

**PARCELS 2125079035, 2125079062,
2125079063
CARNATION, WA 98014**

CRITICAL AREAS REPORT

January 17, 2017



**PARCELS 2125079035, 2125079062,
2125079063
CRITICAL AREAS REPORT**

PREPARED FOR:

MAINVUE HOMES
1110 112TH AVE NE
BELLEVUE, WA 98004

PREPARED BY:

ESSENCY ENVIRONMENTAL, LLC
11104 320TH AVENUE NORTHEAST
CARNATION, WA 98014
CONTACT: MARY HAREnda
(425) 761-5903
MHAREnda@CABLESPEED.COM

January 17, 2017



Table of Contents

	Page
Table of Contents	i
Parcels 2125079035, 2125079062, 2125079063 Critical Areas Report	
Introduction	1
Background	1
Project Description	2
Existing Conditions	2
Methods	2
Results	3
General Site Description	3
Flood Hazard	3
Critical Aquifer Recharge Areas	3
Geologic Hazards	4
Fish and Wildlife Conservation Areas	4
Wetlands	4
Constructed Stormwater Ponds	4
Wildlife	5
Citations	6
 Table 1. City of Carnation Permits Previously Issued for the Project Site	 3
 Appendix A. Figure 1. Vicinity Map	
Figure 2. Critical Areas within the Project Vicinity	
Figure 3. City of Carnation Critical Areas Map	

Background

This Critical Areas Report describes the results of a critical areas assessment completed by Essency Environmental for a proposed residential plat located within the city limits of Carnation, Washington (Figure 1-all figures are in Appendix A). The project site consists of tax parcels 2127079063, 2125079062, and 2125079035 (Figures 2A and 2B).

This study was completed by Aquatic Ecologist, Andrew Wones and Professional Wetland Scientist, Mary Harenda. Wones and Harenda each have over 25 years of experience in wetland delineation and assessment, aquatic habitat inventory, impact assessment, mitigation planning, implementation, and construction and permitting support.

Project Description

The project proposes development of tax parcels 2127079063, 2125079062, and 2125079035 as a single-family residential plat. The three parcels total approximately 33 acres. The plat would include up to 124 single-family residential lots and associated roads and infrastructure. Final project configuration is still being designed at this time.

Methods

This study was conducted following guidelines detailed in Carnation City Code 15.88-Critical Areas. Background research included review of the following sources:

- Federal Emergency Management Agency National Flood Hazard Layer (FEMA 2015).
- City of Carnation Critical Areas Map (Prepared by Roth Hill Engineering Partners, 2005).
- King County Interactive Mapping Tool (King County 2016).
- USDA NRCS Web Soil Survey (NRCS 2016).
- USFWS National Wetlands Inventory Mapper (USFWS 2016).
- USGS National Hydrography Data Layer (USGS 2016)
- Washington State Department of Ecology 303d list, interactive map (Ecology 2012).
- Washington State Department of Fish and Wildlife (WDFW) Priority Habitats and Species database (WDFW 2016a).
- WDFW Salmonscape Interactive map of salmon distribution (WDFW 2016b).
- Washington Department of Natural Resources Forest Practices Application Mapping Tool – Water Type Layer (WDNR 2016).
- Carnation Municipal Code, City of Carnation, WA.
https://www.municode.com/library/wa/carnation/codes/code_of_ordinances?nodeId=CAWAMUCO

Essency Environmental conducted site visits for a critical areas assessment for the project in April, May, and September, 2016. The study area consisted of tax parcels 2127079063, 2125079062, and 2125079035, and adjacent areas within 300 feet. The presence of any wetlands was determined using the US Army Corps of Engineers wetland delineation guidelines (USACE, 2010) and definitions in the Carnation Municipal Code.

Results

General Site Description

The parcels that comprise the proposed residential plat cover approximately 33 acres. The current zoning and land use is Light Industrial/Manufacturing and Service Commercial. The comprehensive plan designation is High Density Residential (City of Carnation, 2015). There are three retention/detention ponds (Figure 2) in the southern portion of the site that were constructed between the late 1990s and early 2000s for commercial and industrial/manufacturing uses. These ponds were permitted as retention/detention ponds by the City of Carnation (permit numbers are shown in Table 1) and are currently used to serve the site. Per information in the issued permits, material excavated during the construction of the ponds was spread onto the remainder of the site as the ponds were being constructed.

Table 1. City of Carnation Permits Previously Issued for the Project Site.

Permit Type	Permit Number	Original Issue Date	Renewal Date
Land Clearing, Filling, or Grading	SSP95-001	3/6/96	3/6/97
Shoreline Substantial Development Permit	1996-NW-10005*	unknown	unknown
Special Use Permit for Clearing and Grading	SP99-001	6/21/00	NA
Shoreline Substantial Development Permit	SSDP99-001	5/26/2000	NA
*Lead Agency: Washington Department of Ecology			

Flood Hazards

The project study area includes the Tolt River Floodway and 100-Year Floodplain areas, and the Channel Migration Zone (CMZ) area of the Tolt River and its setback. (Carnation Municipal Code 15.88.500.C.3). The 100-year floodplain for the project site was modified by two Letters of Map Revision Based on Fill (LOMR-F Case numbers: 11-10-0895A and 316-10-0325A) (Figures 2A and 2B). A portion of the 100-year Floodplain outside of the Floodway is present along the western edge of Parcels 2125079035 and 2125079063. Any proposed development in the 100-year floodplain should meet the requirements in CMC Chapter 16.54 – Floodways, Floodplains, Drainage and Erosion. Under the current plan, no homes are proposed to be constructed in the 100-year floodplain.

Critical Aquifer Recharge Areas

The project site, all of the City of Carnation, and most of the surrounding valley is located within the East King County Ground Water Management Area and is designated as a Category 2 Critical Aquifer Recharge Area (City of Carnation, 2015). The project as proposed, is designed in compliance with the requirements of CMC 15.88.400—Critical Aquifer Recharge Areas.

Geologic Hazards

A separate report has been prepared by a geotechnical consultant that evaluates the presence of erosion, landslide, and seismic hazards, and steep slopes in the project area.

Fish and Wildlife Conservation Areas

The Tolt River is located several hundred feet south of the project site and the Snoqualmie River mainstem is located approximately 2,650 feet west of the project site. A high flow side channel of the Tolt River is present about half way between the southern boundaries of the project parcels and the Tolt River. The WDFW Salmonscape map database shows that Chinook, coho, chum, steelhead, pink salmon, and bull trout are known to occur in both the Tolt and Snoqualmie Rivers in the project vicinity. In addition, Salmonscape shows that coho are known to occur in the stream/wetland floodplain complex on the west side of Highway 203 on the Tolt-MacDonald Park property (WDFW, 2016b).

The closest distance between the proposed residential development and the Tolt River is approximately 225 feet. The landward extent of the 100-foot CMZ setback is also the City of Carnation regulatory buffer line for the Tolt River (Figure 2)(Carnation Municipal Code 15.88.500).

Wetlands

No wetlands are present on the project parcels. Soil probes done across the site indicate the presence of fill in the higher elevation portions of the site and a modified native soil profile (some fill and a mixed soil profile) in upland areas at lower elevations within the 100-year floodplain. No indicators of wetland soil or hydrology were observed in soil pits located in floodway or floodplain areas at the western and eastern edges of the project site. The entirety of the site has been extensively modified by agricultural, commercial, and industrial uses, including the permitted placement of fill and construction of stormwater detention ponds.

The nearest off-site wetlands are the large stream/wetland complex on the west side of State Route 203 on the Tolt-MacDonald Park property and a palustrine emergent wetland in the field north of the track on the Tolt Middle School grounds approximately 440 feet north of Parcel 2125079062.

Constructed Stormwater Ponds

There are three separate stormwater detention ponds in the southern portion of the site that were constructed between the late 1990s and early 2000s and which currently serve this site. (Figure 2). These ponds are within the 100-year floodplain and most of the pond footprints are within the mapped floodway. The City of Carnation Critical Areas Map (Figure 3) does not show these ponds as regulated wetlands. Furthermore, under the definition of "Wetlands" in CMC 15.88.700, "*Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1,*

1990, that were unintentionally created as a result of the construction of a road, street, or highway.”

There is no channel or culvert in the berm between Pond 1 and Pond 2 or between Pond 2 and Pond 3. There is a channel through the berm that connects both cells of Pond 3. A culvert under State Route 203 connects Pond 1 and the wetland on the west side of the road on Tolt-MacDonald Park property. All the ponds appear to be hydrologically connected to the local groundwater table as they have standing water year-round. As part of our site assessment and mapping efforts, we traversed the perimeter of each pond by foot and the entirety of Ponds 2 and 3 by kayak. Bullfrogs were observed in Ponds 2 and 3 and a beaver seen in Pond 3. No fish were seen in any of the ponds during our site visits in April and May, 2016.

The existing detention ponds will not be used for the new residential development and will be decommissioned. New stormwater detention and treatment features will be constructed for the residential development, which will be an improvement in stormwater management and treatment over existing conditions.

Wildlife

The site currently provides limited wildlife habitat due to ongoing industrial uses and past disturbance. A few conifer trees are present around the existing office building on the site. An osprey nest is present on a light pole on the Tolt Middle School property north of Parcel 2125079062. Osprey are listed as a state monitor species by WDFW and are also protected by the federal Migratory Bird Treaty Act. Osprey have nested on the light pole on middle school grounds for at least the last decade and nesting birds are accustomed to regular disturbance from activities on school grounds during both the day and evening hours, from the adjacent fire station, and from existing light industrial activities on the project site. Thus, construction and typical residential activities that would occur after project completion are not likely to affect the behavior of osprey nesting on school grounds.

Citations

- City of Carnation. 2012. Final Carnation Shoreline Master Program. Prepared by City of Carnation, The Watershed Company, and Berk & Associates. Effective Date: June 5, 2012. Available at: [http://www.carnationwa.gov/vertical/sites/%7BBBC2C8B0D-6FDD-43CB-A5E7-03E465DF30E5%7D/uploads/SMP-Effective-120601 Carnation SMP.pdf](http://www.carnationwa.gov/vertical/sites/%7BBBC2C8B0D-6FDD-43CB-A5E7-03E465DF30E5%7D/uploads/SMP-Effective-120601%7D/uploads/SMP-Effective-120601%7D/uploads/SMP-Effective-120601 Carnation SMP.pdf) . Accessed: October 28, 2016.
- City of Carnation. 2015. City of Carnation 2015 Comprehensive Plan. Adopted by Ordinance 860. August 4. Available at: http://www.carnationwa.gov/index.asp?SEC=CBB9FD65-2A80-4F47-B070-F8D51F07AB46&DE=28DFADEE-C406-4245-964A-01EDE7866F7D&Type=B_BASIC . Accessed: October 28, 2016.
- Hruby, T. 2014. Washington State Wetland Rating System for Western Washington: 2014 Update - Effective January 2015. Publication No. 14-06-029. Available at: <https://fortress.wa.gov/ecy/publications/SummaryPages/1406029.html>.
- King County. 2016. Interactive Mapping Tool (iMAP). Available at: <http://www.kingcounty.gov/operations/GIS/Maps/iMAP.aspx>. Accessed: April 1, 2016.
- U.S. Army Corps of Engineers. May 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region, Version 2.0.
- U.S. Department of Agriculture. Natural Resources Conservation Service. 2016. Web Soil Survey Mapper. Available at: <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> Accessed: April 1, 2016.
- U.S. Fish and Wildlife Service. National Wetlands Inventory Mapper. 2016. Available at: <http://www.fws.gov/wetlands/data/mapper.HTML> . Accessed: April 1, 2016.
- U.S. Geological Survey. 2016. The National Map. Hydrograph Layer. Available at: viewer.nationalmap.gov/viewer/. Accessed: April 1, 2016.
- Washington State Department of Fish and Wildlife. 2016a. PHS on the Web. Priority Habitats and Species database. Available at: <http://apps.wdfw.wa.gov/phsontheweb/>. Accessed: April 1, 2016.
- Washington State Department of Fish and Wildlife. 2016b. Salmonscape. Online interactive map. Available at: <http://apps.wdfw.wa.gov/salmonscape/map.html> . Accessed: April 1, 2016.
- Washington Department of Natural Resources. 2016. Forest Practices Application Mapping Tool. Online interactive map. Water Type layer. Available at: <https://fortress.wa.gov/dnr/protectiongis/fpamt/index.html> . Accessed: April 1, 2016.

Appendix A: Figures

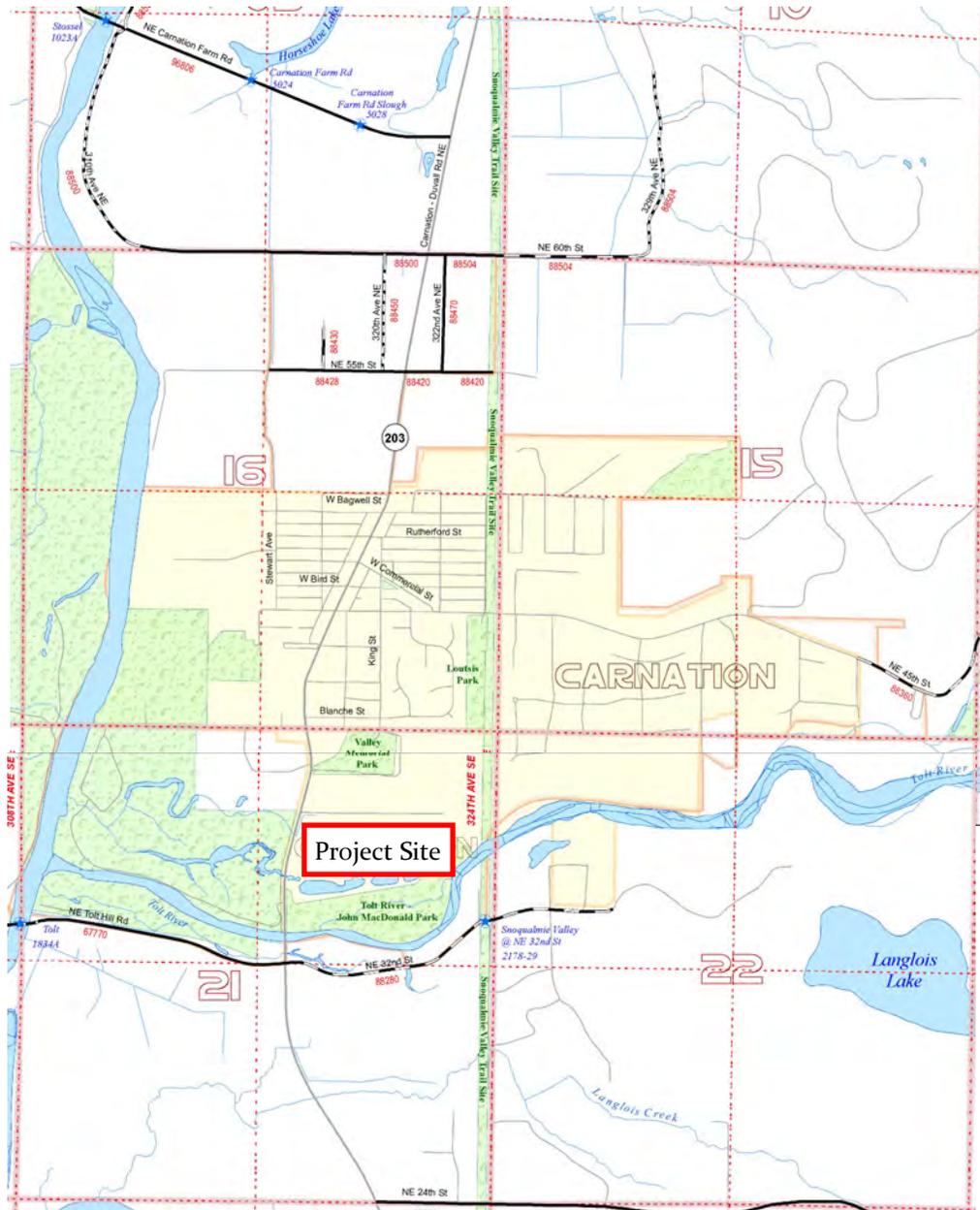


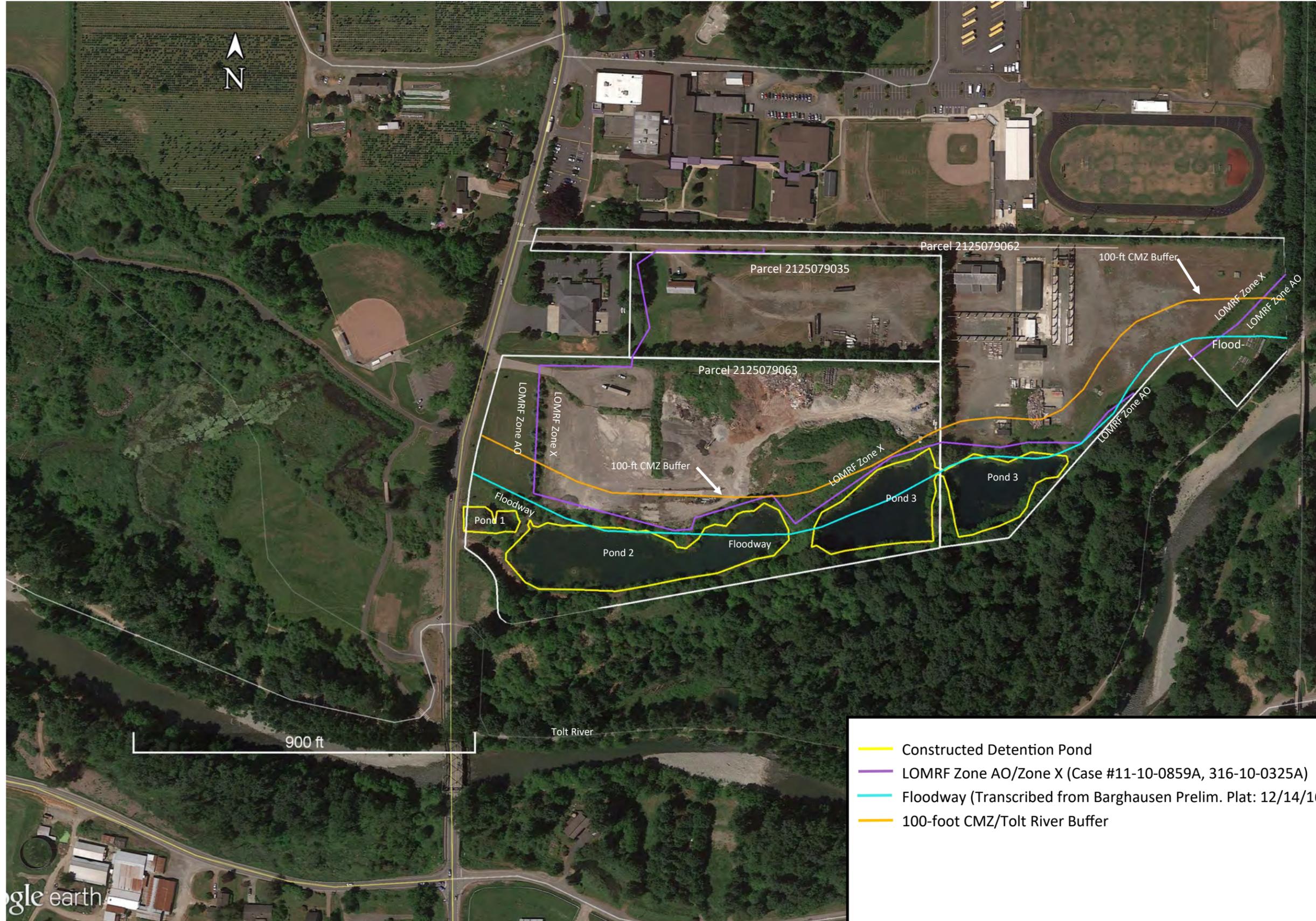
Figure 1. Vicinity Map

Critical Areas Report for:
MainVue Homes



Essency Environmental LLC
11104 320th Ave NE
Carnation, WA 98014

425 269-3119
425 761-5903



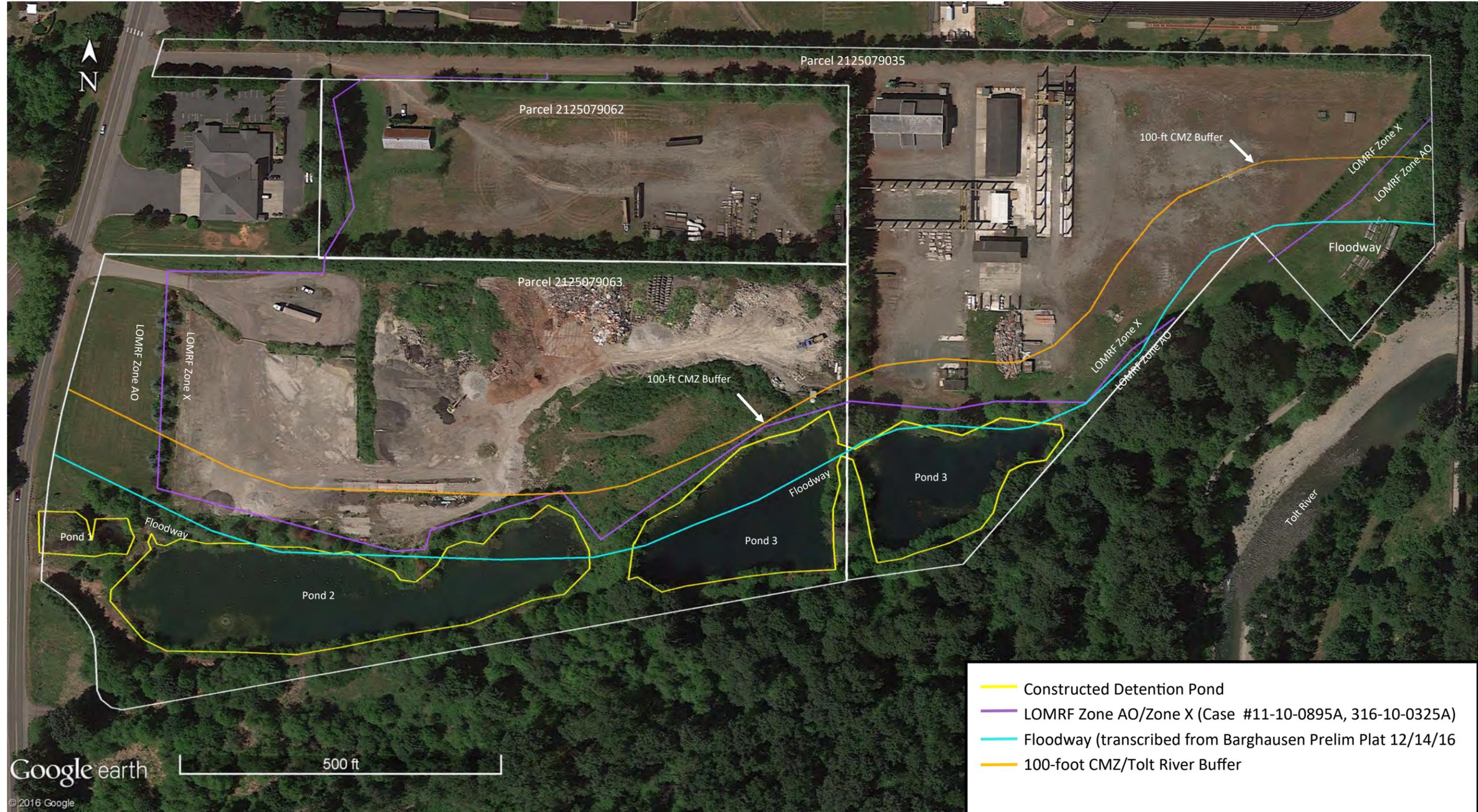
1/17/17
Revisions/Approvals

Essency Environmental LLC
11104 320th Ave NE
Carnation, WA 98014
425 269-3119
425 761-5903



Figure 2A. Aerial Image of Project Area with Critical Areas.

MainVue Homes - Critical Areas Report



- Constructed Detention Pond
- LOMRF Zone AO/Zone X (Case #11-10-0895A, 316-10-0325A)
- Floodway (transcribed from Barghausen Prelim Plat 12/14/16)
- 100-foot CMZ/Tolt River Buffer

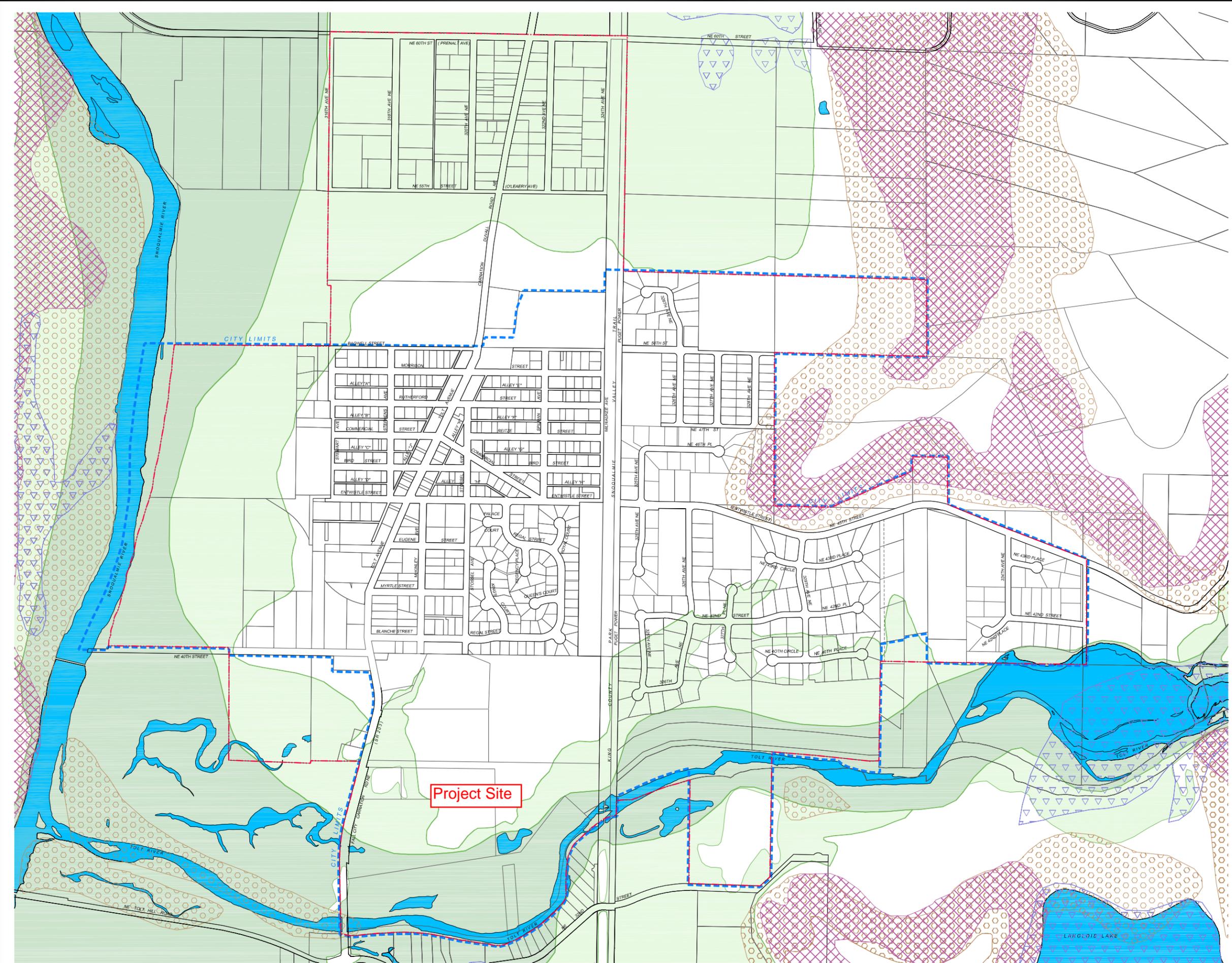
1/17/17
Revisions/Approvals

Essency Environmental LLC
11104 320th Ave NE
Carnation, WA 98014
425 269-3119
425 761-5903



Figure 2.B Aerial Image of Project Site with Critical Areas.

USER: VANWICHE VERSION: 2005 PLOTTING DATE: 1-26-05 FILE NAME: F:\28\SPATIAL MAPS\NEW SENS AREAS.DWG\11417 ZONING

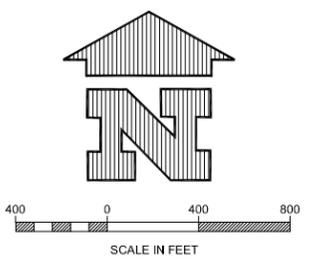


CITY OF CARNATION



CRITICAL AREAS

- LEGEND:**
- URBAN GROWTH BOUNDARY
 - CARNATION CITY LIMITS
 - EROSION HAZARD AREA
 - LANDSLIDE HAZARD AREA
 - WETLANDS
 - FLOODWAY
 - 100 YEAR FLOOD PLAIN



The boundaries of the sensitive areas displayed on this map are provided by King County and FEMA Flood insurance rate maps for the City of Carnation. These boundaries are considered approximate. Additionally, critical areas that have not been mapped may present on a development proposal site. Where differences occur between what is illustrated on this map and the site conditions, the actual presence or absence on the site of critical area - as defined in the Critical Areas Ordinance - is the legal control.

Roth Hill Engineering Partners, LLC
RothHill
 2600 116th Avenue NE #100
 Bellevue, Washington 98004
 Tel 425.869.9448
 Fax 425.869.1190

FIGURE 3