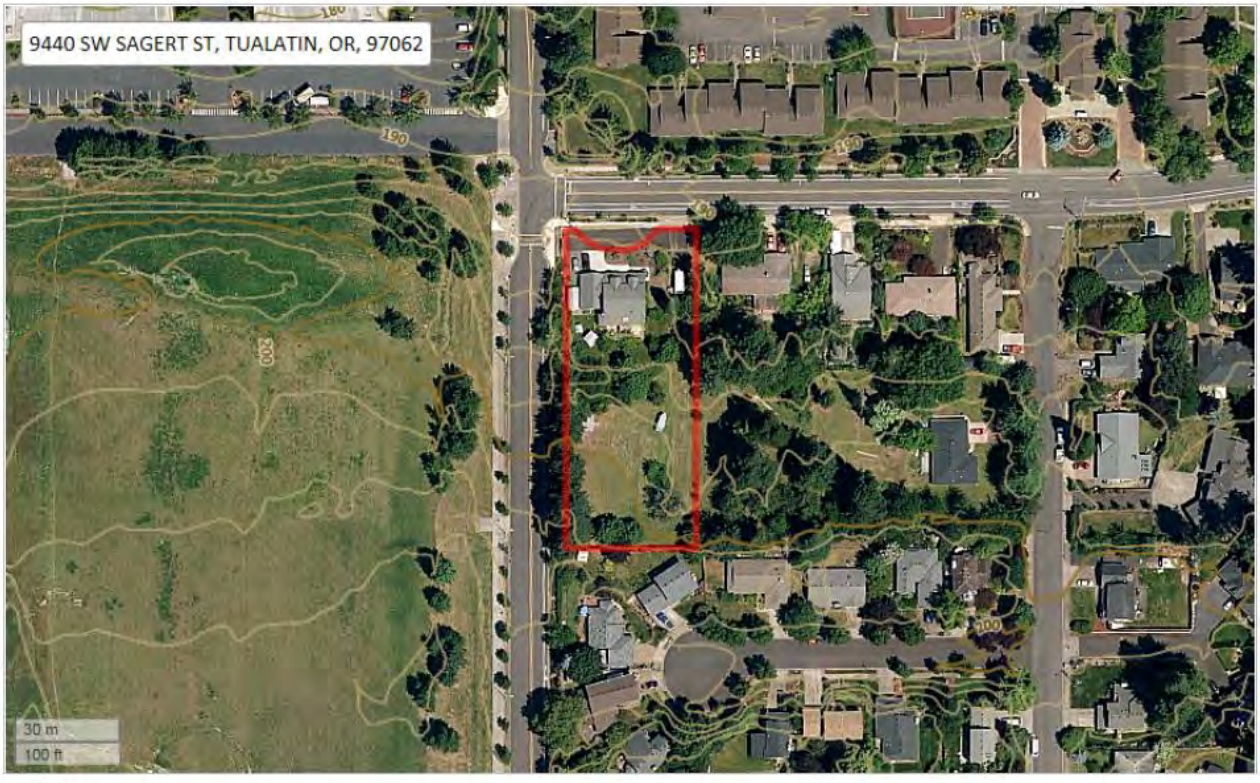
May 31, 2016

Mr. John Marquardt
Better World Homes
14870 NW Pioneer Road
Beaverton, Oregon 97007

Re: Significant Natural Resource Area reconnaissance for 9440 SW Sagert Street, Tualatin

Dear John:

Per our discussion on October 12, 2015, Westbrook Science & Design LLC visited the property at 9440 SW Sagert Street in Tualatin, Oregon. (2S126AB04500). The scope of this evaluation comprises the entire tax lot, as shown in red below. Based on Metro's mapping of natural resources, this 0.88-acre property lies in the southeast corner of SW Sagert Street and SW 95th Avenue.



The subject property is in residential use, with a single-family dwelling at the north end and a large landscaped portion in the southern portion, and a small shed located along the western property line. No roadside ditches were observed along SW 95th Avenue or SW Sagert Street. There is a roadside (parking lot-side) ditch collecting water along the southern edge of the parking lot west of SW Sagert Street in the industrial park.

Our initial investigation occurred on October 13, 2015. The previous few days had been dry but some rain had fallen over the weekend. The property slopes gently from southwest to northeast. The area just south of the house has more intensive landscaping with small trees, shrubs, and lawn grass. The majority is expansive lawn with several mature trees, including Norway maple, Douglas fir, fruit trees, and weeping willow.

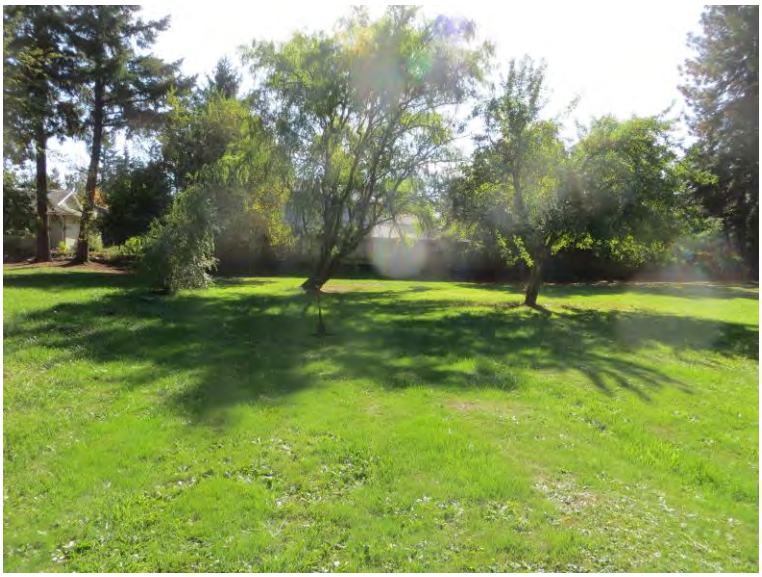


Figure 1. Looking south toward upper end of property

The soil mapped at this location is Dayton silt loam, a hydric soil as noted by CWS. It appears to be an isolated lobe surrounded by Aloha and Amity silt loams, common upland soils in the Willamette Valley and often associated with Dayton silt loam, with Dayton occupying the lower depressions in those associations.

This map unit is an enclosed polygon that is not currently associated with a depression or water feature, though it may have been in the past, prior to the residential and commercial development that surrounds this area.

The vegetation is borderline hydrophytic; most lawn grasses satisfy the wetland vegetation criterion for hydrophytic vegetation. However, spotted cat's-ear is a common weed in the lawn, suggesting that the soil does not remain wet for prolonged periods. Similarly, Norway maple and Douglas fir denote drier conditions as well. Lastly, directly to the east is a stand of Ponderosa pine, which also favors drier soil.

This property appears to be hydrologically isolated. Runoff from the road to the west is captured in the City's storm drain system. To the south, the owner has constructed railroad-tie walls and elevated the property, but we observed no roof drain outfalls or other water leaking onto the subject property from there. There was no evidence of surface ponding or flow, and the grass appeared uniformly green due to irrigation in the summer months but we did not see areas of weaker growth where early spring wetness might have impeded grass growth.

We sampled the soil in two locations. One was south of the southeast corner of the house, just beyond the intensively landscaped area, and the other in a low spot on the eastern property line. Both locations exhibited weakly hydric soil, based upon redoximorphic features in the top 12 inches that met the F3 (Depleted Matrix) criterion. The soil matrices were 10YR 4/2 with redoximorphic concentrations of 10YR 4/4. The location along the eastern property line just barely met the criterion, with redox beginning around 9 inches. The other location closer to the house exhibited redox features closer to the surface. However, neither plot was strongly hydric.

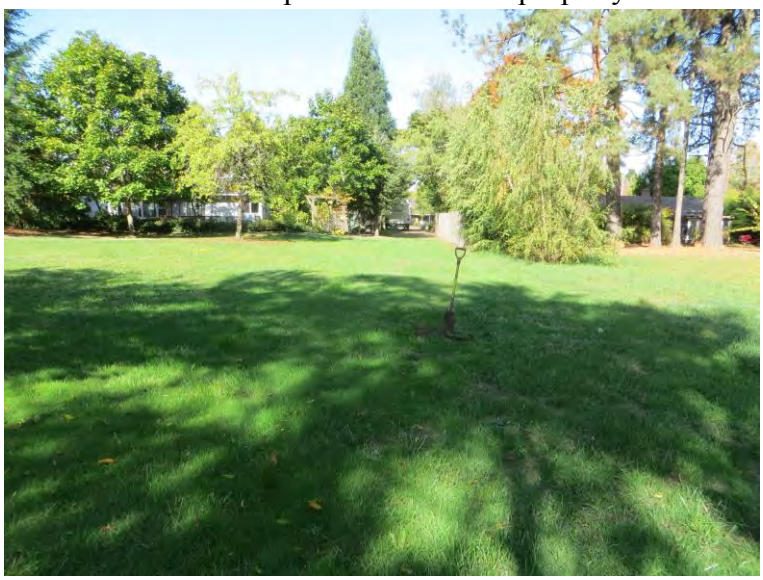


Figure 2. Looking north at sample plot on western property boundary

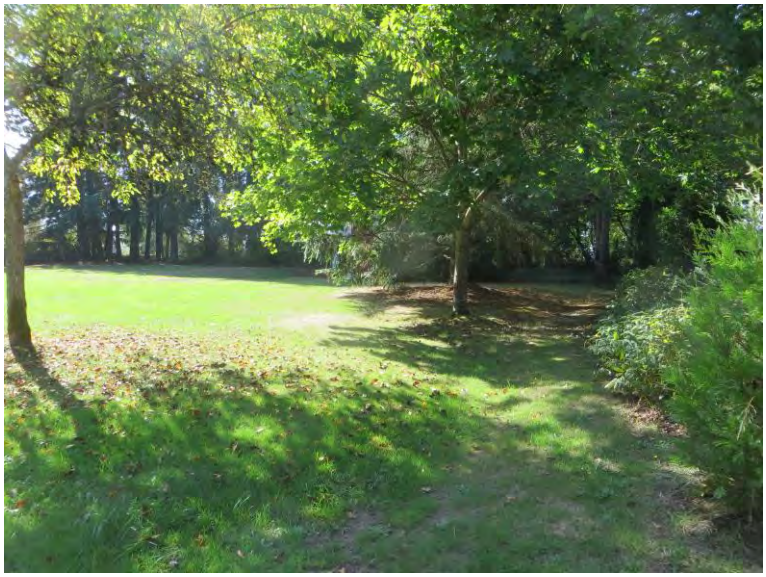


Figure 3. Looking west along edge of intense landscaped area, at sample plot in slight swale.

Additional Information

In May 2016, CWS determined additional information was necessary to determine whether Vegetated Corridors from off-site resources may extend onto the subject property and a follow-up evaluation of offsite resources was conducted on May 31, 2016. The slope in the area of the subject property is very low gradient, based on the topographic lines shown on the Metromap graphic on page 1. The steepest area on the map shows a 10-foot change in gradient over approximately 100 feet, taken about 500 feet west of the study area where the land slopes to the north toward a parking lot. This would indicate a maximum potential vegetated corridor in this area of 50 feet.

There is a ditch present along the edge of the parking lot of the industrial uses in the northwest quadrant of the SW 95th Street / NW Sagert Street intersection. Near the intersection of SW Sagert Street and SW 95th Avenue, the ditch is very shallow and flat, with no indication of standing water and vegetation community similar to the grasses present on adjacent higher ground. The grade descends and the ditch deepens and widens to the west, away from the intersection and toward the center of the property line, and the ditch developed evidence of standing water with increasing depth. Hydrophytic trees and shrubs were present where the surface hydrology indicators were also observed. Because of its status as a stormwater facility that did not appear to be created in a natural Sensitive Area, a vegetated corridor is not applicable to this resource. Additionally, any associated vegetated corridor would be severed by SW 95th Street, which is nearly 50 feet wide itself, including all the impervious surface.

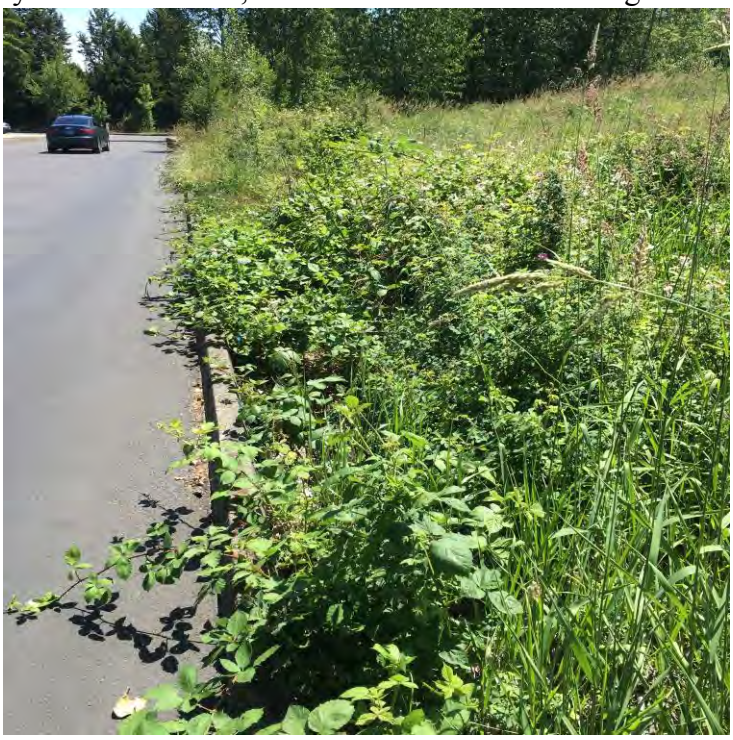


Figure 4. Looking east toward SW 95th Avenue along south side of drive aisle

To the north, the land is developed into single-family residential uses and no potential wetlands were observed on those properties. The area to the south is also in residential construction. To the east, the adjacent property also has a large backyard and conditions appear similar to the subject property. Ponderosa pines are the dominant tree. From the right-of-way, the lawn does not exhibit indications of wetness such as stunted growth or stress. The vegetation present consists of Norway maple, non-native oak, and other species that favor drier conditions. We observed no surface alterations indicating surface water management challenges to the routine use of the property during the wet season, such as ditching.

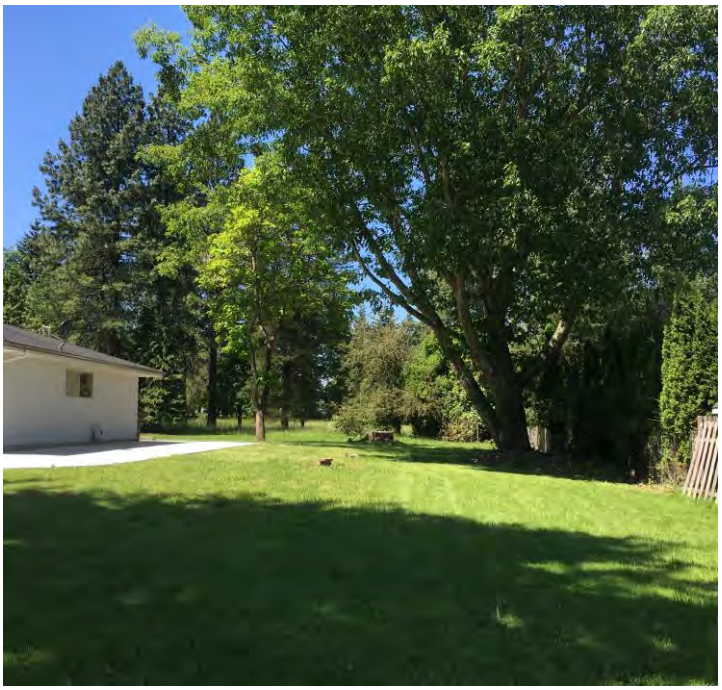


Figure 5. Looking west from SW 93rd toward the subject property. No indication of wet conditions entering from offsite.

Viewing the site from SW 93rd Avenue, we did not see any evidence that water flows from the subject or adjacent property onto properties fronting on SW 93rd Avenue. We did not observe evidence that sheet flow crosses the sidewalk into the roadside ditch serving SW 93rd Avenue, or any other connection allowing potential surface flow to connect to the ditch (area drain, small pipes). This ditch appears to only carry roadway runoff; it is not connected to natural streams or wetlands.

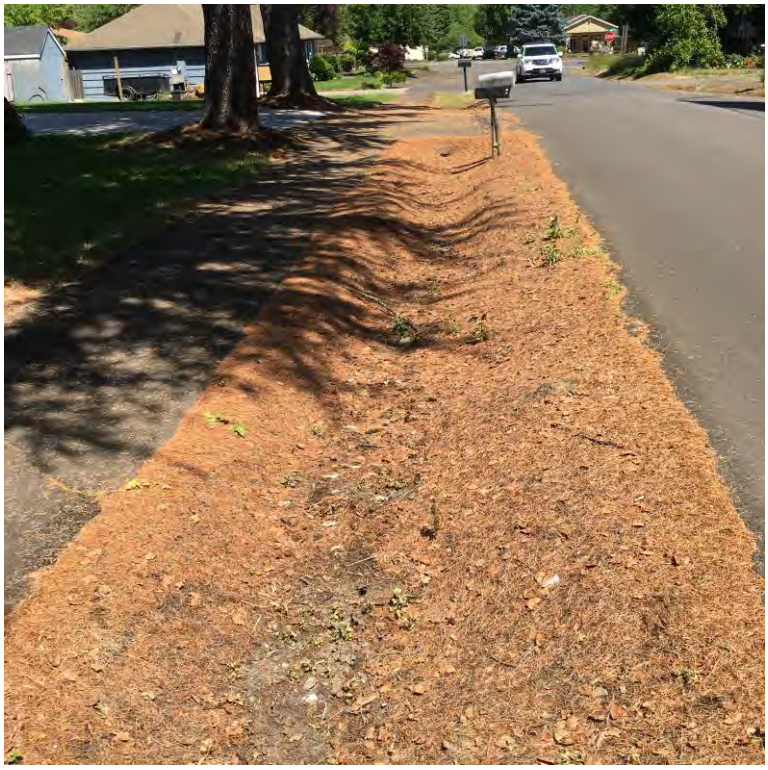


Figure 6. Looking north along east side of SW 93th Avenue. If the subject property or the adjacent property to the south were wet, it would likely drain into this ditch.

Results and Conclusions

We observed hydric soil on the subject property. However, based upon the vegetation on and near the site in a similar landscape position and the interception of surface runoff that might have entered the site from the west and south in the past, it is likely this site is drier than it was historically. Based on the lack of direct and indirect indicators of surface and subsurface hydrology, we conclude that this site does not meet the vegetation or hydrology criteria for wetland determination. Based on observation of offsite properties, we conclude that there are no Water Quality Sensitive Areas in a position to cast a vegetated corridor onto the subject property from off-site.

If you have additional questions, please feel free to contact me at (503) 869-7897.

Sincerely:

Anita Cate Smyth, PWS
Westbrook Science & Design, LLC