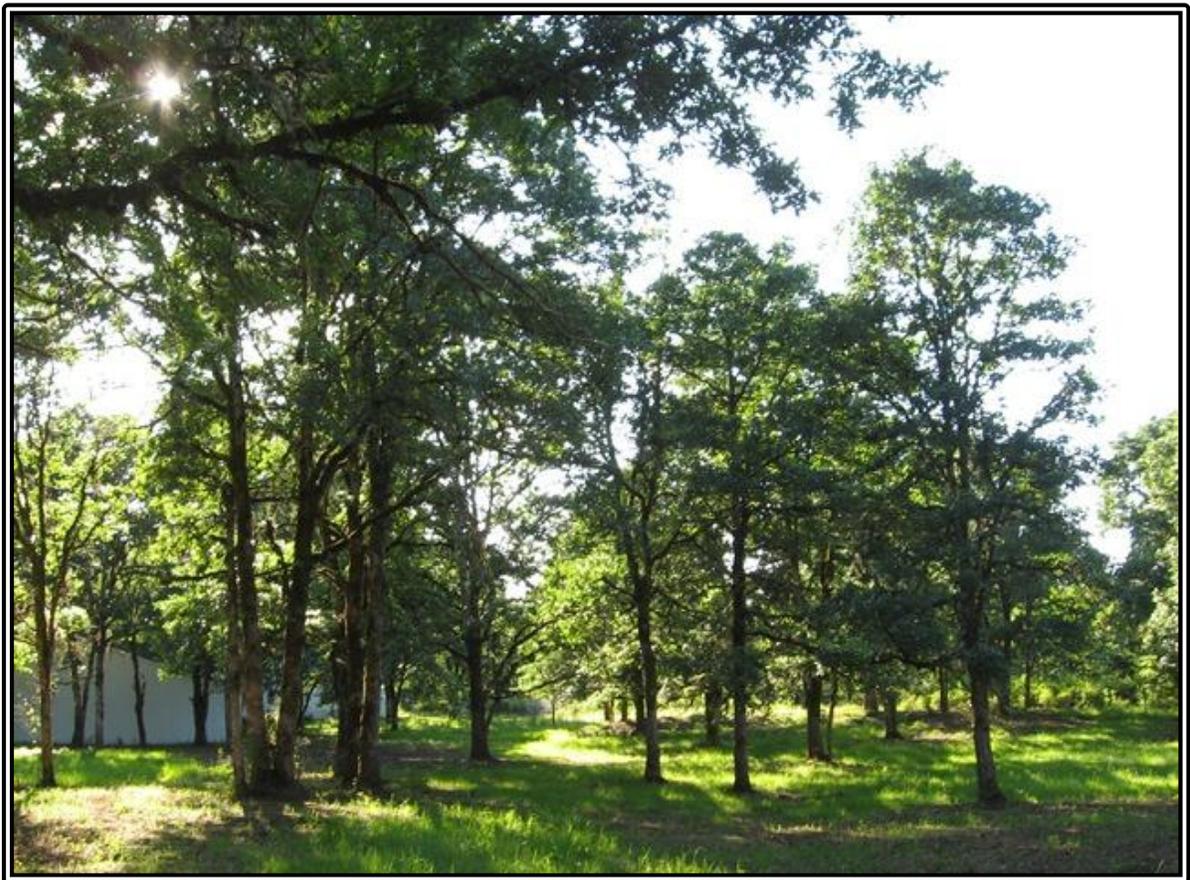


**TERRACE MITIGATION BANK**  
**Clark County, Washington**

**PROSPECTUS**



**Submitted July 2014**  
**Revised September 2014**

Submitted by:

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## **BANK SPONSOR CONTACT INFORMATION**

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# **INTRODUCTION**

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## **PROJECT AND SITE DESCRIPTION**

Rotschy, Inc. is proposing the Terrace Wetland Mitigation Bank (Bank) on 128 acres of light-industrial zoned farmed field held under a current purchase and sale agreement by Rotschy, Inc. The site is located in the City of Vancouver within portions of Sections 13 and 14, Township 2 North, Range 2 East in south-central Clark County, Washington (Figure 1). It is bordered to the west and east by drained agricultural land, to the south by residential property, and to the north by residential and agricultural property. Upon certification by the Interagency Bank Review Team (IRT), the proposed Bank project will provide compensatory mitigation for unavoidable impacts to wetlands and other aquatic resources. The Bank site is being proposed through Washington State's Mitigation Banking Program, co-chaired by the U.S. Army Corps of Engineers (Corps) and the Washington State Department of Ecology (Ecology).

The proposed project site consists of three separate parcels totaling 128 acres (Clark County Tax Parcels 159331-000, 162111-000, and 162114-000). The site was historically farmed for mint and is currently utilized for agricultural crop production, specifically corn. Burnt Bridge Creek originates at the east property boundary and flows east to west across the center of the site. The creek is an extensively ditched channel that originates from a north/south drainage along the east property boundary. As evidenced on historical General Land Office (GLO) maps from the 1860s (General Land Office 1860), prior to the creek channelization for conversion to agriculture in the late-1800s, this area contained large swaths of marshland/swampland (wetlands) with no defined stream channels. This accounts for the overwhelming prevalence of organic (peat) soils onsite. These peat soils are indicative of a historic wetland area that extends approximately 1.5 miles to the west, and 1.5 miles east to end at Lacamas Creek. Recent topographic maps indicate that most of the farmed field is nearly level with elevations ranging between 196 and 198 feet above mean sea level. In addition to the proposed wetland re-establishment and rehabilitation, the project includes riparian habitat enhancement through channel realignment and native plantings, and potential for preservation of Oregon white oak (*Quercus garryana*) priority habitat in the northeast portion of the site.

## **OWNERSHIP AND LEGAL RESTRICTIONS**

Clark County Tax Parcels 159331-000, 162111-000, and 162114-000 are under a purchase and sales agreement by Rotschy, Inc. All parcels are zoned light industrial, with an industrial comprehensive plan designation. Partial water rights for purposes of irrigation are available from the well located on the property, but these rights are not proposed for long-term use by the Bank. However the water rights could be used for short-term irrigation for plant establishment purposes.

A waterline easement runs north to south along a gravel road (an extension of NE 152<sup>nd</sup> Avenue through the middle of the site. A 300-foot Bonneville Power Administration (BPA) powerline easement, two stormwater facilities, and several other utility easements (storm sewer and sanitary sewer) are located in the southern portion of the site (Figure 4). The two stormwater facilities can be accessed for maintenance by the City of Vancouver along the already existing storm sewer, sanitary sewer, and waterline easements. There are no additional encumbrances on the property. Surrounding land use is urban lower density residential (R-9) to the south and

light-industrial (IL) and office-commercial-industrial (OCI) zoned parcels (currently agricultural or rural residential use) to the east, west, and north.

### **CONSTRAINTS, CONFLICTS, OR KNOWN RISKS FROM ADJACENT LAND USE**

The Bank site is surrounded by residential (R-9), office-commercial-industrial (OCI), and light-industrial zoned (IL) property and as such is potentially influenced by these uses. Residents of the residential subdivision to the south are known to access the Bank site via the road along the waterline easement. However, it is anticipated that future access to the Bank for the public could be restricted if necessary or essential for minimizing risks to the site. Additionally, there is potential for the properties to the north and east of the Bank site to be developed with industrial uses, as they are zoned for light-industrial (IL) or office-commercial-industrial (OCI) development. It is anticipated that any future development adjacent to the Bank boundary could be sufficiently buffered with setbacks/buffers placed along the boundaries of the Bank site.

### **COMPLIANCE WITH LOCAL, STATE AND FEDERAL RULES**

During the bank certification process, Ecological Land Services, Inc. and the Terrace Wetland Mitigation Bank Project will comply with the Corps and U.S. Environmental Protection Agency's (EPA) Compensatory Mitigation for Losses of Aquatic Resources rule (2008), and the State of Washington's Mitigation Banking Rule (WAC 173-700). Prior to Bank development, all local, state and federal permits and approvals will be obtained.

### **SPONSOR/CONSULTANT INFORMATION AND QUALIFICATIONS**

The sponsor, Rotschy Inc., is a family-owned construction contracting company located in Vancouver, Washington. Rotschy, Inc. has been involved in building construction projects throughout the Northwest including roads, wetland mitigation sites, pump stations, treatment plants, subdivisions, and railroads for public agencies and private owners for the last 26 years. They have had experience with mitigation site construction since 2006 and have been responsible for the construction of large scale mitigation sites for project impacts from transportation, commercial, and residential projects.

Ecological Land Services, Inc. (ELS), the consultant for the project, was established in Longview, Washington in 1996, has an 18-year history of managing watershed, stream and wetland projects in Washington, Oregon, and Alaska. ELS mitigation banking experience includes establishment of the Long Beach Mitigation Bank in Long Beach, Washington and assisting Habitat Bank, LLC, with preparation of permitting and associated documentation for establishing the East Fork Lewis Wetland Mitigation Bank, the Columbia River Wetland Mitigation Bank in Clark County, the Coweeman Mitigation Bank (in progress) in Cowlitz County, and the City of Ocean Shores Weatherwax Mitigation Bank.

## **WATERSHED NEEDS AND SITE SELECTION**

### **WATERSHED OVERVIEW**

Burnt Bridge Creek and its surrounding watersheds are part of a landscape group identified as the Rain-dominated Terrace unit (Watershed Characterization of Clark County 2009), and includes the drainages of Burnt Bridge Creek, Lamas Creek, Salmon Creek, Mill Creek,

Whipple Creek, Flume Creek, Gee Creek, and Allen Creek. This unit includes large terrace plains formed by glacial floods consisting of gravels, sand, silts and clay. These plains are topographically associated with upgradient foothills and downgradient slopes above the Columbia River. The Terrace unit is wholly contained within the Water Resource Inventory Area (WRIA) #28 (Salmon/Washougal).

The upper eight miles of Burnt Bridge Creek (between 18<sup>th</sup> Street and 162<sup>nd</sup> Avenue) was historically wetland, as evidenced by historic survey maps and remnant soil types. In the mid-to-late 1800s farmers ditched this wetland area to drain portions for agricultural use. The ditch system originated at the east property boundary of the proposed Bank site, and continued eight miles to the west where it connected to a historic natural creek channel, near what is now 18<sup>th</sup> Street. Volume of flow in the ditch and creek (now combined as one continuous 13-mile watercourse) has always been relatively small due to the small size of the watershed (27 square miles) and high groundwater recharge. As mentioned previously, the headwaters of Burnt Bridge Creek originate at the east property boundary, and a north and south flowing agricultural drainage ditch is located immediately adjacent to the east property boundary that contributes to the flow of headwaters of the creek. This north-south drainage ditch is outside of the property boundary and will remain intact to avoid interfering with existing drainage from adjoining properties. The Washington Department of Natural Resources designates this portion of Burnt Bridge Creek as a Type Np (non fish-bearing perennial stream), however, both coho and winter steelhead are presumed present (Salmonscape 2014). The Terrace unit characterization identifies the southern portion of the unit as suitable for protection and restoration of stream corridors, with the eastern portion (near the boundary between Burnt Bridge and Lacamas Creek watersheds) as a priority for restoration and protection of areas for recharge, surface storage, and denitrification.

## **WATERSHED GOALS PERTINENT TO THE PROPOSED PROJECT**

Watershed goals pertinent to the proposed Bank site consist of both goals at a watershed basin level, as well as individual watersheds goals and priorities. Several subbasin recovery plans and watershed management plans were reviewed and identified the specific activities or goals that were necessary for improvement in the watershed:

- *The 2004 Lower Columbia Salmon Recovery and Fish and Wildlife Subbasin Plan: Vol. II Subbasin Plan Chapter H Lower Columbia Tributaries: Bonneville and Salmon (LCFRB 2004)* prioritizes actions for fish recovery in the Salmon Subbasin, which includes the Burnt Bridge Creek watershed. The subbasin plan identifies the top ten restoration and preservation activities necessary for recovery of the subbasin. The activities that are a highest priority for the proposed Bank site's watershed include: #1) Protect existing stream corridor structure and function, #2) Protect hillslope processes in the system; #3) Restore degraded hillslope processes on forest, agricultural, and developed lands; #4) Restore floodplain function and channel migration processes; #5) Restore riparian conditions throughout the basin; #6) Restore access to habitat blocked by artificial barriers; #7) Restore channel structure and stability; #8) Restore degraded water quality with emphasis on temperature impairments; #9) Provide for adequate instream flows during critical periods; #10) Create/restore off-channel and side channel habitat; and #11 Limit intensive recreational use during critical periods. Of these 11 priority

activities, the proposed Bank site has the potential to address nine of the 11 activities, which includes all but activity numbers 6 and 11.

Specifically, the Subbasin Plan indicates that the Burnt Bridge Creek watershed is rated as impaired with regard to hydrology at the watershed level because of high levels of impervious surface in contributing upstream Burnt Bridge Creek subwatersheds, including middle and upper Burnt Bridge Creek. Residential and commercial development, agriculture, transportation corridors, placement of fill, and diking have eliminated most riparian vegetation on Lake River, Whipple Creek, Burnt Bridge Creek, and lower Salmon Creek. As such, riparian conditions in the Burnt Bridge Creek drainage are rated as impaired. Upper Burnt Bridge Creek, where the proposed Bank site is located was historically channelized and drained, eliminating most off-channel habitats (LCFRB 2004).

Re-establishment and restoration of the wetland areas and increasing stream channel complexity will address the overall basin priorities, and will specifically address the issues of impaired hydrology and lack of riparian vegetation and off-channel habitat throughout the watershed.

- The *Watershed Characterization and Analysis of Clark County* (Ecology 2009) specifically addresses the proposed project's watershed reach as priority areas for protection and restoration of stream corridors and wetland areas (providing areas for recharge, surface storage, and denitrification).

## **SITE SELECTION**

The location of the Bank site was chosen for its suitability and priority for restoration of the watershed process through re-establishment or rehabilitation as identified in the *Watershed Characterization and Analysis of Clark County* (Ecology 2009). Additionally, the site satisfies the watershed scale criteria for potential and sustainability according to the Department of Ecology's *Selecting Wetland Mitigation Sites Using a Watershed Approach* (2009). Within the Bank's subwatershed, the watershed hydrology and riparian conditions are impaired, and the hydrologic regime of Burnt Bridge Creek has been highly impacted by urban and rural development. Burnt Bridge Creek is on the 303(d) list for pH, dissolved oxygen, temperature, and fecal coliform (Ecology 2012), and residential and commercial development, agriculture, transportation corridors, and placement of fill has removed most riparian vegetation along Burnt Bridge Creek (LCFRB 2004). The Bank site has been extensively farmed for at least 60 years, which has drastically altered the hydrology through the installation of drain tiles, the soils through repetitive plowing, and the vegetation through continued agricultural production. There is the potential to create a significant amount of functional lift to wetlands and other aquatic resources on the project site, by reestablishing and restoring the historic wetland system and improving existing stream complexity.

## **EXISTING AND PROPOSED CONDITIONS**

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### **DESCRIPTION OF EXISTING CONDITIONS**

The site is currently a farmed field with several existing jurisdictional wetlands (Figure 4). Roughly eight upland acres in the northeast corner of the property is developed with residential and farm buildings.

Approximately 9.5 acres in the northeast portion of the site consists of a mature Oregon white oak woodland. Of the approximate 9.5 acres, 5 acres is characterized as having an overstory consisting exclusively of mature Oregon white oak, with a shrub layer dominated by Indian plum and Himalayan blackberry. The remaining 4.5 acres of oak forest consists of a mixed stand of Oregon white oak and Douglas-fir, with a similar understory. According to the Washington Department of Fish and Wildlife (WDFW), priority Oregon white oak woodlands are stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25 percent; or where total canopy coverage of the stand is <25 percent, but oak accounts for at least 50 percent of the canopy coverage present (Larsen, et al 1998). According to this definition, the entire 9.5 acres is considered a WDFW Priority Habitat.

Burnt Bridge Creek, with a 5- to 6-foot wide span, flows across the property from east to west. A drainage system of clay tiles and 4-inch plastic drain pipes directs surface and groundwater to the stream channel from both the north and south. An aerial photograph from a Soil Conservation Service (SCS) *Conservation Farm Plan* shows that the property was tiled extensively in 1947. Beginning in 1977, failing clay tiles were gradually replaced with a more advanced system of plastic pipes. The average depth of the drainage tiles varies between 2 and 3 feet throughout the field. As the pitch of the drain increases closer to the Burnt Bridge Creek channel, the pipes may be placed as deep as 5 feet (JD White Company 1995). Field investigations conducted in 1995 by the JD White Company and documented in the 1995 *Burnt Bridge Creek Prior Converted Cropland Status Report* support the extensive tile network outlined in the SCS Conservation Plan of 1947.

#### *Wetlands*

Historically, wetland areas ranging from approximately 3 acres to 5 acres have been delineated on the site from 1999 to 2009. There have been two jurisdictional determinations by the Corps, 4.0 acres of wetlands in 1999, and 3.15 acres of wetland in 2003. It is estimated that there is currently close to 4 acres of existing emergent, depressionnal, Category IV wetlands on the site, however, these areas are approximate and will need to be confirmed with a formal delineation.

#### *Streams*

The project site includes approximately 2,750 linear feet of Burnt Bridge Creek, which originates at the east property boundary and flows east to west across the proposed Bank site.

### **HYDROLOGY**

The site is located within the Terrace unit which includes relatively level plains and terraces in the foothills above the Columbia River. The unit has a southwestern trending groundwater flow pattern and a large delta (now a terrace) formed by glacial floods consisting of gravels, sand, silts and clay.

To determine the feasibility of converting the property to a wetland mitigation bank, the presence of onsite wetlands and the site's current hydrologic regime were investigated by field review, piezometer measurements, and rainfall data. Piezometer measurements were recorded from ten locations throughout the site from April 21 to May 29, 2014. Based on these measurements, it appears that the water table fluctuates from 2 feet below ground surface, to at or slightly above the ground surface in the spring, with the highest water table being located in the northwest and southwest areas of the site.

## **SOILS**

Soils mapped (NRCS 2014) within the site boundaries are Cove silty clay loam (hydric), Sifton gravelly loam, and Semiahmoo muck (hydric). The Cove and Semiahmoo are characterized as poorly drained and found in depressions or floodplains. The Sifton loams are characterized as somewhat excessively drained soils found on mostly flat, wide terraces. The developed portion of the site (northeast corner) including the stands of Oregon white oak is situated on the rapidly permeable Sifton gravelly loam. Two of the soils mapped onsite by the NRCS (Cove silty clay loam and Semiahmoo muck) are listed on the *Hydric Soils List for Washington* (NRCS 2013). These hydric soils make up the greater portion of the site and are the soils that have been historically drained for agriculture (Figure 3).

## **VEGETATION**

Both the wetland and upland areas of the site have been historically used as a mint farm or cultivated for other crops (turf grass, onions, corn). Dominant vegetation species have been identified as:

Wetland areas: creeping buttercup (*Ranunculus repens*), common rush (*Juncus effusus*), reed canarygrass (*Phalaris arundinacea*), velvetgrass (*Holcus lanatus*) and fireweed (*Chamerion angustifolium*)

Upland areas: bentgrass (*Agrostis sp.*), oxeye daisy (*Leucanthemum vulgare*), perennial ryegrass (*Lolium perenne*), Himalayan blackberry (*Rubus armeniacus*) and orchardgrass (*Dactylis glomerata*).

Oregon white oak forest: Oregon white oak (*Quercus garryana*), Douglas-fir (*Pseudotsuga menziesii*), Indian plum (*Oemleria cerasiformis*), and Himalayan blackberry (*Rubus armeniacus*).

## **HISTORIC AND CURRENT LAND USE**

The project area has been used for a variety of agricultural purposes since the wetland areas were ditched for drainage beginning in the late 1800s. In the early 1940s the Kunze family purchased the property for use as farmland. Available cropping records, aerial photography, and discussions with Kunze family members (JD White 1995) indicate that the project site has been used continuously for commodity crops since the 1940s.

## **SITE SPECIFIC RESTORATION GOALS AND OBJECTIVES**

The goal of the Terrace Mitigation Bank is to re-establish, rehabilitate, and enhance wetland functions across the degraded site, as well as improve the channel complexity of the existing stream channel, and preserve the Priority Oregon white oak habitat. This work will be done in

two phases, with the first phase taking place south of the stream channel (Figure 4) Specifically the Bank project will aim for:

- Re-establish of additional wetland areas on the historically drained portions of the site through the disabling of drainage tiles and establishing a native historic wetland plant community
- Improve wetland functions within the existing wetland areas through wetland rehabilitation and enhancement
- Preserve and enhance Oregon white oak woodlands
- Increase stream channel complexity by meandering the stream and reconnecting the adjacent floodplain
- Enhance of the riparian area along the stream, by planting native trees and shrubs and removing invasive species.

### **CONCEPTUAL SITE DESIGN**

The final project design will be developed with collaboration with the IRT after adequate analysis of the site has occurred. The initial data collected on the site, historical information on extent of wetland areas prior to conversion to agriculture in the late 1800s, restoration and re-establishment goals within the surrounding watershed, and past experience on similar projects have all contributed to a conceptual design for the Bank site (Figure 4). The key elements of the project design are:

- Re-establish approximately 88 acres of wetland in farmed and drained acreage north and south of the Burnt Bridge Creek channel by removing or blocking drainage tiles and pipes. Remove or control invasive species and plant native bog shrub and emergent species
- Rehabilitate existing wetland areas by enhancement and improving hydrology
- Increase stream channel complexity by meandering of the channelized stream, creating back channel habitat, allow the area to contain elements of both aquatic and terrestrial ecosystems which mutually influence each other, and reconnect floodplain to adjacent wetlands
- Plant riparian buffer areas with native trees and shrubs to increase shading and lower water temperatures, and provide improved habitat structure and diversity
- Preserve Oregon white oak woodlands and enhance with additional oak saplings and possible removal of competing Douglas-fir.

Re-established wetlands will have a high likelihood of long-term sustainability with minimal engineering, as it is anticipated that the disabling of drainage structures will automatically slow the effluence of hydrology from the existing wetlands and will provide the hydrology for re-establishment of the historic wetland areas. Peizometer monitoring data (from April through May 2014) indicated that the functioning drain tiles allow soil hydrology to drop to the artificially lowered level following rainfall events within 1 to 2 days.

## **PROPOSED SERVICE AREA AND PROJECT NEEDS ANALYSIS**

### **PROPOSED SERVICE AREA**

The proposed service area for wetlands includes all plains and terraces, nearly level to gently sloping, within the Terrace Hydrogeologic Unit (Map 1) as described in the 2009 *Watershed Characterization of Clark County* and that also encompasses the somewhat excessively drained to very poorly drained soils of bottom lands and terraces (NRCS 2014, Ecology 2009). These soils can be grouped into associations that have essential characteristics in common (texture, drainage capability, slope). Using these criteria, a service area that includes all relatively flat terrain within the central and western portions of the Terrace unit is feasible. This would include the watersheds of the Burnt Bridge Creek, Lacamas Creek, Lakeshore, and Salmon Creek (Figure 5).

**Map 1. Landscape Groups.** Green is the Rain-on Snow and Snow-Dominated Mountainous unit; blue is the Rain-dominated Mountainous unit (East Fork and Mainstem of the Lewis); pink is the Terrace unit; and orange identifies the Columbia River unit.



Additional support for this service area, especially in regard to the Lacamas Creek subwatershed, is the evidence in historic General Land Office Maps that both Lacamas Creek and Burnt Bridge Creek drainages were historically fed by the original swamp that pre-dated the 19<sup>th</sup>-century ditching of what is now the upper reaches of Burnt Bridge Creek on the project site. The area encompassing these drainages is almost flat – the angle of the ditching determined which way the water would flow (west for Burnt Bridge Creek and southeast for Lacamas). There is little more than 1000 feet of flat ground (and NE 162<sup>nd</sup> Street) separating the ditch from which Burnt Bridge Creek originates and the headwaters of Big Ditch Creek that flows in the opposite direction into Lacamas Creek. Soils in both drainages are of the same soil association category (NRCS 2014).

To the north of these drainages there is a wide flat terrace between Brush Prairie and Hockinson (and extending north to the City of Battle Ground) that further illustrates the connection between subwatersheds. This terrace plain is a likely remnant of a swamp that historically drained to both Lacamas Creek (south) and Salmon Creek (north). The network of ditches that were hand-labor engineered in the 19<sup>th</sup> century altered the flows to suit agricultural purposes and permanently fixed their direction; at one point, China Ditch, which drains south to Lacamas Creek is only about 12 feet away from Mud Creek which drains north to Salmon Creek. In fact, a small driveway culvert at the north extreme of China Ditch receives water from Mud Creek during average high water events. Therefore, during high water, Mud Creek flows to two watersheds, Salmon Creek and Lacamas Creek.

The upper and lower limits of a service area as defined by these criteria would put potential development projects within a reasonable distance from the proposed Bank location and would serve a developing area of Clark County with needed wetland mitigation credit options.

### **PROJECT NEEDS**

The service area encompasses both the rural communities that are east and north of the Cities of Vancouver and Camas, and the more urban communities within the incorporated areas of Vancouver and adjacent Salmon Creek neighborhoods. Both Interstate-5 and 205 run north and south through the service area. Potential projects that could use the bank are transportation projects along the interstate corridors, public and private utility project, single and multi-family housing developments, and commercial and industrial development.

## **REFERENCES**

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## FIGURES

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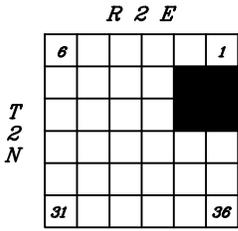
WASHINGTON



45.6618 Latitude  
-122.5166 Longitude

LOCATION MAP

### PROJECT VICINITY MAP



**NOTE:**  
USGS topographic quadrangle map reproduced using MAPTECH Inc., Terrain Navigator Pro software.

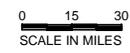
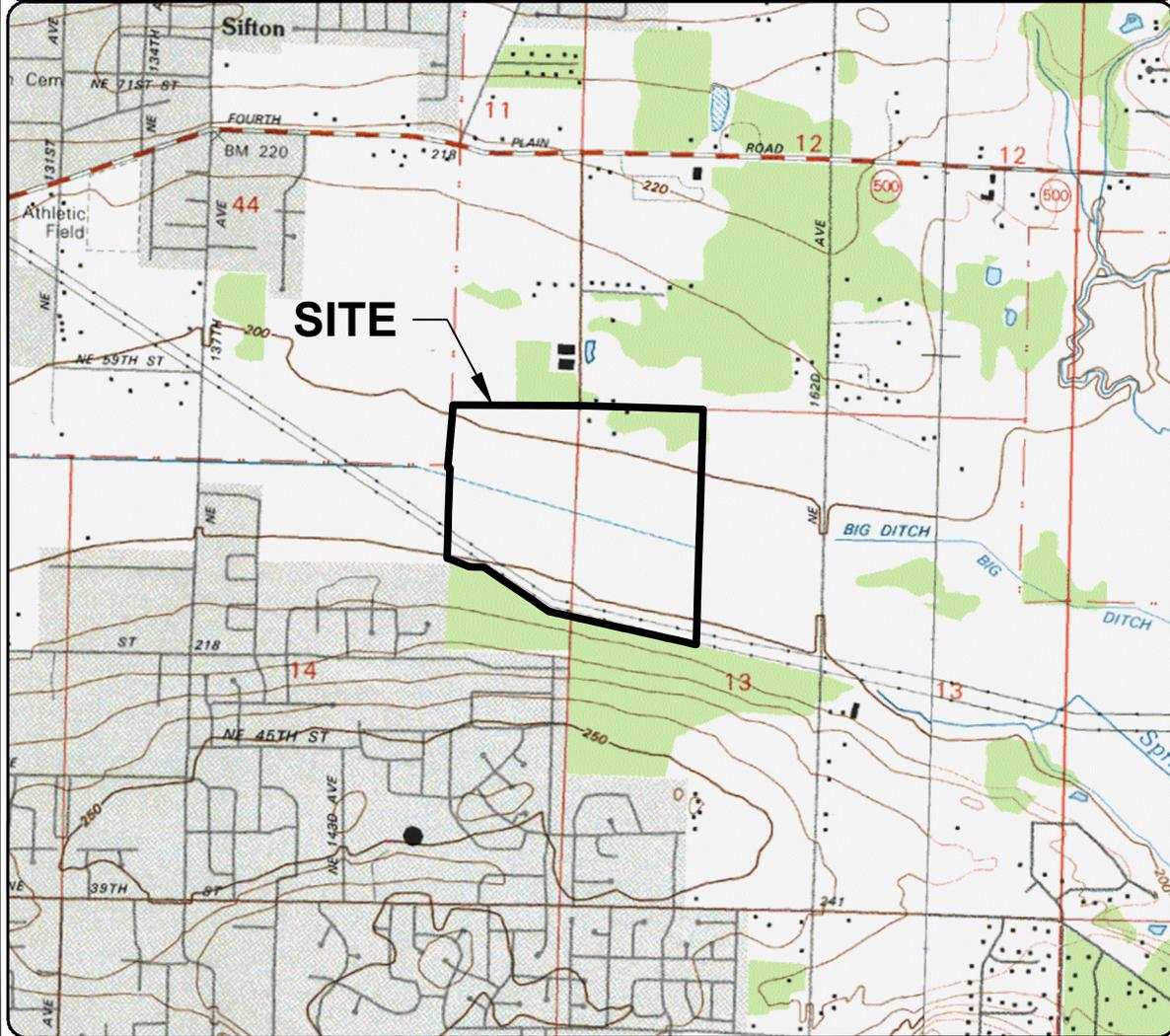


Figure 1

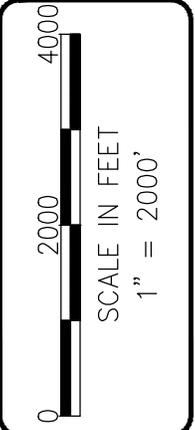
VICINITY MAP  
Terrace Wetland Mitigation Bank

Rotschy, Inc.  
City of Vancouver, Clark County, Washington  
Section 11, 12, 13, & 14, Township 2N, Range 2E, W.M.

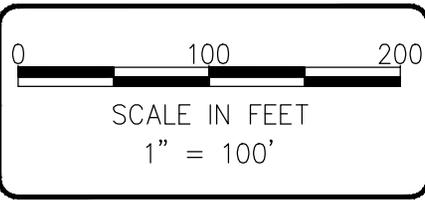
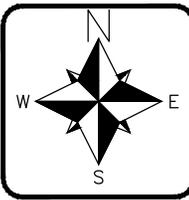
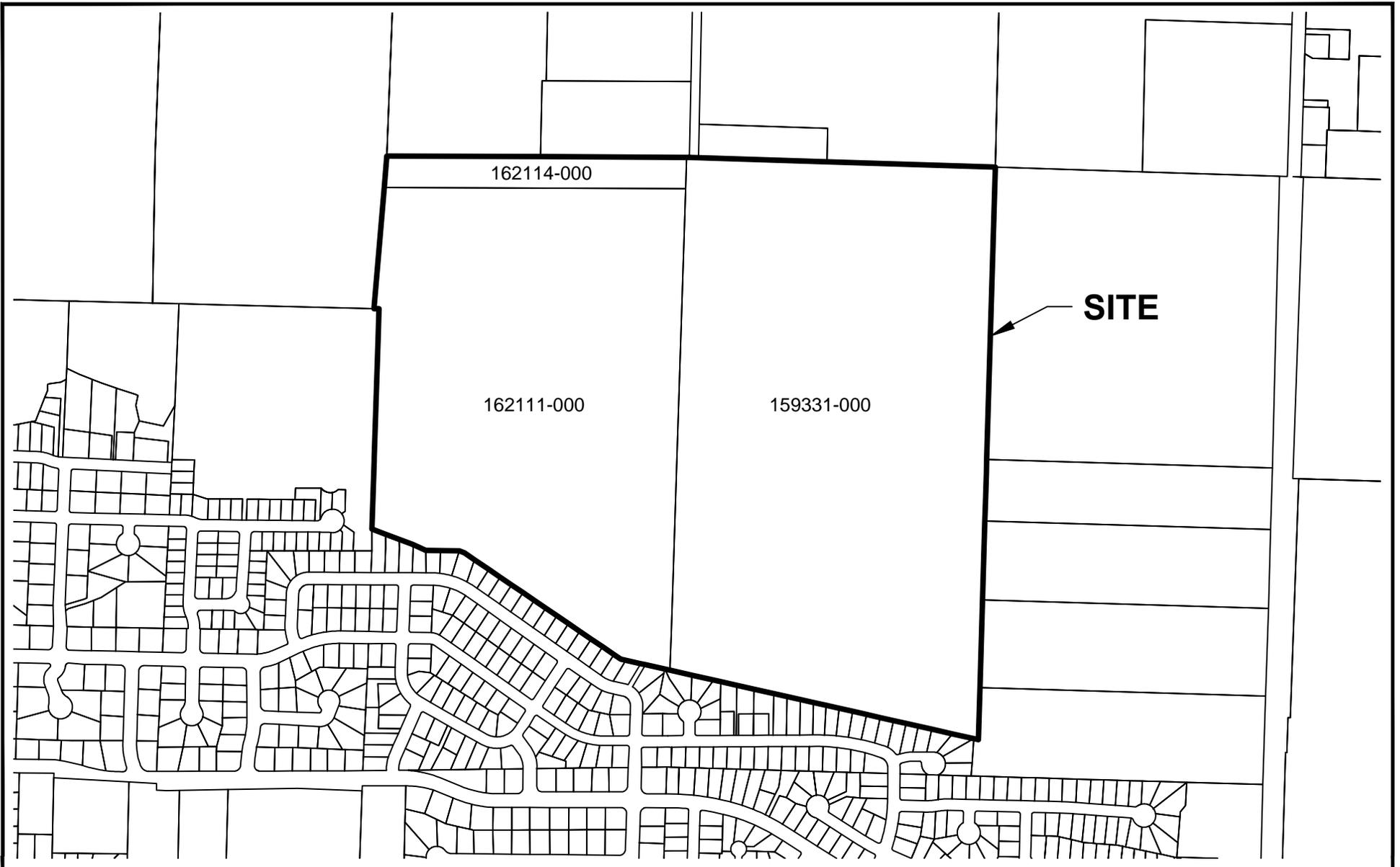
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PRJ. MGR: KB  
CHK:  
PROJECT NO:  
1382.02



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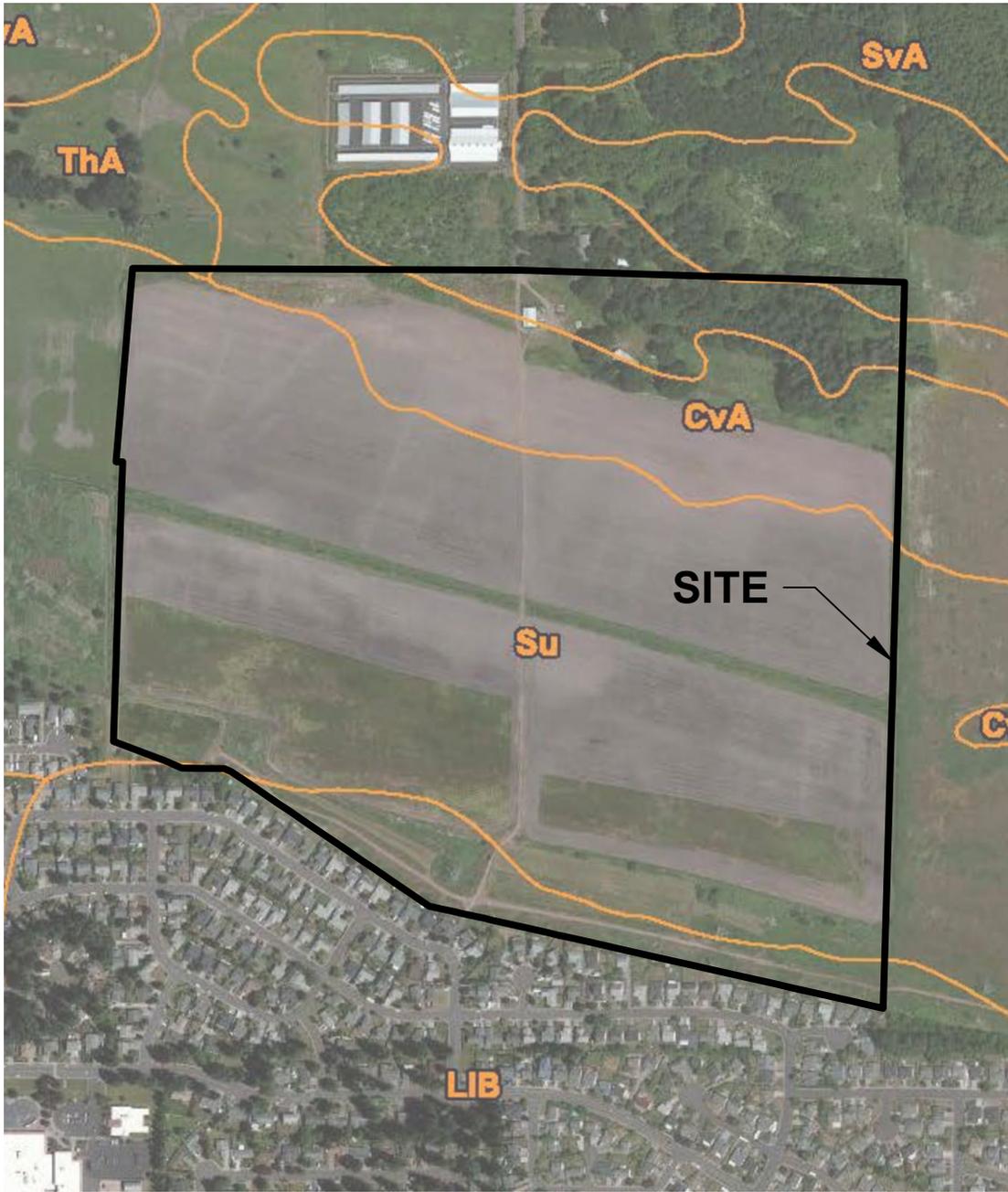
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DATE: 7/11/14  
DWN: BCB  
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1382.02

Figure 2  
TAXLOT MAP  
Terrace Wetland Mitigation Bank  
Rotschy, Inc.  
City of Vancouver, Clark County, Washington  
Section 11, 12, 13, & 14, Township 2N, Range 2E, W.M.

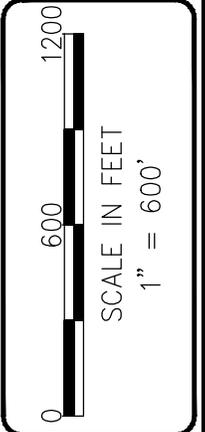


**LEGEND:**

- CvA** Cove silty clay loam, 0 to 3 percent slopes. Hydric.
- LIB** Lauren very gravelly loam, 0 to 8 percent slopes. Not hydric.
- Su** Semiahmoo muck, shallow variant. Hydric.
- SvA** Sifton gravelly loam, 0 to 3 percent slopes.

**NOTE(S):**

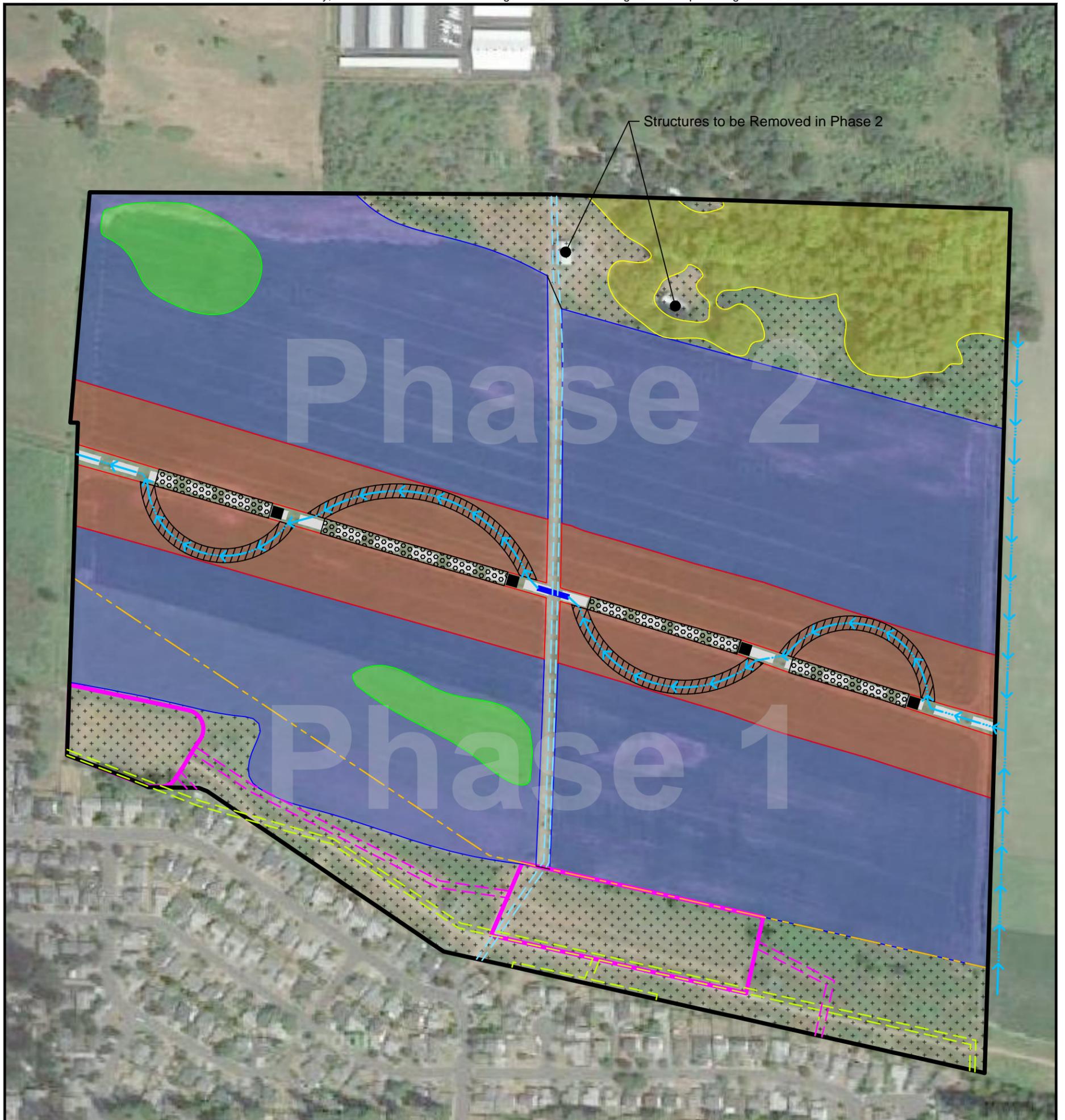
1. Map provided on-line by NRCS at web address:  
<http://websoilsurvey.nrcs.usda.gov/app/>



**ECOLOGICAL LAND SERVICES, INC.**  
  
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DATE: 7/11/14  
 DWN: BCB  
 REQ. BY: KB  
 PRJ. MGR: KB  
 CHK:  
 PROJECT NO:  
 1382.02

**Figure 3**  
**SOIL SURVEY MAP**  
 Terrace Wetland Mitigation Bank  
 Rotschy, Inc.  
 City of Vancouver, Clark County, Washington  
 Section 11, 12, 13, & 14, Township 2N, Range 2E, W.M.



Structures to be Removed in Phase 2

Phase 2

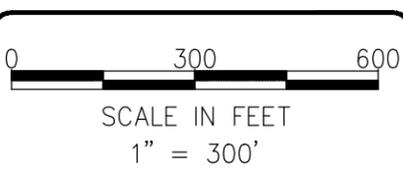
Phase 1

**LEGEND:**

- Site Boundary
- Phase Boundary
- Stream
- Oregon White Oak Priority Habitat Preservation (9.47 ac.)
- Wetland Re-establishment (68.72 ac.)
- Wetland Re-establishment/Riparian Enhancement (21.91 ac.)
- Wetland Rehabilitation (Existing Wetland Area Approximate) (4.03 ac.)
- Upland Enhancement (23.09 ac.)
- Stream Re-alignment Area
- Stream Back Channel Habitat
- Stream Re-alignment Plug
- BPA Powerline Easement
- Culvert Location
- 20' Storm Sewer Easement
- 20' Sanitary Sewer Easement
- 15' Water Line Easement
- Storm Water Facility

**NOTE(S):**

1. Aerial photograph (2012) provided by Google Earth™.



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Figure 4  
**CONCEPTUAL DESIGN MAP**  
 Terrace Wetland Mitigation Bank  
 Rotschy, Inc.  
 City of Vancouver, Clark County, Washington  
 Section 11, 12, 13, & 14, Township 2N, Range 2E, 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 Creek Water Resource Inventory Area (WRIA 28) as defined below in Table 1 and Table 2.

**Table 1. Extent of the Terrace Mitigation Bank**

Limit	Boundary Description
Northern	West Slope (Gee Creek Subwatershed) and East Fork Lewis River Watersheds
Western	Vancouver Lake and Lake River waterbodies; Whipple Creek and Salmon Creek RM 00.06 Subwatersheds
Eastern	East Fork Lewis River and Little Washougal River Watersheds
Southern	Columbia Slope Watershed

**Table 2. Watersheds within the Terrace Mitigation Bank Service Area**

Watershed	Sub-Watersheds
Lacamas Creek	China Ditch, Lower Fifth Plain Creek, Upper Fifth Plain Creek, Shanghai Creek, Upper Lacamas Creek, Lower Lacamas Creek, Matney Creek, Dwyer Creek, Lacamas Lake
Burnt Bridge	Lower Burnt Bridge Creek, Middle Burnt Bridge Creek, Upper Burnt Bridge Creek, Burton Sink
Salmon Creek	Salmon Creek RM 3.83, 8.96, 14.66, and 22.20; Cougar Creek, Curtin Creek, Mill Creek, Woodin Creek, Morgan Creek, Rock Creek
Lakeshore	Lakeshore

**LEGEND:**

- Proposed Service Area
- Watershed Boundary

Figure 5  
 PROPOSED SERVICE AREA MAP  
 Terrace Wetland Mitigation Bank  
 Rotschy, Inc.  
 City of Vancouver, Clark County, Washington  
 Section 11, 12, 13, & 14, Township 2N, Range 2E, W.M.

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