



WETLAND BUFFER BANK USE PLAN

May 16, 2024



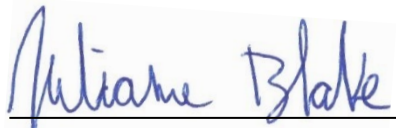
13th Street Gas Station
Camas, WA

Prepared for
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SIGNATURE PAGE

The information in this report was compiled and prepared under the supervision and direction of the undersigned.

A handwritten signature in blue ink that reads "Julianne Blake". The signature is written in a cursive style and is positioned above a horizontal line.

Julianne Blake
Biologist III

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INTRODUCTION

Ecological Land Services, Inc. (ELS) was contracted by PAK USA Camas, LLC to prepare this Bank Use Plan to address wetland buffer impacts resulting from the construction of a fuel station, convenience store, and associated parking lot. The site is approximately 0.97 acres and consists of Clark County Tax Parcel 176148000 located at 20101 NE 13th Street within the NW ¼ of Section 29, Township 2 North, and Range 3 East of the Willamette Meridian in Camas, Washington (Figure 1). Field work was conducted on August 29, 2023 and April 2, 2024. The project will impact 0.16 acres (6,810 square feet) of wetland buffer. Buffer impacts will be offset by purchasing 0.08 credits from Terrace Wetland Mitigation Bank (Bank). This Bank Use Plan was prepared according to the *Camas Municipal Code (CMC) Title 16 Environment (2023)*, *Interagency Review Team (IRT) for Washington State’s Guidance Paper, Using Credits from Wetland Mitigation Banks: Guidance to Applicants on Submittal Contents for Bank Use Plans* (June 2020), the Washington State Department of Ecology (Ecology) *Wetland Mitigation in Washington State Parts 1 and 2* (2021 and 2006), and the U.S. Army Corps of Engineers' (Corps) *Compensatory Mitigation for Losses of Aquatic Resources* (33 C.F.R. §332 (2008)). This Bank Use Plan will discuss wetland buffer impacts only, any impacts to Oregon white oak trees (*Quercus garryana*) will be addressed in a separate report.

RESPONSIBLE PARTIES

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PROJECT DESCRIPTION

The project area is approximately 0.97 acres and consists of Clark County Tax Parcel 176148000 located at 20101 NE 13th Street within the NW ¼ of Section 29, Township 2 North, and Range 3 East of the Willamette Meridian in Camas, Washington (Figure 1). The project consists of constructing a fuel station, convenience store, and associated parking lot. The parking lot will contain electric vehicle charging stations and vacuum pumps as well as pedestrian crossing areas (Figure 3). The project will impact 0.16 acres (6,810 square feet) of wetland buffer. Buffer impacts will be offset by purchasing 0.08 credits from Terrace Wetland Mitigation Bank. Construction is anticipated to start upon receipt of all necessary permits.

Best management practices (BMPs) that will be completed prior to construction include designating staging and stockpile areas outside of critical areas and associated buffers, establishing a standard construction entrance, and installing silt fencing to prevent sedimentation. When site preparation is complete, construction will occur. A water truck will be available to prevent dust blowing during construction, if needed. Equipment used may include haul trucks, bulldozers, excavators, pavers, and hand tools. Upon completion of construction activities, disturbed areas that will not be paved will be seeded with a native grass seed mix.

EXISTING CONDITIONS

EXISTING AND SURROUNDING LAND USES

The 0.97-acre site consists of Clark County Tax Parcel 176148000 and is accessed by a paved driveway off NE 13th Street. The site is zoned as Business Park (BP) and currently contains a single-family mobile home, shed, carport, and paved driveway. The site is bordered to the north by NE 13th Street, to the east by NW Friberg-Strunk Street, to the south by undeveloped land and a commercial development in progress, and to the west by undeveloped land and a single-family residence (Figure 2).

EXISTING CRITICAL AREAS

Two wetland delineation site visits were completed by ELS, following the appropriate technical manuals: *The Routine Determination Method according to the Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (U.S. Army Corps of Engineers 2010). The first site visit took place in August 2023 and the second in April 2024, with one oak tree identified onsite. No wetlands were identified onsite at either visit; however, one wetland (Wetland A) was observed offsite to the west during the April 2024 visit (ELS 2024).

Wetland A is a Category III, depressional, forested and emergent wetland totaling approximately 0.57 acres offsite to the west, and outlets to a roadside ditch (Ditch 1). Offsite boundaries for Wetland A were estimated by visual observations of changes in vegetation, the presence of surface water, and aerial photos; therefore, Wetland A boundaries are approximate. Vegetation in Wetland A is dominated by deciduous trees and herbaceous vegetation. Wetland hydrology likely comes from a seasonally high groundwater table, runoff, and precipitation. Hydroperiods

include seasonally flooded and saturated only. According to the *Washington State Wetland Rating System for Western Washington: 2014 Update* (Yanke and Hruby 2023; Rating System), Wetland A is a Category III wetland scoring 7 points for water quality functions, 7 points for hydrologic functions, and 4 points for habitat functions, for a total of 18 points. The designated buffer width for a Category III wetland with a high land use intensity and a habitat score of 4 is 80 feet, as listed in CMC Table 16.53.040-1 (Table 3).

Table 1. Offsite Wetland Summary

Name	Size	Hydrogeomorphic Classification ¹	Cowardin Class ² / Hydroperiod	Habitat Score ³	Category ³	Buffer Width ⁴
A	Approximately 0.57 acres	Depressional	Emergent, Forested/ Seasonally Flooded & Saturated Only	4	III	80 ft.

¹NRCS 2008, ²FGDC 2013, ³Yanke and Hruby 2023, ⁴CMC Table 16.53.040-1

The WDFW Priority Habitats and Species online mapping tool depicts oak woodlands in the vicinity of the observed oak along the southern site boundary. One oak measuring approximately 52 inches diameter at breast height (DBH) was mapped along the southern site boundary during site reconnaissance (Figure 2). The oak has several live and dead branches, cavities, and has canopy connectivity with other trees in the vicinity but is not connected with other oaks. The oak location and dripline was mapped using a GPS system capable of submeter accuracy in ideal conditions. According to *CMC 16.61.010(3)(a)*, individual Oregon white oak trees with a 20-inch DBH are considered a priority habitat. For more information regarding critical areas onsite, see the *Critical Areas Report for 13th Street Gas Station - Revised* (ELS 2024).

Table 2. Oak Summary

Total Canopy Area	DBH	Number of Trunks	Noteworthy Habitat Features
0.08 acres	52 inches	1	<ul style="list-style-type: none"> • Canopy is interconnected with adjacent trees, but not other oaks • Two large cavities

WETLAND LANDSCAPE POSITION

The site is generally located on a broad terrace in the southwest portion of the Lacamas Creek subwatershed, within Hydrologic Unit Code (HUC) 170800010605, and Water Resource Inventory Area (WRIA) 28 (Salmon-Washougal). In general, hydrology from the offsite wetland is conveyed to the north to a roadside ditch where it then crosses under NE 13th Street via a culvert and eventually discharges to an unnamed stream. Wetland A is a depressional wetland located offsite to the west and may provide localized flood storage and groundwater recharge functions within the lower portion of the HUC.

AVOIDANCE AND MINIMIZATION OF WETLAND IMPACTS

The wetland mitigation requirements of the local, state, and federal agencies specify that all regulated development activities proposing permanent impacts to wetlands or buffers shall examine whether the impacts can be avoided and/or minimized prior to proposing compensation for the impacts. This project has been designed to construct a fuel station, convenience store, and associated parking lot on approximately one acre of maintained land currently containing a single-family residence. Approximately 0.16 acres of the site is affected by the 80-foot buffer for the offsite wetland, Wetland A. The engineering team tested several layouts to try to avoid impacts to the greatest extent practicable. Ultimately, none of the design alternatives avoided buffer impacts while meeting CMC requirements, resulting in the need for wetland buffer impacts. There will be no direct impacts to wetlands as no wetlands exist onsite. The project cannot avoid impacts to Wetland A buffer because there are no other locations where the required parking lot can be constructed that avoids impacts to wetland buffer.

The hydrologic, water quality, and habitat functionality of onsite Wetland A buffer are degraded due to existing residential uses and regularly maintained landscaping. The project minimizes impervious surface impacts by proposing the smallest construction footprint possible to accomplish the project goals. Impacts to other onsite areas will be minimized by the use of best management practices (BMPs) including installing silt fencing along clearing limits, applying native grass seed to disturbed areas, and making a water truck available to prevent dust blowing during construction. Construction staging areas will be located within onsite uplands outside of the wetland and buffer.

UNAVOIDABLE WETLAND BUFFER IMPACT ACREAGE

The project will impact 0.16 acres of the buffer for Wetland A, located offsite to the west. Buffer impacts will be offset by purchasing 0.08 credits from the Bank. Table 3 summarizes all unavoidable wetland buffer impacts.

Table 3. Expected Impacts to Wetlands

Wetland Name	Wetland Area (acres)	Direct Impact (acres)	Buffer Impact (acres)	Ecology Rating ¹	Cowardin Class ²	Hydrogeomorphic Class ³
A	Approx. 0.57	0.00	0.16	III	Emergent, Forested	Depressional

¹Hruby & Yanke 2023

²FGDC 2013

³NRCS 2008

IMPACTED WETLAND AND BUFFER FUNCTIONS

Wetland functions were assessed in May 2024 using the analysis provided in the Rating System. The wetland rating form can be found in the *Critical Areas Report for 13th Street Gas Station - Revised* (ELS 2024).

WATER QUALITY FUNCTIONS

Wetland A achieved a moderately high water quality function score of 7 points in the Rating System. The wetland provides low site potential for improving water quality as it contains an intermittently flowing outlet, greater than 1/2 of its area is covered by persistent, ungrazed plants, and the seasonally ponded area makes up less than 1/4 of the total area of the wetland, allowing for nominal particulate retention and filtration. Wetland A has high potential to support the water quality function of the site as it receives sources of pollutants from surrounding land uses within 150 feet, including adjacent septic systems, which would provide the opportunity for pollutant filtration. The wetland provides high water quality functions valuable to society in that it discharges within a mile to a waterbody on the 303d list and is located in a watershed with TMDLs in development and provides the above pollutant filtration and retention functions to runoff prior to it being discharged into adjacent waters. The majority of Wetland A's water quality functions will be retained as the wetland will not be directly impacted by the proposed development and the existing buffer functions are already degraded.

HYDROLOGIC FUNCTIONS

Wetland A achieved a moderately high hydrologic function score of 7 points in the Rating System. The wetland has low site potential for reducing flooding and erosion due to its intermittently flowing surface outlet and marks of ponding less than six inches from the surface or bottom of the wetland's outlet, which does not allow for high levels of flood storage, retention, or groundwater recharge. The wetland has high potential to support the hydrologic functions of the site as more than 25 percent of its contributing basin is covered with intensive human land uses, and greater than 10 percent of the area within 150 feet upslope of the wetland is in land uses or cover that generate excess runoff, allowing for the opportunity to filter and treat incoming stormwater and pollutants. The hydrologic functions provided by Wetland A are highly valuable to society as there are flooding problems within a sub-basin immediately down-gradient and the wetland may provide a small amount of flood water storage. The majority of the hydrologic functions provided by the wetland will be retained as the wetland will not be directly impacted by the proposed development and the existing buffer functions are already degraded.

HABITAT FUNCTIONS

Wetland A achieved a low habitat function score of 4 points in the Rating System. The wetland has low habitat interspersions with both emergent and forested Cowardin classes and one assumed special habitat feature due to the forested class, large woody debris within the wetland. Additionally, there is low landscape potential to support habitat as surrounding land uses within a 1-kilometer radius contain greater than 50 percent high intensity land uses, accessible habitat is less than 10 percent, and undisturbed habitat is less than 50 percent and found in greater than three patches. Accessibility of habitat provided by the wetland and its buffer to other wetlands or forested areas in the local vicinity is limited by adjacent residential land uses and heavy traffic on NE 13th Street and NW Friberg-Strunk Street. The above constraints limit the amount and diversity of species that can inhabit the onsite wetland. The nominal habitat functions provided by the wetland will be retained as the wetland will not be directly impacted by the proposed development and the existing buffer functions are already degraded.

BUFFER FUNCTIONS

Wetland buffers can reduce adverse impacts to wetland functions and values from adjacent development by moderating the effects of stormwater runoff including stabilizing soil to prevent erosion, filtering runoff, and moderating water level fluctuations. Buffers also provide habitat opportunities for forage, refuge, mobility, and thermal protection. Additionally, buffers help screen the wetland from adjacent developments blocking noise, providing visual separation, and providing protection from other human disturbances (Castelle et al. 1992). The portion of wetland buffer that will be impacted provides low functions as it is comprised of compacted soils covered with frequently mowed upland grasses and ornamental landscaped plants. The primary impacts to the functions and values of Wetland A buffer are loss of minimal habitat area and reduced groundwater recharge functions, as the area will be covered with impervious surfaces. Wetland A will not be directly impacted so it will still function to slow surface flows and recharge groundwater.

WETLAND MITIGATION BANK SITE SELECTION RATIONALE

The wetland proposed for impact is located within the service area for the Terrace Mitigation Bank. The project site is located approximately 3 miles southeast of the Bank site near the southern boundary of the Salmon Creek Watershed (Sheets 1 and 4).

Rationale for selecting this mitigation bank is as follows:

- The development project does not propose impacts to critical wetland functions that should be replaced onsite. The impacted functions are water quality, hydrology, and habitat, which can be fully replaced within the Bank site.
- The wetland mitigation needs of the project correspond directly with the purpose, goals, and objectives of the Bank, as the general Bank goal is to restore approximately 89.15 acres of self-sustaining, diverse forest, scrub-shrub, and emergent wetland habitat. This restoration will be accomplished through re-establishment of a native emergent wetland plant community, and re-establishment of hydrology through the disabling of the drain tiles throughout the Bank site.

The 2008 *Compensatory Mitigation for Losses of Aquatic Resources, Final Rule* (Corps) recommends purchasing mitigation bank credits for ecological considerations (lower risk of failure and lower temporal loss of resources and services) and to avoid the maintenance and contingency issues and outright failures that often accompany permittee-responsible mitigation sites. Use of the Terrace Mitigation Bank substantially lowers the risk of failure and temporal loss of resource functions and services over newly established, permittee-responsible mitigation sites. As described below, the functional lift anticipated in the Terrace Mitigation Bank will adequately compensate for wetland functions lost by development.

WETLAND FUNCTIONS PROVIDED AT MITIGATION BANK

The general goal of the Bank is to restore approximately 89.15 acres of self-sustaining, diverse forest, scrub-shrub, and emergent wetland habitat, similar to pre-agricultural conditions.

The primary ecological goals of Terrace Mitigation Bank consist of:

- Re-establishing hydrology through the disabling of the drain tiles throughout the site;
- Establishing a native historic forested, scrub-shrub, and emergent wetland plant community in re-established and rehabilitated wetland areas;
- Establishing a native upland scrub-shrub plant community in the upland buffer area within the BPA easement;
- Reshaping of incised stream banks to reconnect the stream to its floodplain and existing wetlands;
- Enhancement of the riparian area along Burnt Bridge Creek by removing invasive species and planting native trees and shrubs to increase shading and lower water temperatures, and provide improved habitat structure and diversity;
- Removing an existing culvert crossing at the west property boundary to improve stream flow, and;
- Removing existing invasive species and preventing the establishment of invasive species throughout the Bank site.

A wetland functions assessment was performed for the Bank, which was based on the water quality, hydrology, and habitat functions identified in the Rating System (Hruby & Yanke 2023).

WATER QUALITY

Water quality functions will be significantly improved over current conditions by replacing the existing disturbed wetland vegetation with forested, scrub-shrub, and emergent persistent vegetation that can trap sediments and pollutants, and the increased inundation resulting from disabling the drain tiles will increase the wetland's ability to provide denitrification.

Additionally, the Bank site itself directly contributes agricultural runoff high in sediment and herbicides. Establishment of the Bank will allow onsite agricultural practices to cease, eliminating the potential for chemical contaminants to enter the downstream watershed from the site. The resulting overall score for the wetland unit improving water quality functions is high (9 points), which reflects a 3 point increase over baseline conditions.

HYDROLOGY

Currently, groundwater, runoff, and flood water from Burnt Bridge Creek within the Bank site is quickly and effectively conveyed downstream through the extensive drain tile system. Once the drain tiles are disabled, water will be impounded for a much longer duration than current conditions, and groundwater storage will be increased, improving the site's hydrologic function. This will supplement summer base flows within Burnt Bridge Creek, buffer peak flows during flood events, reduce offsite flooding, reduce erosion, provide temperature regulation within the Burnt Bridge Creek during the summer, and recharge groundwater.

By increasing groundwater levels at the Bank site through disabling drain tiles, it will have an effect of “mounding” the groundwater. This adds downward pressure on the groundwater as well as increased storage due to the highly absorbent peat soils. Therefore, it should not be assumed that a groundwater elevation increase at the Bank site only benefits Burnt Bridge Creek Watershed hydrologically. Once the tiles are disabled, the flow path of the shallower groundwater will not only be lateral to Burnt Bridge Creek but also vertical and downward to the larger aquifer within the Upper Troutdale Formation (that bisects and discharges to both Burnt Bridge Creek and Lacamas Watersheds), thus providing hydrological improvements to areas well outside of the Bank boundary. The resulting overall score for the wetland unit improving hydrologic functions is moderately high (7 points), which reflects a 3 point increase over baseline conditions.

WILDLIFE HABITAT

The majority of the Bank site currently contains limited habitat for wildlife. The wetlands onsite are low quality wetlands within managed agricultural fields. Within the Bank site, Burnt Bridge Creek consists of a ditched, incised channel with very little native riparian vegetation, and provides less than ideal conditions for resident fish. The Oregon white oak woodland adjacent to the northeast portion of the Bank provides some adjacent priority habitat for the Bank, but this habitat has been impacted by the construction of residential and commercial structures and associated impervious surfaces, invasive species, and competition and succession by Douglas-fir (*Pseudotsuga menziesii*). The woodland area is currently disconnected from the existing wetlands by the historic and existing agricultural use of the majority of the Bank site.

The proposed site plan will provide diverse wetland habitat for a variety of large and small mammals, songbirds, waterfowl, amphibians, and insects. The addition of trees and shrubs along Burnt Bridge Creek will provide temperature regulation, cover, and leaf litter, all important to the overall health of the stream system. Large woody material incorporated within the Bank site, in the form of horizontal logs and snags, and habitat features such as bird boxes and perch poles will provide additional areas for perching and nesting habitat for avian species. The resulting overall score for the wetland unit providing wildlife habitat functions is moderately high (7 points), which reflects a 2 point increase over baseline conditions.

ANTICIPATED FUNCTIONAL LIFT

The Bank site will re-establish high quality wetlands and associated wildlife habitat where there is currently a mostly barren, drained agricultural field, providing for significant overall functional lift. Wetlands onsite are expected to be rated as Category I wetlands post-construction (20 years following final mitigation site work and plantings, in contrast to the majority of onsite wetlands which are currently considered Category IV wetlands. The overall functional lift (an increase of 7 to 8 wetland rating points) provided by the post-construction wetlands is reflected in the change (lift) in wetland rating score from the baseline conditions of the four existing Category III, and fourteen Category IV wetlands with the post-construction wetlands scoring 23 points (Category I wetland), and the existing wetlands scoring 15 or 16 total points (Category IV or Category III wetland).

The Bank site location within the landscape and overall design will provide a significant ecological benefit not only to the immediate, surrounding area, but throughout a large portion of the watershed. The post-construction Bank site will consist of a forested, scrub-shrub, and emergent depressional flow-through wetland system that contain the headwaters of a perennial stream. As a whole, the Bank site will provide variety of water regimes, vegetation interspersions, and habitat features which will provide diverse habitat opportunity for wildlife. The re-established wetlands will also increase flood storage, improve water quality, help prevent downstream erosion, recharge groundwater to supplement low summer flows and keep summer water temperatures cooler, similar to pre-agricultural conditions.

WETLAND FUNCTIONS NOT MITIGATED AT MITIGATION BANK

The Bank site is designed to have an overall functional lift in all its baseline water quality, hydrology, and habitat functions over time raising them from their existing low moderate to high functions. Stormwater improvement functions are not provided by the Bank; however, the development will direct stormwater to an underground detention facility where it will be treated before it is directed into the City municipal system. Terrace Mitigation Bank will adequately mitigate for all other wetland and buffer functions impacted by the proposed project.

PROPOSED MITIGATION CREDITS

The table below is from the Mitigation Banking Instrument (MBI) for the Terrace Mitigation Bank (ELS 2017), and it lists the recommended credit ratios for purchasing credits based on the impacted wetland category or buffer.

Table 4. Credits Recommended for Wetland and Buffer Impacts at Terrace Mitigation Bank.

Resource Impact	Bank Credits : Impact Area
Category I Wetland	Case-by-Case
Category II Wetland	1.2:1
Category III Wetland	1:1
Category IV Wetland	0.85:1
Critical Area Buffer	Case-by-Case

Direct impacts result in immediate changes of hydrological characteristics of a wetland, loss of habitat, loss of flood storage, and loss of nutrient removal or retention and shall be mitigated by purchasing credits at the ratios listed in Table 4 above. Wetland buffer impacts will be compensated by multiplying the credits necessary for direct wetland impacts in the table by 0.5 (50 percent of the direct wetland ratio). The 0.50 (50 percent) multiplier is based on the rationale that wetland buffer impacts can be adequately compensated for by using 50 percent of the Bank's required ratio for direct wetland impacts. Buffer impacts adversely affect the ability of the wetland to provide functions and values over time, which the wetland provided prior to disturbance. Examples are changes in drainage characteristics, changes in water levels, and changes in wetland characteristics. Mitigating at 50 percent of the Bank's required ratio for direct wetland impacts is therefore reasonable and ecologically sound.

Bank credits will be purchased from Terrace at the ratio of 1:1 designated for impacts to Category III wetlands. Wetland buffer impacts will be calculated by applying a 0.50 multiplier to the corresponding ratio for wetland category. Table 5 below details the mitigation ratios used to calculate the total number of Bank credits needed to compensate for the project impacts. A total of 0.08 credits will be purchased to compensate for 0.16 acres of wetland buffer impact.

Table 5. Mitigation Bank Credits Proposed for Project Impacts.

Wetland	Wetland Category	Impact Type	Impact Amount	Mitigation Ratio	Multiplier	Proposed Credits
A	III	Buffer	0.16 acres	1:1	0.5	0.08
Total Credits to be Purchased:						0.08

CREDIT PURCHASE OR TRANSFER TIMING

Following permit issuance, PAK USA Camas, LLC, as the applicant, will enter into a Buy/Sell Agreement with Terrace Mitigation Bank, LLC for purchase of mitigation credits (in the quantity specified in Table 5) that would appropriately mitigate for the proposed project impacts. The actual purchase of credits will occur upon permit issuance. Prior to impacting project wetlands, the applicant will submit proof of transfer of mitigation credits to project managers for both Ecology and the Corps. Proof of the mitigation transfer will be provided in the form of a notification letter to the approving agencies. Upon service of this notification, the mitigation requirement to purchase 0.08 mitigation credits will be fully satisfied.

CONFIRMATION OF MITIGATION CREDIT AVAILABILITY

Proof of the current number of available mitigation credits at the Terrace Mitigation Bank site can be confirmed by approving agency(s) through the Interagency Review Team.

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LIMITATIONS

ELS bases this report's determinations on standard scientific methodology and best professional judgment. In our opinion, local, state, and federal regulatory agencies should agree with our determinations. However, the information contained in this report should be considered preliminary and used at your own risk until it has been approved in writing by the appropriate regulatory agencies. ELS is not responsible for the impacts of any changes in environmental standards, practices, or regulations after the date of this report.

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FIGURES

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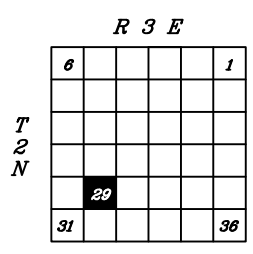
WASHINGTON



SITE

45.6321° Latitude
-122.4664° Longitude

LOCATION MAP



PROJECT VICINITY MAP



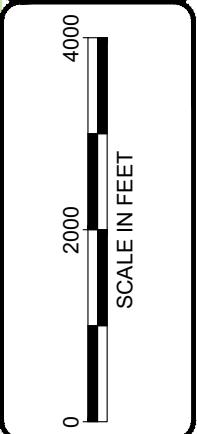
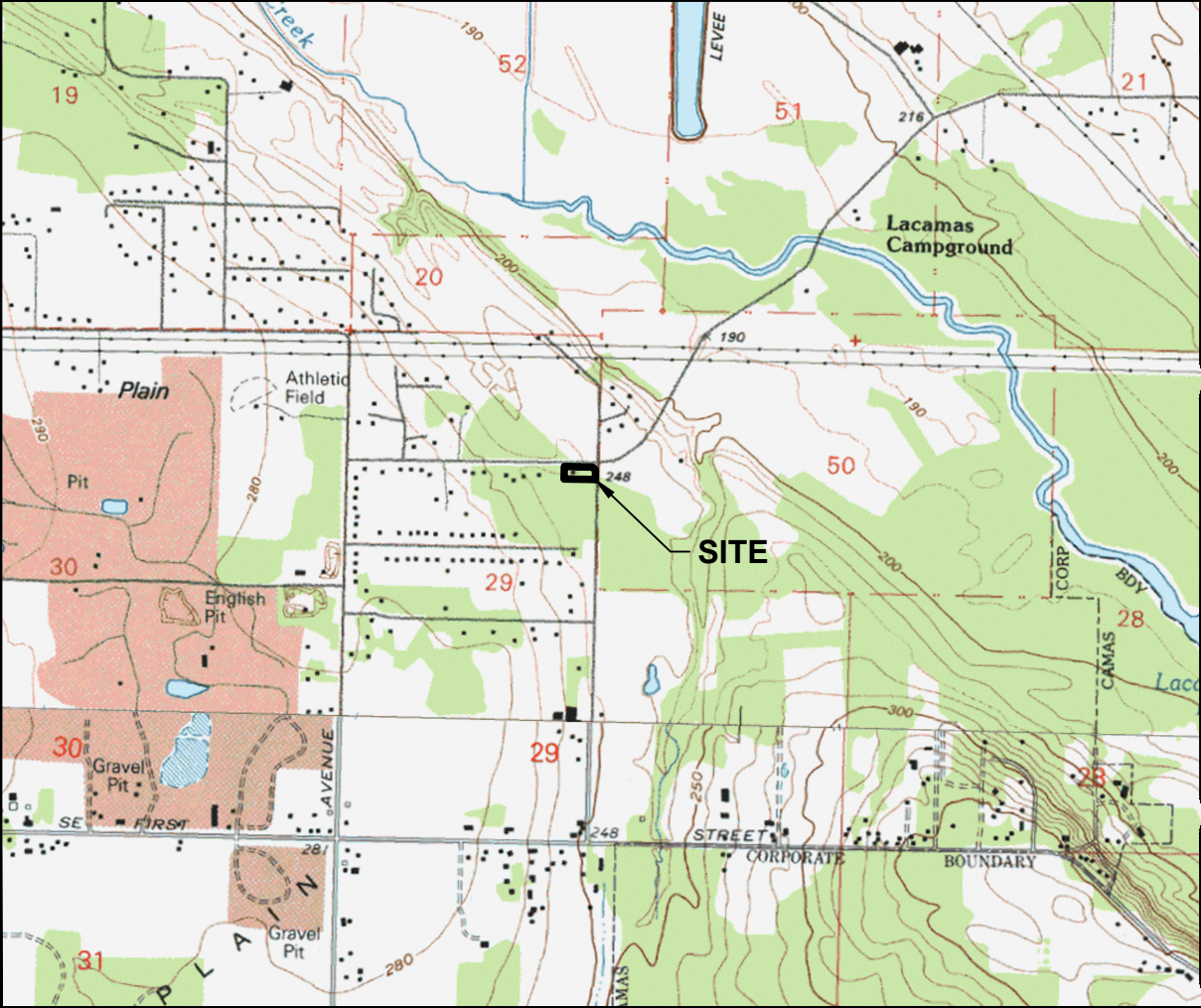
Figure 1
VICINITY MAP
13th Street Gas Station
PAK USA Camas, LLC
City of Camas, Clark County, Washington
Section 29, Township 2N, Range 3E, W.M.

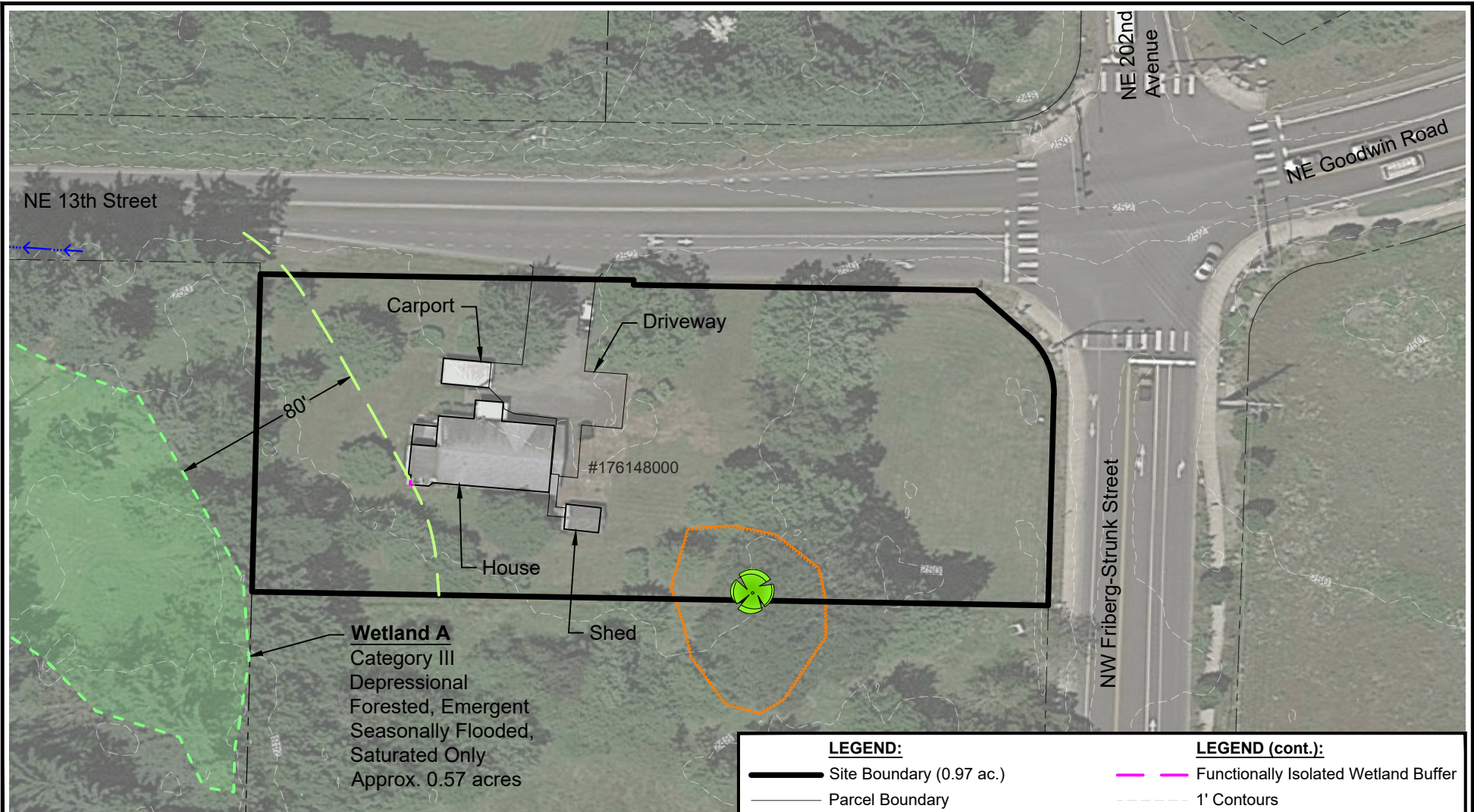
DATE: 5/15/24
DWN: JKJ
REQ. BY: JB
PRJ. MGR: JB
CHK:
PROJECT NO:
3934-01

1157 3rd Ave., Suite 220A
Longview, WA 98632
Phone: (360) 578-1371
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NOTE:
Quadrangle topographic map from USGS.





NOTE(S):

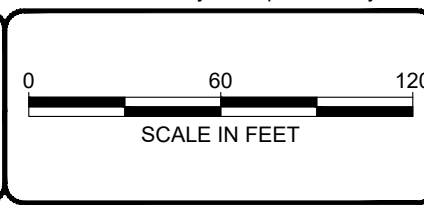
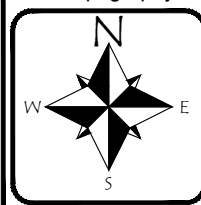
1. Aerial from Google Earth™ (6/17/2021).
2. Site boundary, oak tree location, and oak dripline surveyed by PLS Engineering, Inc.
3. Parcel data from Clark County GIS Department.
4. Topography from 2013 Clark County Lidar provided by WDNR at <https://lidarportal.dnr.wa.gov>.

LEGEND:

- Site Boundary (0.97 ac.)
- Parcel Boundary
- ⊗ Oregon White Oak Tree Location
- - - - - Oak Dripline (0.08 ac. total/0.03 ac. onsite)
- - - - - Approx. Offsite Wetland Boundary
- - - - - Wetland Buffer

LEGEND (cont.):

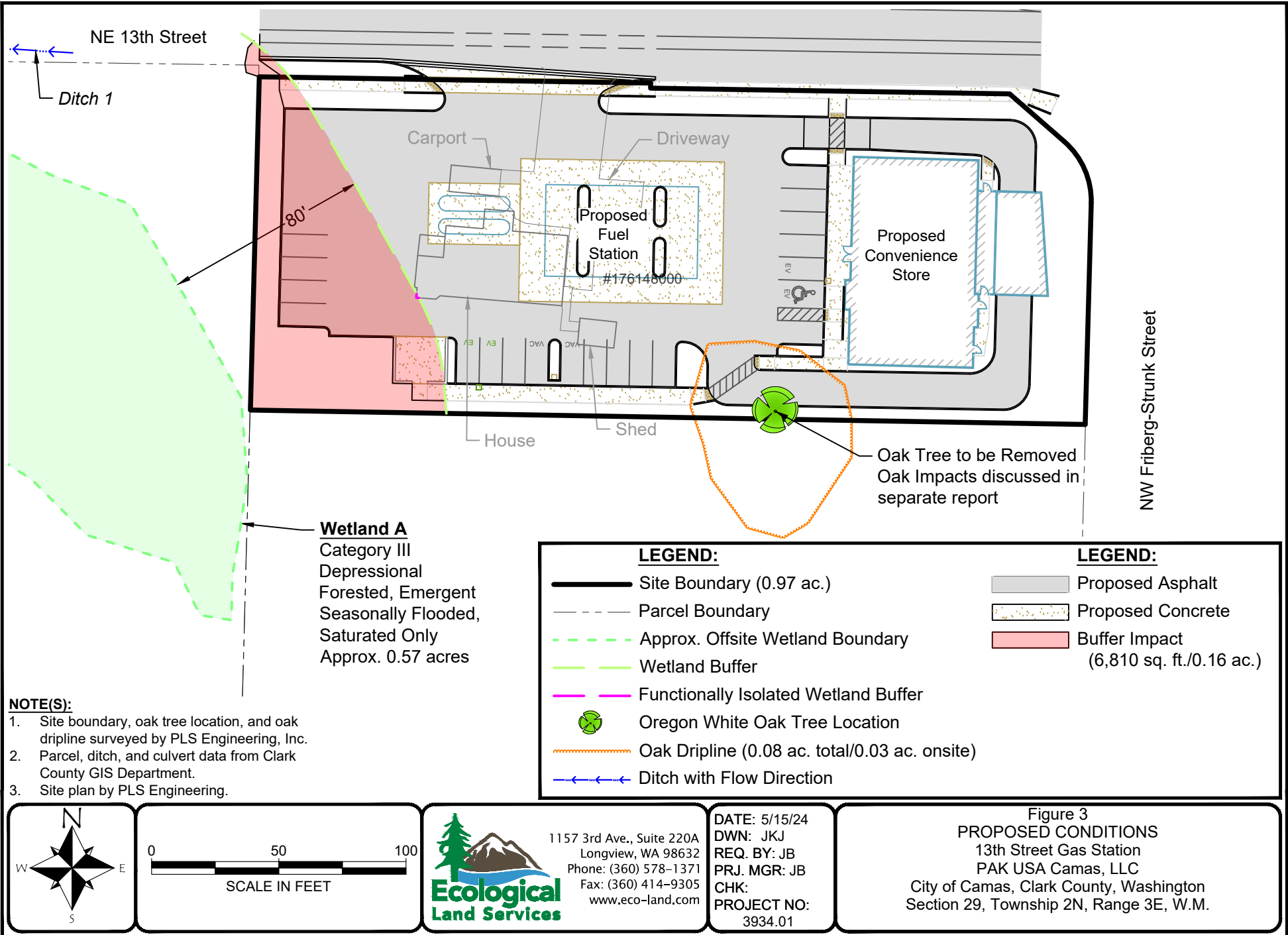
- - - - - Functionally Isolated Wetland Buffer
- - - - - 1' Contours

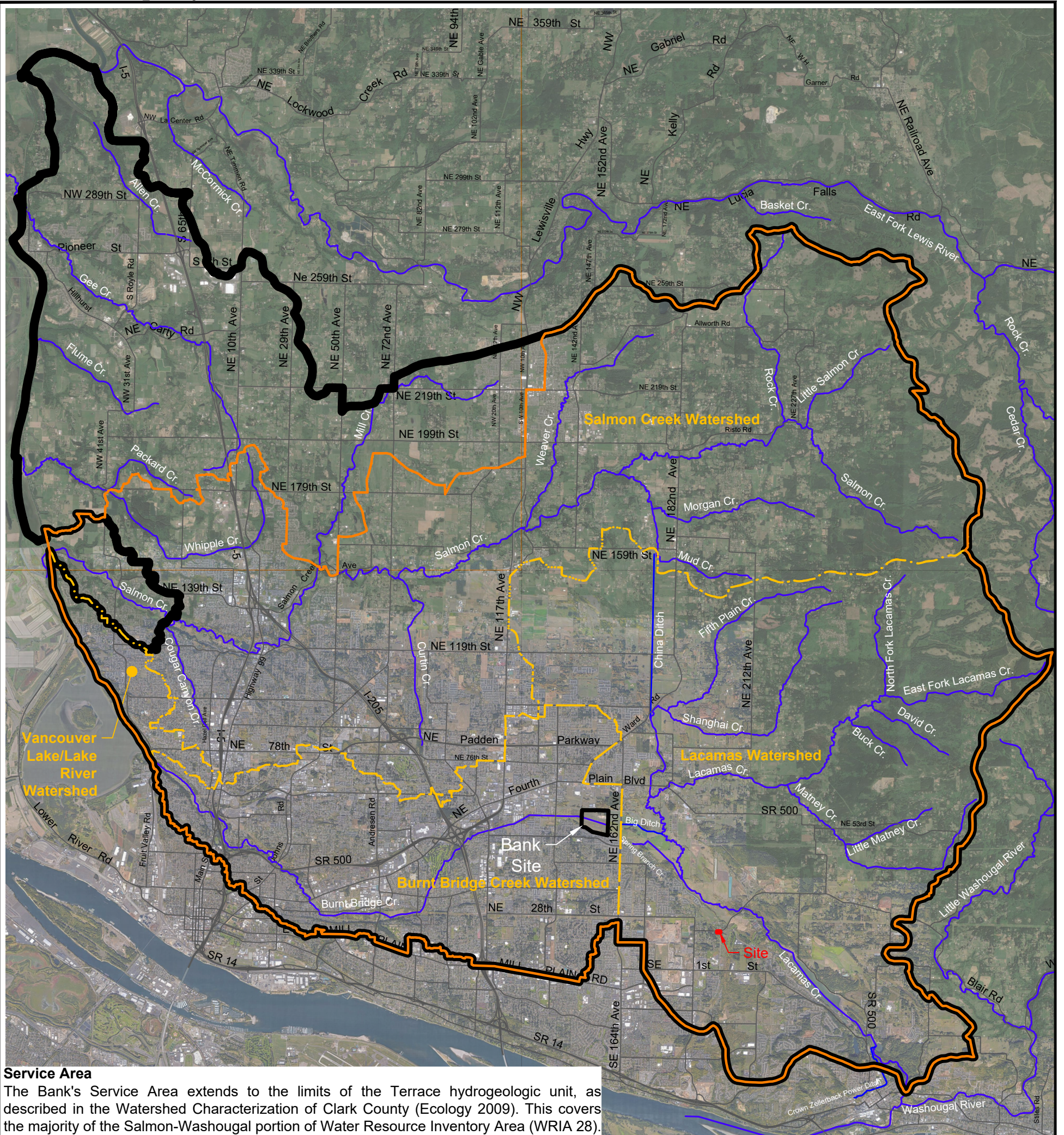


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Figure 2
 EXISTING CONDITIONS
 13th Street Gas Station
 PAK USA Camas, LLC
 City of Camas, Clark County, Washington
 Section 29, Township 2N, Range 3E, W.M.





Service Area
 The Bank's Service Area extends to the limits of the Terrace hydrogeologic unit, as described in the Watershed Characterization of Clark County (Ecology 2009). This covers the majority of the Salmon-Washougal portion of Water Resource Inventory Area (WRIA 28).

Limits of Terrace Mitigation Bank Service Area	
Northern Limits	Salmon Creek RM 0.60 and 8.96; Upper Whipple Creek, Woodin Creek, and Rock Creek Subwatersheds
Western Limits	Lakeshore and Lower Burnt Bridge Creek Subwatersheds
Southern Limits	Middle Burnt Bridge Creek, Burton Sink, Dwyer Creek, and Lacamas Lake Subwatersheds
Eastern Limits	Matney Creek, Upper Lacamas, and Salmon Creek RM 22.20
Sub-watersheds in Service Area	
Watersheds that are wholly (Lacamas/Burnt Bridge Creek) or partially (Salmon Creek/Vancouver Lake/Lake River) encompassed within the Service Area	
Lacamas	China Ditch, Lower Fifth Plain, Upper Fifth Plain Creek, Shanghai Creek, Upper Lacamas Creek, Lower Lacamas Creek, Matney Creek, Dwyer Creek, and Lacamas Lake
Burnt Bridge Creek	Lower Burnt Bridge Creek, Middle Burnt Bridge Creek, Upper Burnt Bridge Creek, and Burton Sink
Salmon Creek	Salmon Creek RM 0.60, 3.83, 8.96, 14.66, and 22.20; Cougar Creek, Curtin Creek, Woodin Creek, Morgan Creek, Rock Creek, and Upper Whipple Creek
Vancouver Lake/Lake River	Lakeshore

LEGEND:

- Service Area
- - - Watershed Boundary
- Terrace Hydrogeologic Unit
- Roads
- Streams

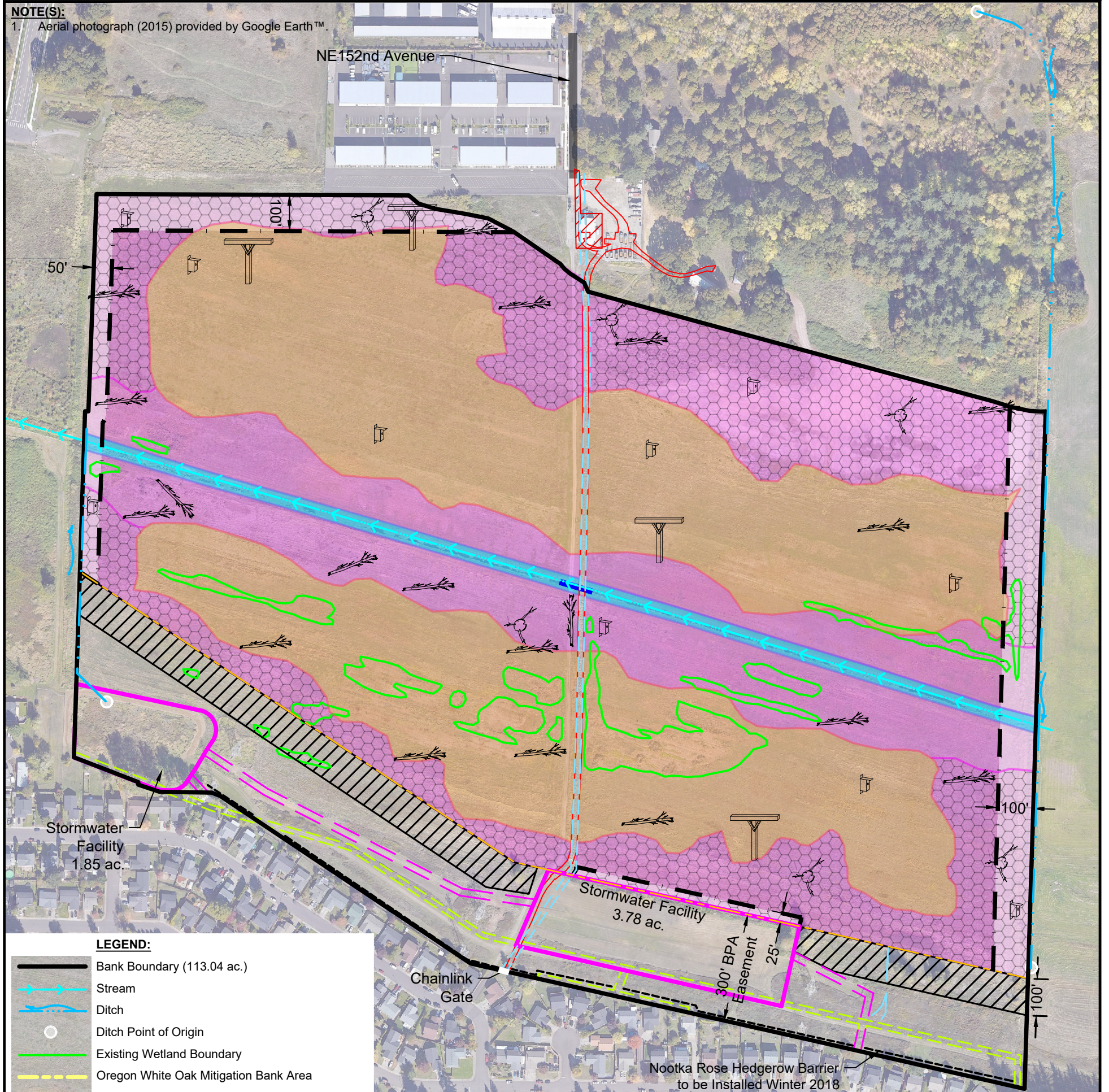


NOTES: Aerial photo from Google Earth™. Subwatershed boundaries from Clark County GIS Department.

 SCALE IN MILES 1 INCH = 2 MILES	 1157 3rd Ave., Suite 220A Longview, WA 98632 Phone: (360) 578-1371 Fax: (360) 414-9305 www.eco-land.com	DATE: 5/15/24 DWN: JKJ REQ. BY: JB PRJ. MGR: JB CHK: PROJECT NO: 3934.01	Figure 4 TERRACE WETLAND MITIGATION BANK SERVICE AREA 13th Street Gas Station PAK USA Camas, LLC City of Camas, Clark County, Washington Section 29, Township 2N, Range 3E, W.M.
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NOTE(S):

1. Aerial photograph (2015) provided by Google Earth™.



LEGEND:

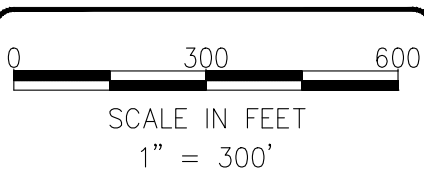
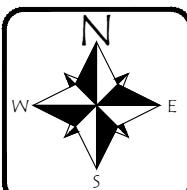
- Bank Boundary (113.04 ac.)
- Stream
- Ditch
- Ditch Point of Origin
- Existing Wetland Boundary
- Oregon White Oak Mitigation Bank Area
- BPA Powerline Easement
- Existing Gravel Road
- Culvert Location
- Mitigation Bank Buffer (7.28 ac.)
- Staging Area
- 20' Storm Sewer Easement
- 20' Sanitary Sewer Easement
- 15' Water Line Easement
- Stormwater Facility
- Area to be Re-graded and Planted Winter 2018 (4.86 ac.)

Proposed Mitigation Habitat

- Palustrine Forested/Scrub-Shrub Mosaic (PFO/PSS) (26.11 ac.)
- Palustrine Forested /Scrub-Shrub Riparian (PFO/PSS) (17.13 ac.)
- Palustrine Emergent (PEM) (45.81 ac.)
- Open Stream Channel Enhancement (2.53 ac.)
- Shrub Buffer Enhancement (SB) (4.85 ac.)
- 8-foot Wide Nootka Rose Hedgerow (NRB) (0.41 ac.) (to be Installed Winter 2018)

Proposed Habitat Features

- Standard Bird Nest Box (10)
- Snags (6)
- Perch Poles (4)
- Horizontal Logs (19)



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Figure 5
TERRACE WETLAND MITIGATION BANK SITE DESIGN
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