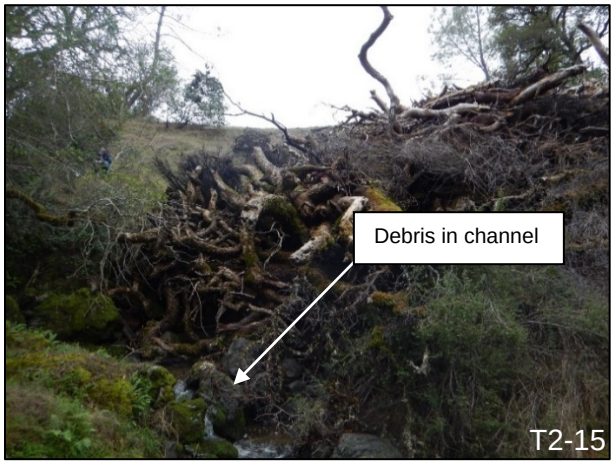

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-13 through T2-16: View of slash, soil, and rock that has been pushed into the stream channel at Location WQ 2.8. This debris caused/exacerbated slope failure into the stream. The area of slope failure is approximately 75 feet wide and 50 feet from the head scarp to the streambed (about 3,700 sf). This feature poses an ongoing threat to water quality and instream habitat as it continues to erode and fail, impeding stream flows, and contributing additional earthen and organic material and fine sediment in the downstream watercourses.

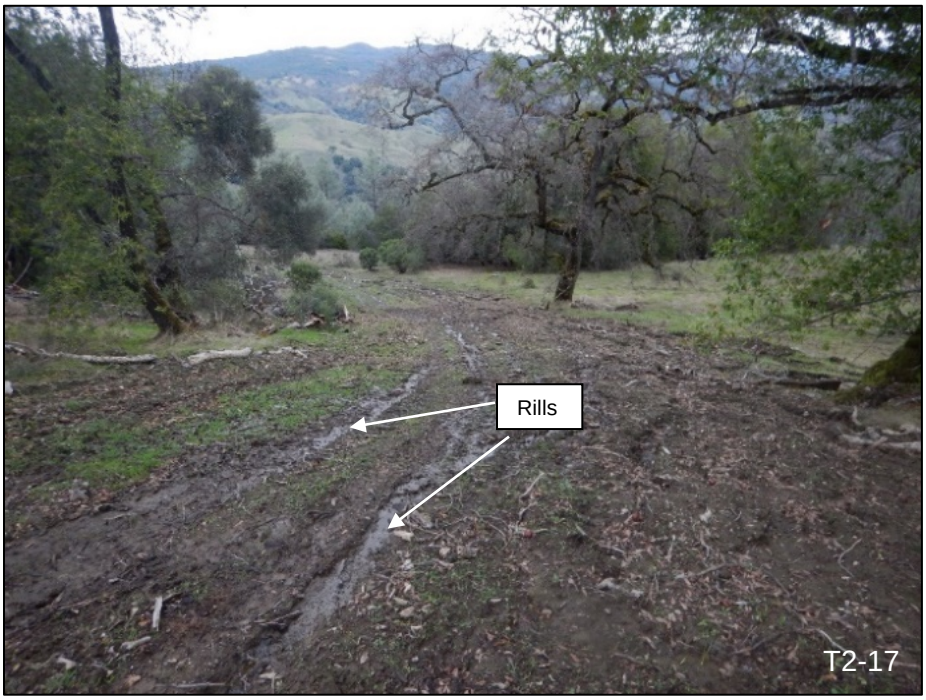

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-17 and T2-18: View of rills along the graded area in Location WQ 2.9. Staff observed substantial sediment deposits at the base of the slope, as well as evidence of sediment transport farther down the slope to the north. These features will continue to impact and threaten to impact water quality and instream habitat as they continue to erode, and runoff continues to transport eroded material into downstream watercourses.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-19 and T2-20: Slash and soil/debris pushed into the headwaters of an ephemeral stream (Location WQ 2.10). This slash pile is approximately 100 feet long, by 50 feet wide, by 20 feet high. This feature impacts and threatens to impact water quality and instream habitat as material continues to erode and migrate downstream.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-21 through T2-24: View of two ephemeral streams at Location WQ 2.11, below the hunting camp. Photos show rocks that have been placed in the rills, and sediment deposits and a slash pile at the base of the slope. These features impact and threaten to impact water quality and instream habitat as they continue to erode, and eroded material continues to migrate or be transported downstream.

Photo taken by: J. Luders, 14 January 2019

Photo T2-25: Rill in the northwest meadow at Location WQ 2.12. Staff estimated rill dimensions to be approximately 200 feet long by six inches wide by six inches deep. This feature impact and threatens to impact water quality and instream habitat as it continues to erode, and eroded material continues to migrate or be transported downstream

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-26 and T2-27: Disturbed soil and spoils adjacent to an ephemeral stream at Location WQ 2.13.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-28 and T2-29: Boulders and soil pushed into an ephemeral stream at the western edge of the meadow below the hunting camp (Location WQ 2.14).

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-30 through T2-33: Boulders, soil, and slash that have been pushed into an ephemeral stream at Location WQ 2.15. Staff observed pooled water uphill from the graded area and *Juncus sp.* growing at the edges of the disturbed area, suggesting this is the site of a wetland/spring.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-34 through T2-37: Wood chips and soil pushed into an ephemeral stream at Location WQ 2.16.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-38 through T2-41: Ephemeral stream east of the main road at Location WQ 2.17. Wood chips and debris in the watercourse. Sediment accumulations at the base of the slope.

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photo taken by: J. Luders, 14 January 2019

Photos T2-42 through T2-45: Wood chips piled in and adjacent to a watercourse at location WQ 2.18. Evidence of sediment transport and delivery from the adjacent hillslopes and fine sediment deposits in the channel.

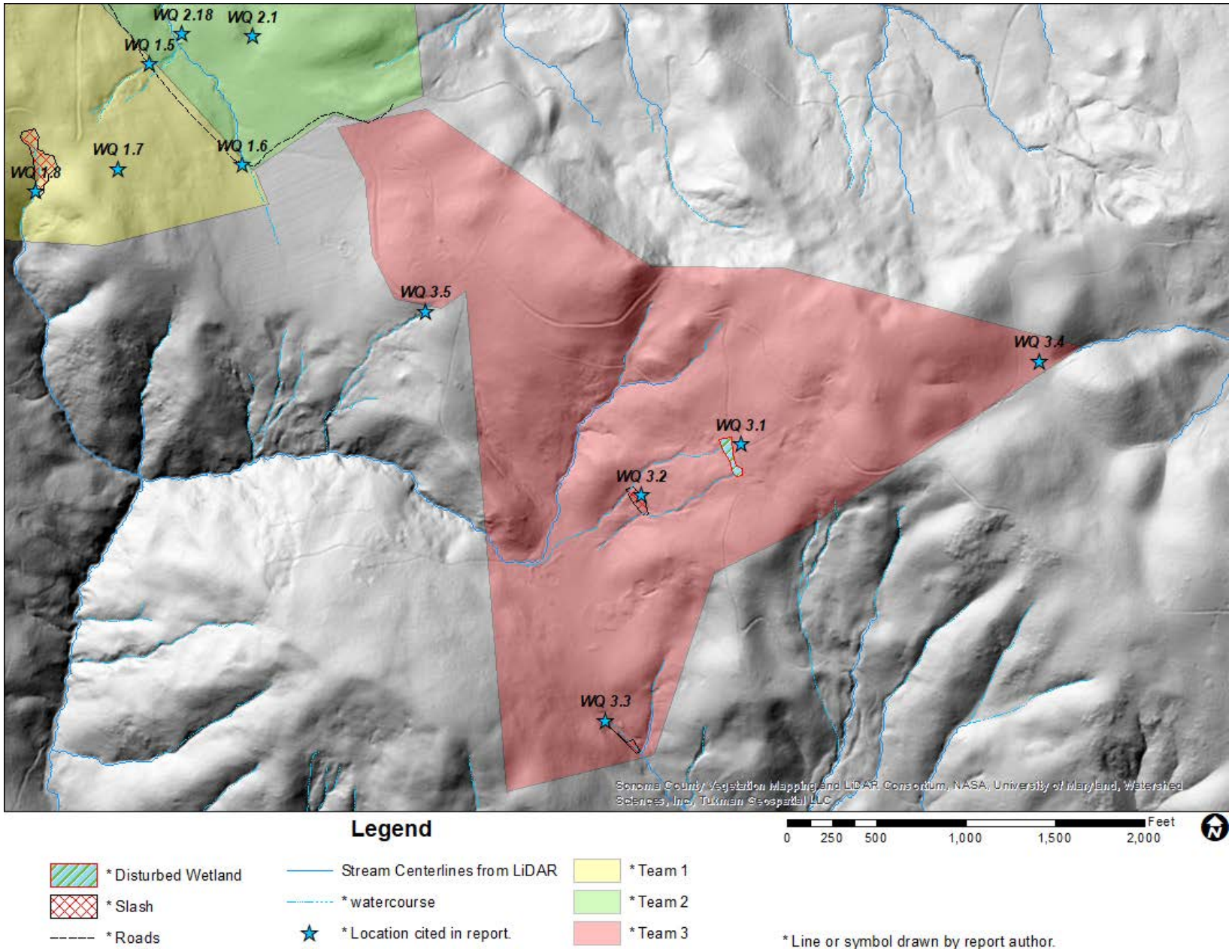

Figure 5. Team 3 inspection area.

IV. Team 3: South of the Ranch Manager's House

Team 3 inspected approximately 80 acres of cleared, ripped, and graded oak woodlands and pastures area (*Figure 5*), south of the ranch manager's house. All disturbed areas appeared to have been seeded with a cover crop (see Photo T3-1), however, the cover crop was sparse, undeveloped, and ineffective at controlling soil erosion and preventing sediment transport.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-1. Looking northwest towards the cleared, ripped, and graded hillside west of the main access road to the Property (Shellenger Road). Cover crop, straw mulch, and "V" ditches can be seen on the distant hillside. All grassy hillsides visible in the foreground are part of the area that was cleared, ripped, graded, and seeded with cover crop.

The inspection points identified as WQ 3.1 -WQ 3.5 in Figure 5, and discussed below, include conditions that typify water quality violations and concerns Team 3 staff observed throughout their inspection area.

WQ 3.1

Photos T3-2a through T3-8 show the damage that was caused to a large headwater seep complex during development for domestic water. Mr. Reimers explained that historically the seep complex had been developed to supply domestic water to the ranch manager's house. Mr. Reimers stated that the seep complex was "developed" using heavy equipment to deliver a larger volume of domestic water to the ranch manager's house. Mr. Reimers stated that seep development included installation of gravel

infiltration galleries, a new black plastic water tank, and new piping to replace the existing water delivery system.

Mr. Reimers told staff that he directed his agent(s) to excavate the seep to locate the active spring(s) and install a gravel infiltration gallery(s) to increase water collection. Associated water system also included a replacement plastic water tank and 1,700 feet of new PVC water pipe. Steep slopes above the headwater seep complex, the headwater seep complex, ephemeral streams, and the entire hillside on either side of the headwater seep complex had been cleared, ripped, and graded, and disturbed soils had not been adequately stabilized.

Staff observed signs of active erosion and rilling on the disturbed slopes and soils above the headwater seep complex, and evidence of sediment transport and delivery into the headwater seep complex and the ephemeral streams. Staff did not observe any additional erosion and sediment control such as straw, “V” ditches, straw wattles, or sediment basins. Staff observed *Juncus sp.*, a wetland obligate plant, resprouting throughout the headwater seep complex and along the ephemeral streams. Based on the presence of obligate wetland vegetation and standing and flowing waters, staff identified the seep and the two ephemeral streams draining as waters of the state, and potentially jurisdictional waters of the United States as well. There is no record that Mr. Reimers and/or his agents applied for, nor obtained, permits for dredge/fill activities in state/federal waters.

Photo Taken by: J. Puget, 14 January 2019

Photo Taken by: J. Puget, 14 January 2019

Photos T3-2a and T3-2b, inspection point WQ 3.1, showing a widened road and excavated wet area (suspected wetlands). In the foreground of each picture, recently applied straw mulch is visible, but observably ineffective at controlling erosion and sedimentation. An abandoned water tank and wetland features, including *Juncus sp.*, are visible in the background of photo T3-2b.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-3. Inspection point WQ 3.1, looking west at disturbed soils in a headwater seep complex with recently applied straw mulch. *Juncus sp.* can be seen resprouting throughout the disturbed soils in the headwater seep complex.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-4. Inspection point WQ 3.1, looking east up the hill at extensively disturbed soils in the headwater seep complex, where an infiltration gallery and pipeline has been installed. The straw cover over disturbed soils is sparse, and not sufficient to control erosion or sedimentation. *Juncus sp.* can be seen resprouting throughout the disturbed soils in the headwater seep complex to the right.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-5. Inspection point WQ 3.1, looking at fine sediment deposits in the suspected wetland area.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-6. Inspection point WQ 3.1, looking at fine sediment deposits in the suspected wetland area and ephemeral stream. Insufficient erosion and sediment controls on the adjacent disturbed hillsides has resulted in sediment transport and deposition into these surface waters.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-7. Inspection point WQ 3.1, looking east at loose, disturbed, unstable soils at the headwater seep complex and ephemeral stream, and fine sediment deposits in the stream channel. This unstabilized material will continue to enter and/or be transported into surface waters. Resprouting *Juncus sp.* is visible in the disturbed soil. Erosional rills are visible in the steep hillside slope above this area, and staff observed evidence of sediment transport via these rills into the ephemeral stream. Mr. Reimers reported the water tank visible in the upper left of the photo leaks and is no longer in use.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-8. Inspection point WQ 3.1, looking northwest. Extensive soil disturbance with insufficient erosion and sediment controls has resulted in sediment deposition into the headwater seep ephemeral stream. All hillside slopes in foreground, including the ephemeral stream, have been cleared, ripped, and graded. Note clumps of *Juncus sp.* along the path of the ephemeral stream.

WQ 3.2:

At this location, staff observed a large pile of logs, slash, roots, and soil (Photos T3-9 – T3-11) that had been bulldozed into two ephemeral streams, approximately 500 feet downstream of the headwater seep complex at WQ 3.1. This was just one of several areas throughout the Team 3 area where staff observed organic and earthen material, including oaks and California bay laurels, as well as tree roots and rocks, that had been bulldozed into swales and ephemeral watercourses. Staff observed erosional rills on the disturbed slopes and soils above the debris piles, and sediment deposits in and below the debris piles. These soil erosion features are impacting and threatening to impact water quality and instream habitat as they continue to erode, and eroded material continues to enter and transported into downstream watercourses.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-9. Inspection point WQ 3.2, looking west down an ephemeral drainage filled with trees, slash, and soil.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-10. Inspection point WQ 3.2, looking north. Cleared trees and slash has been pushed into two ephemeral drainages. Fine sediment from this pile of debris has discharged into and deposited in the two ephemeral watercourses downhill from the debris piles. Sediment in this pile is likely to continue to enter or be discharged into the watercourse.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-11. Inspection point WQ 3.2, below the pile of trees and slash, looking north. One of the ephemeral drainages that originates at inspection point WQ 3.1, upslope of the debris pile can be seen in the foreground. Soil mixed into the trees and slash and pushed into the ephemeral drainage will continue to be a source of discharging sediment.

WQ 3.3:

At inspection point WQ 3.3, shown in Photos T3-12 through T3-16, staff observed sparse, non-functional cover crop and another of several large piles of logs, slash, and soil that had been bulldozed into an ephemeral stream at the base of a hillslope. Cover crop conditions at this point typify those seen by the Team 3 staff throughout the area they inspected.

As can be seen in the photos, there is recent vegetation growth on the graded/ disturbed soils, but it is too sparse to serve as a functional cover crop capable of providing effective erosion and sediment control. Site elevations on the Property vary from approximately 1,250 to 1,980 feet above sea level, resulting in early-autumn subfreezing temperatures, and the Property has predominantly northern exposures, limiting exposure to direct sunlight. These two factors have likely served to slow the growth of the cover crop.

Staff noted that when observed from a distance at a low angle, the cover crop appears to be dense and tall, and might be assumed by an observer to be fully functional at controlling soil erosion and sediment transport. However, when observed vertically from above (e.g., as shown in photo T3-15), it is evident that the cover crop is quite sparse. Team 3 staff did not observe evidence of any additional erosion and sediment control devices or measures applied to the hillslopes in this area. In the absence of adequate erosion and sediment controls, these hillsides are susceptible to ongoing erosion and sediment transport/delivery to downstream surface waters.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-12. Inspection point WQ 3.3, looking west. This picture provides a representative image of many cleared, ripped, graded and seeded slopes staff observed throughout the Team 3 inspection area.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-13. Inspection point WQ 3.3, downslope of Photo T3-14, looking west. This picture provides a representative image of the steep slopes, sparse vegetative cover, and erosion rills observed by staff throughout the Team 3 inspection area.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-14. Inspection point WQ 3.3, looking east. The bright green cover crop shows the extent of the area that was subject to clearing, ripping, and grading. Organic and earthen spoils and slash, bulldozed into an ephemeral drainage at the base of the slope, are visible just to the right of the trees at the center of the photo. Rilling is visible on the sparsely cover cropped steep slope. Members of inspection Team 3 are visible to the left of the California bay laurel.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-15. Closer view of the area pictured in the foreground of Photo T3-14 showing sparse cover crop typical of what staff observed throughout the entire Krasilsa Pacific Farms site. When observed from a distance at a low angle, this vegetation appears dense and tall. However, when observed vertically from above, it is evident that vegetative cover is sparse.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-16. Taken at WQ 3.3, looking west across an ephemeral watercourse filled with trees, slash, and soil bulldozed from the cleared slope seen in Photo T3-14. Soil from this pile of debris has entered or been transported into the watercourse, and additional sediment within the pile is likely to enter or be transported into the watercourse over time, and with continued exposure to the elements. The pile of debris is approximately 225 linear feet long with 90 linear feet of debris in the watercourse. Sediment deposited in the stream can be seen to the right of the debris pile at the red arrow.

WQ 3.4:

At inspection point WQ 3.4, shown in photos T3-17 through T3-21, staff observed hillslopes where soils had been deeply ripped, graded smooth, and seeded with cover crop, and where subsequent runoff was now beginning to form erosional rills and gullies following pre-project drainage patterns. This area typifies conditions observed on vast portions of the project area. Pre-project LIDAR (see Figure 1) shows an erosional feature resembling a stabilized gully that should have been recognized and avoided when the area was undergoing development. The gully is now re-establishing itself as stormwater runoff drains over the graded soil which, absent a functional cover crop and other erosion and sediment controls, is easily susceptible to erosion. Eroded soils are transported from the filled stabilized gully and being deposited into a potential wet meadow (wetland feature) lower on the slope. From this wetland feature, soils will continue to be transported downslope into a grassy ephemeral stream, where they will eventually be transported to Big Sulfur Creek.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-17. Taken at WQ 3.4, looking northwest. This area had been cleared, ripped and graded. The LIDAR map in Figure 1 shows an erosion feature resembling a stabilized gully that had been ripped and graded over. A gully is forming between the two hills resulting from concentrated rainfall runoff eroding the graded fill soils. Sediment from the gully has been deposited in a potential wet meadow (wetland feature) (see photo T3-19) that drains to an ephemeral drainage (see photo T3-20). A member of the inspection team can be seen to left for scale.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-18. Taken at WQ 3.4 looking east. This area has also been cleared, ripped, and graded. Sediment has discharged to a potential wet meadow (suspected wetland feature) that drains to an ephemeral drainage in the distance. Runoff is now eroding the sediment deposited in the potential wet meadow and transporting it farther downslope to an ephemeral drainage.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-19. Taken at WQ 3.4, looking west towards the gully shown in Photo T3-17. Sediment has been deposited in the potential wet meadow (suspected wetland feature) shown in the center of the photo. Note footprints filled with muddy water in the foreground show fine sediments that have been transported from the gully shown in Photo T3-17 and deposited into this area.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-20. Taken at WQ 3.4, looking east, upstream. Drainage from the gully shown in Photo T3-17 is transporting sediment through this ephemeral drainage. Staff observed that the grassy vegetation in this swale was helping trap sediment, but note that a large volume of earthen materials remains susceptible to erosion from the upstream hillslopes and transport through this area, potentially burying the grassy vegetation in this area and continuing to travel down the ephemeral drainage to Big Sulfur Creek.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-21 Inspection point WQ 3.4; runoff draining from the grassy swale shown in Photo T3-20.

WQ 3.5:

Inspection point WQ 3.5, shown in photos T3-22 through T3-24, is a gully resulting from poorly constructed and/or maintained road drainage features associated with drainage from the main access road (Shellenger Road). This gully is approximately 375 feet long and resulted from concentrated flow from the inside ditch along Shellenger Road, flowing through a cross culvert and draining onto a hillslope that had been cleared, ripped, graded, and seeded with cover crop. As shown in photo T3-22, taken on December 28, 2018, by James Bishop of SCACO, runoff from the road has caused rilling and gullying on the slope. During the January 14, 2019, inspection, Team 3 staff observed straw mulch and straw wattles on this erosional feature. As mentioned below, staff noted that these erosion control measures were not effectively controlling continued erosion on the hillslope.

Photo Taken by: J. Bishop, 28 December 2018

Photo T3-22. Inspection point WQ 3.5, looking west towards Cloverdale. John Bishop, Sonoma County Agricultural Commissioner's Office, took this photo during the December 28, 2018, site visit with Mr. Gergus and Mr. Reimers. Note several rills and a developing gully, approximately 375 feet long, resulting from concentrated flow from a ditch relief culvert under Shellenger Road.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-23. Inspection point WQ 3.5, looking west. The gully shown in photo T3-22, taken 19 days earlier, has now been covered with straw. Straw wattles are visible at places. Staff noted that the straw wattles were bridging the rills and gully, allowing rainfall runoff to pass under the wattles. The inspection team ran short of time, and were unable to measure or estimate the size of the gully. This feature extends towards Crocker Creek, a blue line stream.

Photo Taken by: J. Puget, 14 January 2019

Photo T3-24. WQ 3.5, at Shellenger Road. The arrow points at the outlet of an eight-inch diameter corrugated metal pipe ditch relief culvert. This culvert discharges onto the fillslope shown in photos T3-22 and T3-23, and appears to be the cause of the gully shown in those photos.

V. Summary of Inspection

Beginning late 2017 or early 2018, Mr. Reimers and/or his agents cleared, ripped, and graded (disturbed) approximately 140 acres of land on the Property, without first applying for or obtaining applicable local, state, and federal permits. Mr. Reimers's land disturbance activities caused or included the following elements detrimental, or potentially detrimental, to the quality and beneficial uses of waters of the state:

- Removal of 40 acres of trees, including trees bordering approximately 500 feet of watercourse channel length.
- Placement of earthen spoils and organic debris (slash) into at least 8 different watercourse channels, impacting a cumulative channel length of at least 1,000 feet.
- Dredge/fill/obliteration of at least 2,450 feet of channel length.
- Dredge and/or fill in at least 10,000 square feet of wetland.

VI. Recommendations

1) For the remainder of the rainy season, deploy erosion and sediment control measures throughout the site as needed to prevent/minimize additional sediment discharges to receiving waters.

2) Engage appropriately licensed, qualified professional(s) to conduct a U.S. Army Corps verified forensic wetland delineation of the entire Property, to identify locations of all watercourses present on the project area prior to the site development activities conducted since late 2017, and to identify and assess condition of all watercourses currently present on and adjacent to the site.

   Retain a licensed professional to inventory, assess, and develop a workplan and schedule to implement measures to ensure that all developed features throughout the Property are corrected, restored, and/or maintained in conditions that prevent or minimize erosion, sediment transport/delivery, and adverse impacts to water quality and beneficial uses. Include measures to ensure that unstable features caused or affected by onsite development and operations are removed or otherwise protected so as to minimize the potential for these features to cause adverse impacts to water quality and beneficial uses.

   This plan must include/incorporate a wetland and watercourse restoration plan which includes but is not limited to, a project description, goal of restoration, implementation plan and schedule, plan for monitoring and site maintenance following restoration, and contingency measures addressing the diversity index of wetland/ non-wetland/riparian native plant species occurring on the Property. The

plan should include proposed mitigation to address the temporal and permanent losses of wetland and watercourse value and function. The plan should include specifications for removal and disposal of earthen and organic debris that has been placed in or has discharged into surface waters.

Dispose of all development and restoration-related earthen spoils in a manner to prevent/minimize transport and delivery to receiving waters.

Plan implementation will need to include considerations to address the requirements of other applicable agencies.

3) In the event that the property owner and/or tenant(s) propose in the future to develop or use the Property in a manner or method that will or may result in a discharge of waste to waters of the state in the future, staff recommend that the owner(s)/tenant(s) be aware of and comply with relevant regulatory requirements for water quality protection. For example, Water Code section 13260 requires that a person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system shall file with the appropriate regional board a report of the discharge. Further, Water Code section 13264 states, in part: “No person shall initiate any new discharge of waste or make any material changes in any discharge…prior to the filing of the report required by Section 13260.” In addition, projects involving the disturbance of an acre or more of land are subject to regulation under the State Water Board’s Construction General Stormwater permit, and projects involving dredge or fill in waters of the United States are subject to regulation under Clean Water Act section 401. For more information about Water Board permits that may apply to proposed site development or land use activities, refer to this link:

https://www.waterboards.ca.gov/northcoast/water_issues/programs/permit/

VII. Enforcement Discretion

The observations in this report will be assessed for violations of the California Water Code. The Regional Water Board and the State Water Board reserve the rights to take any enforcement action authorized by law.