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**North Coast Regional Water Quality Control Board**

TO: Devon Jorgenson  
Engineering Geologist, NPDES Unit

FROM: Brendan Thompson  
Environmental Scientist, Non-Point Source Unit

DATE: December 29, 2016

SUBJECT: FOX HOLLOW CONSTRUCTION SITE INSPECTION SUMMARY

This memo summarizes the construction site inspection that Stephen Bargsten and myself performed in response to Mona Dougherty's request that we visit the Fox Hollow development construction site (Project) during the rain event of Friday, December 23, 2016. We inspected the site between 8:30 am and 10:00 am. Some photos are included at the end of this memorandum, but all photos taken can be found in the Regional Water Board R: Drive, here:

R:\RB1\Shared\Storm\_Water\Construction\Counties\Sonoma\ACTIVE\Fox Hollow\161226 Photos. A Clean Water Act section 401 water quality certification (401 certification) was issued for the Project on June 23, 2016 (CIWQS Place No. CW-821894).

On Thursday, December 22, 2016, I contacted Charity Wagner of City Ventures and left a voice message saying that we wanted to inspect the Project at 8:30 a.m. the following day, during the forecast rain event. Ms. Wagner left me a voice message later the same day, saying that it was okay for us to visit the Project and that Mr. Bob Fortney would meet us there.

We met Mr. Fortney at Youth Community Park, which borders the northern boundary of the Project, at 8:30 am. Rainfall preceded our arrival and scattered showers were present during our inspection. The ground in the Project area appeared fully saturated. We walked with Mr. Fortney east through the park to reach the Peterson creek trail that runs along the right bank of Peterson Creek—the Project site is roughly rectangular and the western boundary runs adjacent the left bank of Peterson Creek. We observed two, and possibly a third, active discharge locations to Peterson Creek from the construction site along this western boundary. The discharges originated from several large impoundments of water

along the Project boundary. The purpose of the impoundments was to slow down and store water to prevent discharges of sediment-laden water to Peterson Creek. The impoundment perimeters were either constructed from silt fence (see Photo 14) or earthen berms covered in filter fabric (see Photo 6 and 7). The impounded water was discharging to the creek by either overwhelming the perimeter sediment controls (see Photo 2) or, by infiltrating at the top of bank, piping through the creek bank (see Photo 3 and 4), running down the creek bank and discharging into the active channel.

It appeared that the entire site was broken into two catchments as a result of changes to topography by grading activities—a high point stretched from north to south across the Project site, causing approximately 75% of the total Project disturbed area to drain to the western project boundary, while the rest would drain to the eastern Project boundary.

We asked Mr. Fortney if the site discharge locations had yet been sampled (per the CGP requirements) and he said that he had a call into the consultant to do sampling, but that the consultant had not yet arrived.

The entire site had been recently sprayed with a fiber matrix/Earthguard combination (hydromulch). Mr. Fortney said that the hydromulch application rate was 1500 pounds/acre, and that the Earthguard was used in a concentration of 7 gallons/acre (see Photo 10 and 11). Earthguard is a soil binder—according to the manufacturer, Earthguard is as effective applied in a water solution as it is mixed into a fiber matrix slurry. It was evident that the hydromulch had been recently applied, because pools of runoff from hydromulch-treated areas had a green tint to them as a result of the green dye used by the fiber matrix manufacturer (see Photo 16).

After inspecting the western Project boundary, we walked along the northern Project boundary, where no discharges from the Project were observed, to the eastern project boundary where storm water accumulated to discharge to a drain inlet in the southwest corner of the Project area. One drainage entered this Project catchment from a Fulton Road cross culvert (see Photo 17).

Mr. Fortney mentioned that when conditions were suitable (i.e., drier), he intended to work with the Project consulting engineer to revise the drainage pattern so that all runoff would discharge at one discrete location (see Photo 18). I cautioned him that the engineer should perform the necessary calculations to ensure that the outlet to Peterson Creek could handle this introduced flow and not cause erosion in response to the changed hydrology. I mentioned that they may need to distribute the drainage to more than one outlet to prevent erosion, depending upon the engineering calculations.

The Project 401 certification required preservation of an existing wetland within the Project area. One objective of the Project inspection was to assess whether the wetland

had been impacted by construction runoff. We did not see any indication that the wetland had been damaged by turbid runoff (see Photo 12). However, we did observe turbid runoff from the construction site in a wetland immediately adjacent the southern Project site boundary, at the base of a constructed retaining wall (see Photo 13). This wetland appeared to be a wetland identified as "W2" in the 401 certification application materials (see Figure 1). Impacts to this wetland are not permitted by the 401 certification.

It was apparent that the implemented BMPs were the result of a reactive pollution prevention strategy; because proper wet weather site planning was not completed prior to the wet season, site conditions necessitated construction of several improvised detention basins and in some places, multiple layers of sediment control (see Photo 9, 14, 15, 19). Measures that could have been performed earlier in the season to make the site runoff more manageable appeared to not have been performed; for instance, breaking the project into smaller catchments so that runoff could be more easily managed, construction of sediment/detention basins engineered per the CASQA manual, and Project-wide, series of check dams to slow runoff and allow sediment to settle.

Other inspection details are included below in the photo captions.

## Inspection Photos



Photo 1: Peterson Creek discharge location 1. Photo was taken at 8:36 a.m. The camera time stamp was corrected after this photo was taken. Water was running down the stream bank and causing turbidity along the left bank channel margin as shown in the photo.



Photo 2: Peterson Creek discharge location 1. It appeared that storm water was passing underneath the silt fence. This discharge location appears to correspond with discharge sampling location #1 as provided in the 12/23/16 Sampling Field Log sheet.



Photo 3: Peterson Creek discharge location 2. This discharge location appears to correspond with discharge sampling location #5 as provided in the 12/23/16 Sampling Field Log sheet. As shown in Photo 4, storm water was either passing beneath the silt fence or infiltrating and discharging at a uniform elevation on the bank of Peterson Creek. Storm water may have infiltrated and forced to emerge from the bank after hitting an impervious soil layer.



Photo 4: Peterson Creek discharge location 2.



Photo 5: Peterson Creek discharge location 3. It was unclear where or whether this discharge originated from the Project site. This outfall does not appear to be listed as a discharge location on the 12/23/16 Sampling Field Log sheet, though sampling location #4 may be in the background at the silt fence, where runoff leaves the southwest Project boundary.



Photo 6: Earthen berm covered with filter fabric. Looking north. Peterson Creek is approximately 40 feet to the left.



Photo 7: Another earthen berm covered with filter fabric, looking south. Peterson Creek is approximately 60-70 feet to the right.



Photo 8: An armored discharge point along the western project boundary, in the northwest corner. There was no discharge to Peterson Creek occurring at the time of our visit.



Photo 9: Discharge location shown in Photo 8.



Photo 10: Disturbed area with hydromulch after rainfall.



Photo 11: Close-up of area shown in Photo 10. Mr. Fortney said the hydromulch was sprayed at 1,500 pounds per acre.



Photo 12: Looking south, jurisdictional wetland area required to be preserved as a condition of the 401 certification.



Photo 13: Retaining wall along southern Project boundary, looking west. The puddle consists of muddy runoff from the Project site and may be a jurisdictional wetland as identified in Project 401 certification application documents. Runoff from disturbed Project areas reached this depression area by passing below the western end of the wall, whereupon it flowed east into this area.



Photo 14: A view of improvised detention basins along western Project boundary, looking west.



Photo 15. One of the earthen basins failed and storm water was flowing into the next downstream basin. The blue line shows flow direction.



Photo 16. Photo taken within the eastern catchment. The storm water runoff on the bottom half of the photo is from areas treated with hydraulic mulch and has a green hue, unlike the water in the top of the photo, which is from areas largely not treated with hydraulic mulch. Ponded water throughout the Project area, in areas where hydromulch had been applied, had a green hue.



Photo 17: Looking north on the southeast portion of the Project site. Run-on from Fulton Rd. cross-culvert shown coming from the right side of photo to the foreground. A confluence with the drainage from the equipment staging area is in the lower left corner of the photo.



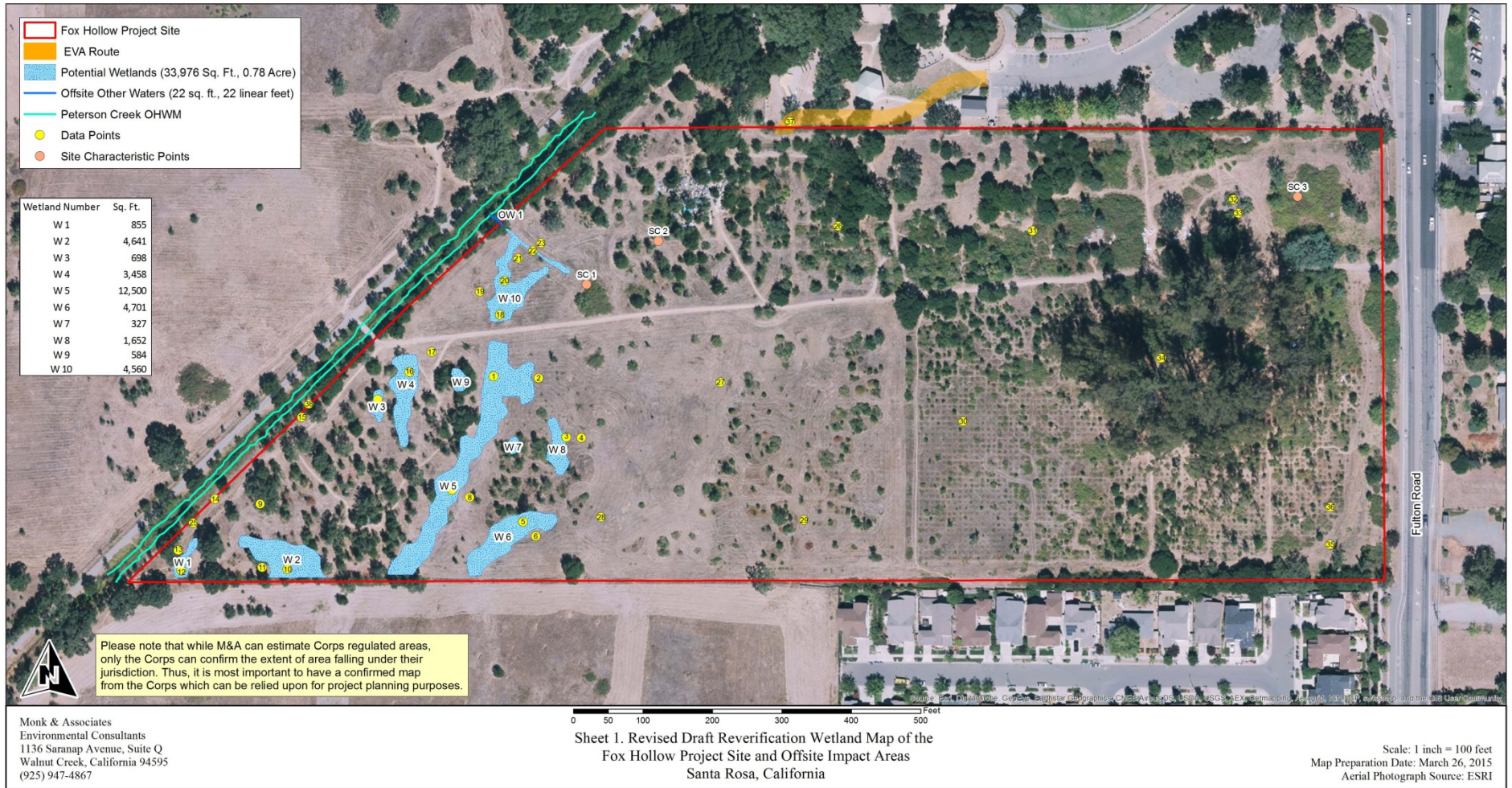
Photo 18: Existing outfall channel on the left bank of Peterson Creek where future drainage from the western side of the Project is proposed for discharge.



Photo 19: Looking west, at multiple layers of sediment control near southwestern Project boundary.

# Figure 1: Pre-Project Wetland Delineation

MONK & ASSOCIATES



Sheet 1. Revised Draft Reverification Wetland Map of the Fox Hollow Project Site and Offsite Impact Areas Santa Rosa, California

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