

SITE STEWARDSHIP PLAN

North Logan Natural Area



May 2018



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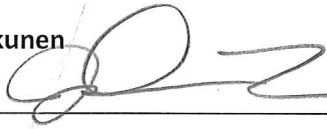
North Logan Natural Area

Approvals for Site Stewardship Plan

Date first routed: May 22, 2018

Justin Takkunen

Signature

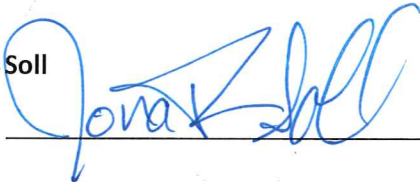


Date

1/31/19

Jonathan Soll

Signature



Date

5/23/2018

Dan Moeller

Signature



WELL DONE!

Date

2/19/19

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NORTH LOGAN NATURAL AREA SITE INFORMATION

LOCATION

Address: 15265 S. Latourette Rd. Oregon City, OR 97045

Number of acres: 195.59

Metro file no.: S 18.06

Table 1: Metro natural area bond purchased land for North Logan Natural Area

PROPERTY NAME	FILE NO.	BOND YEAR	DATE ACQUIRED	MANAGEMENT	ACRES
Parsons	18.020	1995	7/18/2001	Metro	174.29

DIRECTIONS TO SITE

From Wankers Corner Field Station (2661 SW Borland Rd, Tualatin, OR 97062):

- Head east on SW Borland Rd; at the traffic circle, take the first exit onto SW Stafford
- Turn left to merge onto I-205 N
- Take exit 10 and merge onto OR-213 S towards Oregon City/Molalla
- Slight right onto Washington St, turn right to stay on Washington St; at the traffic circle, continue straight onto S Clackamas River Dr
- Continue onto S Springwater Rd then turn left onto S Bakers Ferry Rd/Bakers Ferry Eagle Creek Rd
- Turn left onto S Latourette Rd; take a slight right to stay on S Latourette Rd and arrive at 15265 S. Latourette Rd

See Map 1 for details.

SECTION 1: INTRODUCTION

1.1 CONTEXT

North Logan Natural Area is located one mile southwest of Barton, Oregon on the south bank of the lower Clackamas River (Map 1) in a mixed agricultural and rural residential area where the Oregon Cascade Range meets the Willamette Valley. The site is directly south of and across the river from Barton Natural Area.

The Clackamas River supplies drinking water to more than 200,000 people. It also supports significant runs of imperiled fish species, including Chinook and coho salmon, steelhead and cutthroat trout, bull trout and pacific lamprey, and is identified in federal salmon recovery plans for the Lower Columbia ESU as a focal recovery watershed for Chinook and coho salmon and winter steelhead. North Logan Natural Area's abundant native habitats include oak savanna, riparian and upland forests and wetlands that support a diversity of species.

The Clackamas River Basin has been used by people for thousands of years and North Logan Natural Area lies within the traditional territory of Clackamas, a Chinookan-speaking tribe who

lived on the Willamette River near Willamette Falls, along the Clackamas River, and on nearby tributary streams. French and English fur traders began to explore the area in the early 1800s bringing diseases that decimated Pacific Northwest indigenous people. Oregon City was founded in 1829 at Willamette Falls to take advantage of the water power to run a lumber mill. Additional use of the area followed, including for transportation, commodity extraction and human settlement.

Nearby conservation properties include the Metro-owned Clackamas Bluff and Richardson Creek Natural Areas to the west, Barton Park (Clackamas County) and River Island (Metro) to the east/southeast, Barton Natural Area (Metro) to the immediate north, and Clear Creek Natural Area (Metro) to the southwest. North Logan Natural Area connects riverine-riparian habitats along the lower Clackamas River corridor and safeguards secondary channels and floodplain wetlands. In addition, the natural area features Oregon white oak woodland, which is part of a larger oak woodland/savanna landscape to the west and south. Historical and ongoing residential development, timber harvest, and agricultural practices in the surrounding area have fragmented and degraded native habitats, and North Logan Natural Area and neighboring conservation properties provide refuges for several species of imperiled fish and wildlife.

Ongoing restoration and coordinated management with neighboring conservation properties has the potential to improve on-site habitat conditions and restore landscape connectivity. Since acquisition of the site in 2001 under Metro's 1995 Open Space Bond Measure, restoration treatments have included tree and shrub plantings, weed treatments, pre-commercial thinning, and side channel excavation and large woody debris placement.

See Map 2 for details.

1.2 SITE STEWARDSHIP PLAN GOALS AND USES

Site Stewardship Plans (SSPs) and Site Conservation Plans (SCPs) are sister documents. SCPs document conservation targets, desired future conditions, and key threats, providing a long-term conservation vision for the site for internal and external audiences. Though rarely fully updated, SCPs are periodically revised to document strategic implementation and reflect on lessons learned through adaptive management. SCPs provide guidance for short- and long-term stewardship actions that the Natural Areas Land Management Team will take to reduce threats and increase conservation target health.

SSPs provide a five to ten-year outlook for ongoing care of a site, shaping a vision of options and costs to facilitate thoughtful decisions using available resources. SSPs are primarily an internal working document and address vegetation management, such as invasive species control, and infrastructure maintenance for items such as fences, gates, and water control structures. SSPs are updated periodically as key restoration or access and development projects are implemented.

This SSP provides information necessary to:

- Protect natural resources supporting wildlife habitat and water quality.
- Define key actions that help achieve desired future conditions of conservation targets.
- Define key actions required to maintain infrastructure.

- Provide cost estimates for actions.
- Prioritize actions and document implementation.

The major stewardship issues of concern at North Logan Natural Area include:

- Invasive species management including monitoring, treatments, and enhancing native vegetation by planting.
- Maintaining infrastructure such as signs, gates and fences, roads, etc.
- Monitoring for and mitigating unauthorized/illegal uses of site and restoring site degradation due to public use and recreational nature of site.
- High fire danger issues with public use during fire season. Arson has been a previous issue on site.

SECTION 2: CONSERVATION TARGETS AND DESIRED FUTURE CONDITIONS

2.1 MAJOR HABITAT TYPES

Based on historical vegetation maps compiled by Christy and Alverson (2011), North Logan Natural Area was dominated by Douglas fir (*Psuedotsuga menziesii*) forest often with big leaf maple (*Acer macrophyllum*), grand fir (*Abies grandis*), dogwood (*Cornus*), hazel (*Corylus*), and yew (*Taxus*). To the immediate north red alder-mixed conifer forest was prevalent on the Clackamas River bottomlands with mixed mesic conifer forest and Douglas fir. Oregon white oak (*Quercus garryana*) woodlands dominated the uplands. To the south of the natural area, there was a large tract of Oregon white oak-Douglas fir savanna.

Current cover types at North Logan Natural Area include riparian forest, upland forest (mixed and coniferous), and oak savanna with Douglas fir, as well as river channel bars and a small developed area around the residence and outbuildings (Table 2; Map 3). More detailed descriptions are available in the SCP.

Table 2: Major habitat types at North Logan Natural Area

HABITAT TYPE	ACRES
Riparian forest	47.9
River channel bars	11.6
Upland forest – mixed	69.5
Upland forest – conifer	32.9
Oak savanna	31.2
Developed – pervious	1.9

2.2 CONSERVATION TARGETS

Conservation targets are composed of a suite of species, communities and ecological systems that represent and encompass the full array of native biodiversity of the site, reflect local and regional conservation goals and are viable or at least feasibly restorable. Using onsite natural habitat types and regional conservation planning efforts as guides, conservation targets were selected that encompass the site's biodiversity values and regional conservation targets. The targets at North Logan Natural Area are:

- Riparian forest
- Upland forest
- Oak savanna
- Native fish

Appendix A summarizes the conservation targets, key ecological attributes, threats and strategic short- and long-term stewardship actions that can help address threats to these conservation targets. For more information, see the SCP.

It is important to prioritize restoration and stewardship activities for several reasons. Budgetary or time constraints are likely to limit how much work can be accomplished at a given site. Specific actions may rise to the top due to the scarce or unique nature of a habitat type or because abating a certain threat now will save time and money in the future. The SCP prioritizes conservation targets while Appendix B of this SSP assigns priority rankings to key actions; this does not mean that the other actions are not important, simply that they are not the most important actions within the next five to ten years.

2.3 SPECIAL OR SENSITIVE HABITAT

Natural resources of special interest at North Logan Natural Area include the Oregon white oak savanna and the largely intact Clackamas River riparian-floodplain habitats. Metro plant materials scientist Marsha Holt-Kingsley visited the site and did not identify any rare plants. No formal archeological surveys have been completed at the site.

North Logan Natural Area is surrounded by other natural areas including Richardson Creek and Clackamas Bluff natural areas downstream, the Clackamas-Deep Creek confluence to the immediate northwest, Barton Natural Area to the immediate north, Barton County Park and River Island Natural Area upstream of Bakers Ferry Road. To the southwest, at Clear Creek Natural Area there is active restoration of oak savanna habitat. This complex of conservation properties affords unique opportunities to protect landscape-level habitat connectivity for both aquatic-riparian and upland oak savanna habitats. It also should be noted that larger mammals such as cougar and black bear have been recently sighted on this property.

SECTION 3: STEWARDSHIP ACTIONS

Stewardship actions are broken up into five primary stewardship categories: site monitoring, vegetation management, access and infrastructure, water resources, and wildlife habitat as described below. Terramet includes the full list of stewardship categories, actions and tasks. Appendix B-1 describes strategic stewardship actions for each category needed over the next five to ten years, and Appendix B-2 provides a budget for these actions, as well as additional actions that may be warranted given sufficient time or funds.

3.1 SITE MONITORING

Monitoring at the North Logan Natural Area is an integral part of an adaptive management approach to restoration and stewardship. Based on the monitoring plan developed by Metro, a feedback loop is created between monitoring and management decisions. Monitoring will be done to evaluate habitat, population responses to management action, as well as progress toward achieving habitat and population objectives.

Key monitoring actions at North Logan Natural Area may include:

- Site walks to monitor for priority invasive plants and early detection and rapid response (EDRR) species. Special attention should be focused in riparian areas where new infestations are likely.
- Monitor for plant mortality in Metro and CRBC planting units using visual estimates for success.
- Monitor for encroachments, illegal uses, fire rings and trash during summer season, trail issues, hazard trees, etc.
- Inspect infrastructure: gates, fences, barn, road, signage, etc. for maintenance needs and repairs.

3.2 VEGETATION MANAGEMENT

Key vegetation management actions for the next five to ten years at North Logan Natural Area relate primarily to:

- Invasive weed control of priority invasive species of concern such as Scot's broom (*Cytisus scoparius*), false brome (*Brachypodium sylvaticum*), garlic mustard (*Allaria petiolata*), butterfly bush (*Buddleia davidii*), Bohemian knotweed (*Fallopia x bohemicum*), blackberry (*Rubus bifrons*), spurge laurel (*Daphne laureola*), meadow knapweed (*Centaurea pratensi*), ivy (*Hedera spp.*), vinca (*Vinca minor*), clematis (*Clematis vitalba*), English holly (*Ilex aquifolium*), hawthorn (*Crataegus monogyna*) and other common agricultural weeds.
- Interplant riparian areas established in 2016-2018 by Clackamas River Basin Council (CRBC) and plant maintenance to include seedling release/circle spray on 2016-2018 plantings in CRBC units.
- Additional key vegetation management actions at North Logan Natural Area are defined in Site Conservation Plan and Implementation Plans for Large Restoration Projects. These actions

include continued maintenance of Douglas fir stands by thinning to promote larger trees and increase downed wood. As well as evaluating oak units for snag and downed wood creation and remove Douglas fir and maple seedlings in oak units. See SCP for more details.

Many of these actions span multiple habitat areas and conservation targets.

Metro has initiated an early detection and rapid response (EDRR) program for certain invasive species. These EDRR species will be controlled by hand pulling or herbicide application as they are detected in the natural area. Other invasive plant species will be controlled as part of restoration projects or ongoing management of habitat areas. See Appendix C for a list of invasive species.

3.3 ACCESS AND INFRASTRUCTURE

Infrastructure generally includes human constructs such as maintenance roads, gates, fences, culverts, and signs. This category of stewardship actions may also include inventory property encroachments or surveying property lines. See Map 4 for spatial information on access and infrastructure at North Logan Natural Area.

Key access and infrastructure actions at North Logan Natural Area are:

- Road mowing and brushing to maintain access, parking areas and create a fire break during high fire season.
- Maintain and repair fencing and gates on site – newly installed on Bakers Ferry, Latourette, and along neighboring property. Wildlife specifications are considered and implemented on all fence installation and repairs.
- Maintain and repair natural area rules and information signage on site – kiosk, entrances, and seasonal postings along river.
- Maintain and repair boot brush stations on site including replacement of brushes, cleaning out debris, and monitoring locations new invasive weeds establishing.
- Remove dilapidated barn near renter house and rebuild new pump house for rental house water supply.

3.4 WATER RESOURCES

Water resources stewardship actions are generally defined as maintenance of infrastructure associated with streams, rivers or wetlands at the site. Examples include maintenance of large wood structures, water control structures, or other water resource related actions and tasks.

Key water resources actions at North Logan Natural Area are defined in Site Conservation Plan and Implementation Plans for Large Restoration Projects in Levy 1.0 & 2.0.

3.5 WILDLIFE HABITAT

Wildlife habitat structures are specific features installed to improve wildlife habitat. Examples include nest boxes, turtle logs or platforms, beaver exclusion fencing and other associated wildlife related actions and tasks.

Key wildlife habitat actions at North Logan Natural Area may include:

- Key wildlife habitat actions at North Logan Natural Area are defined in Site Conservation Plan and Implementation Plans for Large Restoration Projects in Levy 1.0 & 2.0.

SECTION 4: COORDINATION

This Site Stewardship Plan outlines strategic development and restoration actions to be carried out at North Logan Natural Area over the next five to ten years. These actions include natural resource, access, and infrastructure improvements that require implementation plans and communications between Land Management and Science staff about long term stewardship costs. Implementation of these actions will have impacts to future stewardship and management of the site. This section is intended to identify actions that need additional coordination.

Actions that require coordination

- Large restoration or development projects require implementation plans and conversations between Science & Stewardship and Land Management teams about long term stewardship costs. These plans also need to be discussed with the Communications team for public outreach.
- Vegetation management - coordination regarding the control and treatment of non-native, invasive plant species; monitoring for the health of native vegetation.
- North Logan invasive weed treatments are part of a larger partnership in the Clackamas basin known as the Clackamas River Invasive Species Partnership. Annual reporting and bi-annual meetings are required to communicate vegetation management activities as well as newly found invasive species on the site and throughout the basin.
- Riparian plantings installed and maintained by Clackamas River Basin Council (CRBC) will require coordination in transitioning this project back to Metro management. In addition to coordination with CRBC on riparian plantings, coordination is required on the Stash the Trash locations if placed on Metro property during the summer season. This program helps to mitigate the amount of trash left.
- Volunteer events will require communication and coordination between the land management and volunteer coordinators.

Current and potential partners

- Clackamas River Basin Council (CRBC) - Currently Metro is coordinating a riparian planting project at North Logan with the CRBC. Metro's Natural Resource Scientist has been managing this relationship and effort in conjunction with Natural Area's Land Management Staff. Plantings began in 2016 and will be free to grow by 2020.
- Clackamas County - Metro has coordinated with Clackamas County's River Patrol Program to provide access to the site at peak summer season.
- Clackamas River Invasive Species Partnership - Metro is coordinating a basin wide effort to control high priority invasive weeds with the Clackamas River Invasive Species Partnership

(CRISP). Annual reports of weed infestations and treatments are submitted and analyzed on a watershed wide scale.

- Metro has coordinating in-stream restoration projects with a variety of partners such as Oregon Department of Fish and Wildlife, Portland General Electric, Oregon Watershed Enhancement Board, etc. Details of this coordination is outlined in the Site Conservation Plan.

SECTION 5: VOLUNTEERS AND COMMUNITY ENGAGEMENT

The primary goal of the volunteer program is to provide a variety of high-quality, meaningful volunteer opportunities that add value and capacity to Metro’s work. Through these opportunities, community members are able to learn about and enjoy North Logan Natural Area, work alongside fellow community members, learn new skills or polish existing ones, and gain the satisfaction of contributing to the long-term health and livability of their communities.

For North Logan Natural Area, strategic volunteer opportunities may include:

- Group restoration projects – e.g. invasive weed removal or native plantings.
- Litter clean up along riparian shoreline of site.
- Wildlife monitoring.

SECTION 6: SITE MANAGEMENT

Metro’s management of North Logan Natural Area includes enforcement of the posted rules to provide protection for wildlife, water quality, and to protect the safety and enjoyment of any person visiting these facilities. The following sections describe key elements to management of the site.

6.1 FIRE INCIDENT ACTION PLAN

A fire incident action plan has been developed for this site (Appendix D; Map 5).

6.2 PUBLIC ACCESS

Public access is managed at North Logan with a mind toward respecting the sensitive balance between recreation and habitat protection as with all Natural Areas in the Metro portfolio. Presently, public access to North Logan Natural Area is neither discouraged nor promoted by Metro. People have been recreating informally on the site since it was purchased and public access has been primarily isolated to the existing road networks and informal fishing trails by the river. At this time, the public use levels are generally low except during hot summer days, with the most use by fishermen, recreational boaters and neighbors. Dogs and horses are not allowed on site. Rule signage has been posted at all entrances informing users of Metro natural area rules. Metro staff regularly educates the public of permitted uses of the site.

Many users park on the road shoulder of the Baker’s Ferry road entrance. A recently installed fence and gate direct public access and has enabled Metro to post signs conveying natural areas rules and other information at a single location. Although North Logan Natural Area is not identified as an access site, public access has increased in the summer months as recreation on the river sees more pressure from the public. To protect sensitive riparian, wetland and prairie habitats any additional

access improvements would require a more in-depth analysis of opportunities and constraints, including meetings with neighbors and the public and development of a detailed master plan. In coordination with Clackamas County, there may be an opportunity to connect the natural area by trail to the Barton County Park parking lot via the Bakers Ferry Road Bridge in order to establish a consolidated parking facility. Such a trail could prevent the need for additional parking at North Logan Natural Area, reduce or eliminate dangerous parking on the road shoulder and reduce impacts to natural resources. Challenges to creating such a trail include gaining access to private property and extending the sidewalk across the bridge.

North Logan Natural Area currently has one rental home and one barn. The barn is used by Metro's land management team and is a key facility for operations in the Clackamas River area.

6.3 SPECIAL USE PERMITS

Special use permits (SUPs) are required for certain regulated and non-traditional uses of Metro's parks and natural areas to ensure public health and safety and to protect natural resources, properties and facilities.¹

Current and historical SUPs for this site can be found in Terramet in the Site Documents section of the North Logan Natural Area Docs & Agreements page or on the M drive (M:\PN\Teams\Visitor Services\SUP). However, as of the date of this document, North Logan has no SUPs.

6.4 DEED RESTRICTIONS, EASEMENTS AND OTHER SITE AGREEMENTS

The acquisition of a property under the Natural Area Program may sometimes include deed restrictions that place limitations on the use of the land. Deed restrictions can include restrictions on tree cutting, establish landscaping requirements, or establish road maintenance fees. Acquisitions may also include easements that entitle the holder to certain uses or rights on the property. Easements can include utility easements, easements of access, and conservation easements. Metro may enter into other voluntary agreements including intergovernmental agreements (IGAs) with other agencies and management agreements with non-governmental organizations.

Existing deed restrictions, easements and other site agreements include:

Property 1 Parsons (File # 18.020)

- Rights of fishing, navigation, commerce, flood control, propagation of anadromous fish and recreation or other rights of the public, Indian tribes or governmental bodies in and to the waters of the Clackamas River.
- Rights of the public in and to that portion of the property lying within the limits of roads and highways.
- Two Grants of Easement and Right of Way, recorded May 21, 1938, in favor of Barton District Improvement Company for construction and maintenance of Clackamas River flood control

¹ More information regarding policies, guidelines, and applications can be found at www.oregonmetro.gov/specialuse.

project. This effects parcel III. (Title Co. note says that they are unable to determine the exact location of the easements).

- An easement was granted to PGE for a transmission line easement, dated 5/17/38. This effects parcel III.
- Consent Agreement, dated 5/19/38, whereby Union Central Life Insurance Co. as Mortgagee for T.O. Gregory, consents to U.S. Army Engineers' easement.
- Easement dated 12/29/49 and 1/3/50 between Latourettes and U.S. A. (i.e., Army Corps of Engineers). The easement and right-of-way grants the "perpetual right to enter upon the [property] and to construct, reconstruct, maintain, repair, operate and patrol a bank protection and/or a channel improvement and rectification project. Gov. Lots 5, 6 and 7.
- Easement dated 5/8/59 in favor of Clackamas County. Easement grants Clackamas County permission to construct an excavation slope a portion of parcel III abutting the right-of-way of County Rd 778 (i.e., Bakers Ferry Road). The slope of the easement is described as "1 foot horizontal measurement to each 1 foot of vertical measurement."
- Unrecorded Conservation/Scenic Waterway Easement, disclosed by deeds from Schoppert, recorded 1/21/99 on Parcel I, II, III, & IV. Easement benefits the State of Oregon, acting by & through the Parks and Recreation Div. of the Dept. of Transportation.
- An easement to PGE for a transmission line easement, recorded 6/2/38, affecting parcels V and VI. The easement runs along the east line of tax lots 700 and 1000.
- Easement disclosed by Real Estate Contract, recorded 7/27/76, contains covenant to bear a share in the cost of maintenance, improvements and/or repair of said easement and roadway. Affects parcel VI (tax lot 700). In addition this easement is intended to be for right-of-way, roadway, access, egress, and exit purposes.

For more detailed information on any of the above agreements, please refer to the Terramet acquisition pages or the legal acquisition hard copy files for the properties that make up this site (Parsons 18.020).

6.5 RESIDENTIAL OR AGRICULTURAL LEASE AGREEMENTS

Some Metro Natural Areas include a residence or multiple residences on the site. If and when it is decided to rent out a residence, a rental agreement is developed by Metro. This agreement describes the lease terms, any rental restrictions, and acceptable uses of the lease area. In some cases the lease area is delineated on the ground by installation of markers such as carsonite posts, t-posts, or fencing. Some standard lease terms include a month to month term, pet restrictions, no hunting, and no commercial activities.

Existing lease agreements (Map 6) include:

Residential

- North Logan – Parsons – Residential lease (Contract # 925838, Map 6) of 0.50 acres to 'lessee' effective 02/01/2009 and expiring 06/30/2019.

For more detailed information on any of the above leases, please refer to the Agreements section of the Terramet site page for North Logan Natural Area or the Leases tab of the Terramet Administration Agreements page.

MAPS

Map 1 – Vicinity

Map 2 – Site

Map 3 – Current Cover

Map 4 – Site Infrastructure

Map 5 – Fire Incident Action Plan

Map 6 – Agricultural Lease/Residential Lease (if applicable)

APPENDICES

Appendix A – Summary of Conservation Target KEA, Threats, Goals

Appendix B – Stewardship Actions

B-1 Summary of Stewardship Actions

B-2 Budget for Stewardship Actions

Appendix C – Invasive species

Appendix D – Incident Action Plan

APPENDIX A

NORTH LOGAN NATURAL AREA

Conservation Target Summary Table for North Logan Natural Area - summary of conservation target key ecological attributes (KEAs), significant threats, and long term goals and strategic restoration actions. The priority assignment refers to the habitat(s) in most immediate need of attention.

CONSERVATION TARGET	KEY ECOLOGICAL ATTRIBUTES (KEAs)	SIGNIFICANT THREATS	CURRENT KEA INDICATOR RATING	LONG TERM GOALS OR DESIRED FUTURE CONDITION	STRATEGIC RESTORATION AND STEWARDSHIP ACTIONS	PRIORITY
Riparian forest	Riparian forest width	Land conversion, invasive species.	Very Good >61 m (200 ft.) each side of stream.	Very Good >61 m (200 ft.) each side of stream.	Vegetation enhancement, remove invasive blackberry, reed canary grass, butterfly bush and high priority EDRR species. Replant a diverse native tree and shrub community and maintain plantings until they are free to grow.	High along small headwater tributary and pond by access gate Medium elsewhere
	Vegetative structure: shrub layer	Invasive species, human disturbance.	Good 25-50% cover.	Very Good >50% cover.	Conduct periodic monitoring of and treatment for invasive vegetation.	High
	Standing and downed dead trees	Legacy land uses, previous forest management.	Good 12-18 snags and 10-20% down wood with moderate variety of size and age classes.	Very Good >18 snags and >20% cover down wood in a good variety of size and age classes.	Continue tree thinning to create variable densities and canopy openings. Re-establish native understory trees and shrubs, snags and downed logs. Coordinate activities with ongoing weed treatments.	High
	Floodwater access to the floodplain; upstream habitat connectivity	Diking, filling, draining; land conversion.	Good Minimally disconnected by channel incision, dikes, tide gates, elevated culverts, etc.	Good Minimally disconnected by channel incision, dikes, tide gates, elevated culverts, etc.	Continue native tree and shrub plantings in forest understory. Install engineered logjams within active channel of main river. Evaluate culvert head gate under floodplain access road to augment flushing flows. Develop a long-term strategy to ensure that the side channel functions in a manner that provides the intended benefits.	High
Upland forest	Native tree and shrub richness	Invasive species.	Fair 5-8 species 0.4 ha (1 ac).	Very Good >12 species per 0.4 ha (1 ac).	Vegetation enhancement, remove invasive blackberry, reed canary grass, scotch broom and high priority EDRR species. Replant a diverse native tree and shrub community and maintain plantings until free to grow.	Medium
	Mature trees	Previous forest management.	Poor Mature trees lacking.	Good 3-5 per ac with dbh>24 in.	Thinning of Douglas fir stands to promote larger trees, recruitment of native trees, maintain individual and small clumps of Oregon white oak embedded in the mixed Douglas fir upland forest.	Medium
	Standing and downed dead trees	Previous forest management, land conversion.	Poor <5 snags and <5% down wood.	Fair 5-11 snags and 5-10% down wood.	Continue tree thinning to create variable densities and canopy openings. Re-establish native understory trees and shrubs, snags and downed logs.	Medium
Oak savanna	Western Meadowlark and grassland bird habitat	Invasive species, previous forest management, land conversion, competition of Douglas fir due to fire suppression	Poor <16 contiguous ha (40 acres) of a mix of suitable habitat such as prairie and degraded prairie, savanna or appropriate pasture habitat, i.e. insufficient habitat for 2 male meadowlark territories.	Fair 16-49 ha (40-120 ac) of contiguous prairie or other suitable habitat, i.e. enough suitable habitat for 2 to 5 male meadowlark territories.	Future acquisition from a willing seller would allow for management of a much larger area, thereby increasing its habitat value significantly.	Medium
	Native grass and forb presence	Invasive species, previous forest management, land conversion, competition of Douglas fir due to fire suppression.	Poor <20 native herbaceous plant species with high fidelity to the system types present within the patch.	Poor <20 native herbaceous plant species with high fidelity to the system types present within the patch.	The presence of rocky soils limits use of farm equipment in site preparation and presents challenges to the restoration and maintenance of native grasses and forbs. Although some planting is likely to occur, this KEA is expected to remain in poor condition. Explore opportunities to re-establish native grass and forb species and managed fire regimes. Prevent encroachment of Douglas firs as described in KEAs and to continue treatments of high priority invasive weeds that threaten this KEA such as scotch broom, blackberry, reed canary grass, and EDRR weeds.	Medium

CONSERVATION TARGET	KEY ECOLOGICAL ATTRIBUTES (KEAs)	SIGNIFICANT THREATS	CURRENT KEA INDICATOR RATING	LONG TERM GOALS OR DESIRED FUTURE CONDITION	STRATEGIC RESTORATION AND STEWARDSHIP ACTIONS	PRIORITY
	Vegetative structure	Invasive species, previous forest management, land conversion, competition of Douglas fir due to fire suppression.	Good Total native woody cover is within the preferred range (5-30%) over at least 90% of the habitat area, but young oak tree recruitment is limited or absent.	Very Good Total native woody cover is within the preferred range (5%-30%) over at least 90% of the habitat area, and canopy includes appropriate mix of large open-grown trees and younger tree recruitment.	Restore native understory shrub community in small patches. Consider fire as a management tool to limit Douglas fir competition. Prevent encroachment of Douglas firs as described in KEAs and to continue treatments of high priority invasive weeds that threaten this KEA such as scotch broom, blackberry, reed canary grass, and EDRR weeds.	Medium
Native fish	Complexity of habitat	Invasive species, diking, filling, draining; land conversion, human disturbance.	Fair Between 2-5 habitat units.	Good Between 5-10 habitat units.	Continue invasive species treatments and native plantings and maintenance.	High
	Key pieces and number of pieces of large wood in wetted areas of stream and adjacent stream bank	Diking, filling, draining; land conversion.	Poor-Fair <10 large wood pieces and 0-1 key pieces, 10-20 large wood pieces and 2-5 key pieces.	Good 20-40 large wood pieces and 6-10 key pieces.	Develop a long-term strategy to ensure that the side channel functions in a manner that provides the intended benefits. Continue placements of engineered logjams in side channels and possibly the main stem. Evaluate culvert head gate under floodplain access road to augment flushing flows.	High

APPENDIX B-1

NORTH LOGAN NATURAL AREA SUMMARY OF STEWARDSHIP ACTIONS

Stewardship actions planned for the next five to ten years at North Logan Natural Area.

(Estimated costs and potential additional actions that could take place, depending on time and resources, are in Appendix B-2)

PROJECT TYPE	DESCRIPTION	TIMING/FREQUENCY	COMPLETED BY
SITE MONITORING			
Vegetation monitoring – invasive weeds	Walk site and monitor for priority invasive plants especially in riparian area where new infestations are likely.	Twice per year (at minimum)	Natural Resource Technician/Natural Resource Specialist
Vegetation monitoring - plantings	Monitor for plant mortality in Metro and CRBC planting units.	Spring 2018 and 2019	Natural Resource Technician/Natural Resource Specialist
Vegetation monitoring – oak units	Monitor for Douglas fir and maple seedling establishment to prevent encroachment establishment.	Once per year	Natural Resource Technician/Natural Resource Specialist
Other monitoring – site walk	Monitor for encroachments, illegal uses, fire rings and trash during summer season, trail issues, hazard trees, etc.	Twice a week in the summer and once per month during other seasons	Park Ranger
Other monitoring – site walk	Inspect infrastructure: gates, fences, barn, road, signage, etc.	Four times per year	Natural Resource Technician/Natural Resource Specialist
VEGETATION MANAGEMENT			
Invasive weed control	Maintenance – treat priority invasive weeds including high priority weeds such as Scot’s broom, false brome, garlic mustard, butterfly bush, Bohemian knotweed, blackberry, spurge laurel, meadow knapweed, ivy, vinca, clematis, English holly and hawthorn and other common agricultural weeds.	Three times per year or as needed	Contractor and oversight by Natural Resource Technician/Natural Resource Specialist
Planting – tree and shrub	Interplant riparian areas established in 2016 -2018 by Clackamas River Basic Council (CRBC).	Winter (January/February)	Contractor and oversight by CRBC/Metro
Planting – tree and shrub	Plant maintenance to include seedling release/circle spray on 2016-2018 plantings in CRBC units.	Spring (2017-2020) until plants are free to grow	Contractor and oversight by CRBC/Metro
ACCESS AND INFRASTRUCTURE			
Road – mowing /fuel reduction	Mow road system, inside front gate, and around barn for fuel reduction and access.	Spring/summer and as needed	Natural Resource Technician/Natural Resource Specialist
Road – maintenance (hourly cut)	Brush road and remove deadfall and hazard trees.	Spring and Fall or as needed	Natural Resource Technician/Natural Resource Specialist

PROJECT TYPE	DESCRIPTION	TIMING/FREQUENCY	COMPLETED BY
Fence/gates	Maintain and repair fencing and gates on site – newly installed on Bakers Ferry, Latourette, and along neighboring property.	As needed	Natural Resource Technician/Natural Resource Specialist
Signage/boot scrape	Maintain and repair natural area rule signage on site – kiosk, entrances, and seasonal postings along river.	Four times per year or as needed	Natural Resource Technician/Natural Resource Specialist
Barn removal	Remove dilapidated barn near renter house and rebuild new pump house for rental house water supply.	Levy 3.0	Natural Resource Technician/Natural Resource Specialist
WATER RESOURCES			
N/A	These items are defined in SCP and are restoration actions vs. stewardship actions.	See SCP	Scientist with support of land management team
WILDLIFE HABITAT			
N/A	These items are defined in SCP and are restoration actions vs. stewardship actions.	See SCP	Scientist with support of land management team

APPENDIX B-2

NORTH LOGAN NATURAL AREA BUDGET TABLE

10-year budget for stewardship actions

UNIT/AREA	MAINTENANCE CATEGORY	PROJECT TYPE	DESCRIPTION OF TASKS	HABITAT TYPE OR CONSERVATION TARGET	TIMING/FREQUENCY	PRIORITY	COST BY FISCAL YEAR									
							FY17/18	FY18/19	FY19/20	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	FY25/26	FY26/27
Site wide	Vegetation management	Invasive weed control	Maintenance – treat priority invasive weeds including high priority weeds such as Scot’s broom, false brome, garlic mustard, butterfly bush , Bohemian knotweed, blackberry, spurge laurel, meadow knapweed, ivy, vinca, clematis, English holly and hawthorn and other common agricultural weeds.	Riparian forest, oak savanna, upland forest	3 times per year or as needed	High	\$20,000	\$20,000	\$20,000	\$17,000	\$17,000	\$17,000	\$14,000	\$14,000	\$14,000	\$12,000
Riparian area	Vegetation management	Planting - tree and shrub	Interplant riparian areas established in 2016 -2018 by CRBC and plant maintenance to include seedling release/circle spray on 2016-2018 plantings in CRBC units.	Riparian forest	Spring (2-17-2020) and winter (Jan/Feb)	High	\$25,000	\$20,000	\$15,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Road system	Vegetation management	Mowing roadside	Mow roadside and brush woody vegetation.	Upland forest	Up to 2 times per year	High	\$4,400	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$3,000	\$3,000	\$3,000	\$3,000
Developed area	Access and infrastructure	Site clean up	Remove dilapidated barn near renter house and rebuild new pump house for rental house water supply as well as adding new water draw location for land management needs.	Upland forest/developed area	Fall	Medium	\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0	\$0	\$0
Totals							\$49,400	\$42,500	\$37,500	\$19,500	\$19,500	\$19,500	\$42,000	\$17,000	\$17,000	\$15,000

*Note: Water resources and wildlife habitat actions are defined in SCP

APPENDIX C

NORTH LOGAN NATURAL AREA INVASIVE SPECIES

The table below summarizes a preliminary list of invasive plants in all or parts of North Logan Natural Area, including focus areas and timing for control if needed. The list is compiled from the data collected during the 2014 weed mapping project, and reviewed and updated by the Natural Areas Land Management team. A list of noxious weeds for Oregon, including descriptions and photos, can be found at: www.oregon.gov/ODA/PLANT/WEEDS/statelist2.shtml.

Working list of priority non-native species at North Logan Natural Area (EDRR species are bolded in red)

GENUS	SPECIES	COMMON NAME	FOCUS AREA FOR DETECTION/CONTROL	CONTROL TIMING
Alliaria	petiolata	Garlic mustard	Site wide/Riparian	Spring/Fall
Arctium	minus	Lesser burdock	Site wide	Spring
Brachypodium	sylvaticum	False brome	Site wide	Spring/Fall
Buddleia	davidii	Butterfly bush	Riparian	Fall
Calystegia	sepium	Hedge bindweed	Riparian forest	Summer
Castanea	sp.	Chestnut	Near rental home	Fall
Cenraurea	pratensis	Meadow knapweed	Road system	Summer
Cirsium	arvense	Canada thistle	Site wide	Spring
Clematis	vitalba	Old man's beard	Riparian forest	Spring/Fall
Crataegus	sp.	Common hawthorn	Site wide	Fall
Crepis	atribarba	Slender hawksbeard	Upland forest	Spring
Cytisus	scoparius	Scots broom	Site wide	Fall
Daphne	laureola	Spurge laurel	Site wide	Spring/Fall
Digitalis	purpurea	Purple foxglove	Site wide	Spring
Geranium	lucidum	Shining geranium	Site wide	Spring/Fall
Geranium	robertianum	Herb Robert geranium	Site wide	Spring
Hedera	sp.	Ivy	Site wide	Winter
Hesperis	matronalis	Dames rocket	Riparian forest	Spring
Ilex	aquifolium	English holly	Site wide	Fall
Jacobaea	vulgaris	Stinking willie	Site wide	Spring
Lychnis	coronaria	Rose campion	Site wide	Spring
Melissa	officinalis	Common balm	Site wide	Spring
Phalaris	arundinacea	Reed canarygrass	Riparian forest	Fall
Polygonum	sp.	Knotweed	Riparian forest	Summer
Prunus	avium	Sweet cherry	Site wide	Fall
Prunus	sp.	Stone fruit trees	Site wide	Fall

Ranunculus	ficaria	Lesser celandine	Latourette Rd	Spring
<i>Rubus</i>	<i>bifrons</i>	Himalayan blackberry	Site wide	Fall
<i>Senecio</i>	<i>jacobaea</i>	Tansy ragwort	Site wide	Spring/Fall
<i>Solanum</i>	<i>dulcamara</i>	Bittersweet nightshade	Site wide	Spring
<i>Torilis</i>	<i>arvensis</i>	Spreading hedge parsley	Site wide	Spring
Vinca	major	Big leaf periwinkle	Site wide	Fall
Vinca	minor	Periwinkle	Site wide	Fall

Incident Action Plan

APPENDIX D

NORTH LOGAN NATURAL AREA

Address/access points

Address:

- Approximately 21849 S. Bakers Ferry Rd, Oregon City, OR 97045, Clackamas County

Primary Access (gated graveled road):

- No situs – approximately 21849 S. Bakers Ferry Rd. Oregon City, OR, 97045
- Longitude: -122.415524; Latitude: 45.38084
- Gate with Metro A lock with chain; Knox Box at gate

Secondary Access (gated paved drive to gravel road):

- Address: 15265 S. Latourette Rd. Oregon City, OR 97045
- Longitude: -122.423193; Latitude: 45.384261
- Gate with Metro A lock with chain on primary gate and Metro B lock on secondary gate past rental house; Knox Box has both Metro A and Metro B key

Location

Primary access and secondary access 1 and 2:

- T2S-R3E SECT22

Acreage

195.59

Structures

All structures listed are located at 15265 S. Latourette Rd.

- Rental house – located at end of drive through first gate. Gate has knox box and key for access.
- Metal barn – located past rental house through secondary cable gate. Key for access is located in knox box at first gate. Barn is used for storage of seed, straw, and at times tractor equipment.
- Well/pump house and wooden barn – located past rental house through secondary cable gate. Key for access is located in knox box at first gate.

Water sources and staging areas

Water can be sourced from a side channel of the Clackamas River on site as well as a pond and the secondary entrance of the site. The metal barn near the rental home could be utilized as a staging area. In addition the frontage of the property could be used as a staging area as well with the main entry being at the cross roads of S. Bakers Ferry Rd. and S. Eden road. See IAP Map for details.

Sensitive habitat

The SE section of North Logan hosts 31 acres of oak savanna habitat and special care should be taken in this area.

Contact information*

Metro Conservation Program

Justin Takkunen, Natural Areas Land Manager	503-964-2386 (cell)
Kristina Prosser, Natural Resource Specialist	971-678-4121 (cell)
Chris Hagel, Lead Natural Resource Specialist	971-242-9835 (cell)
Brian Vaughn, Natural Resource Scientist	503-830-8719 (cell)
Yuxing Zheng, Communications Coordinator	971-344-2207 (cell)

Sheriff/police department

Emergency	911
Clackamas County Sheriff, non-emergency	503-655-8211

Local fire department

Clackamas Fire District #1	503-742-2600
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Tenants

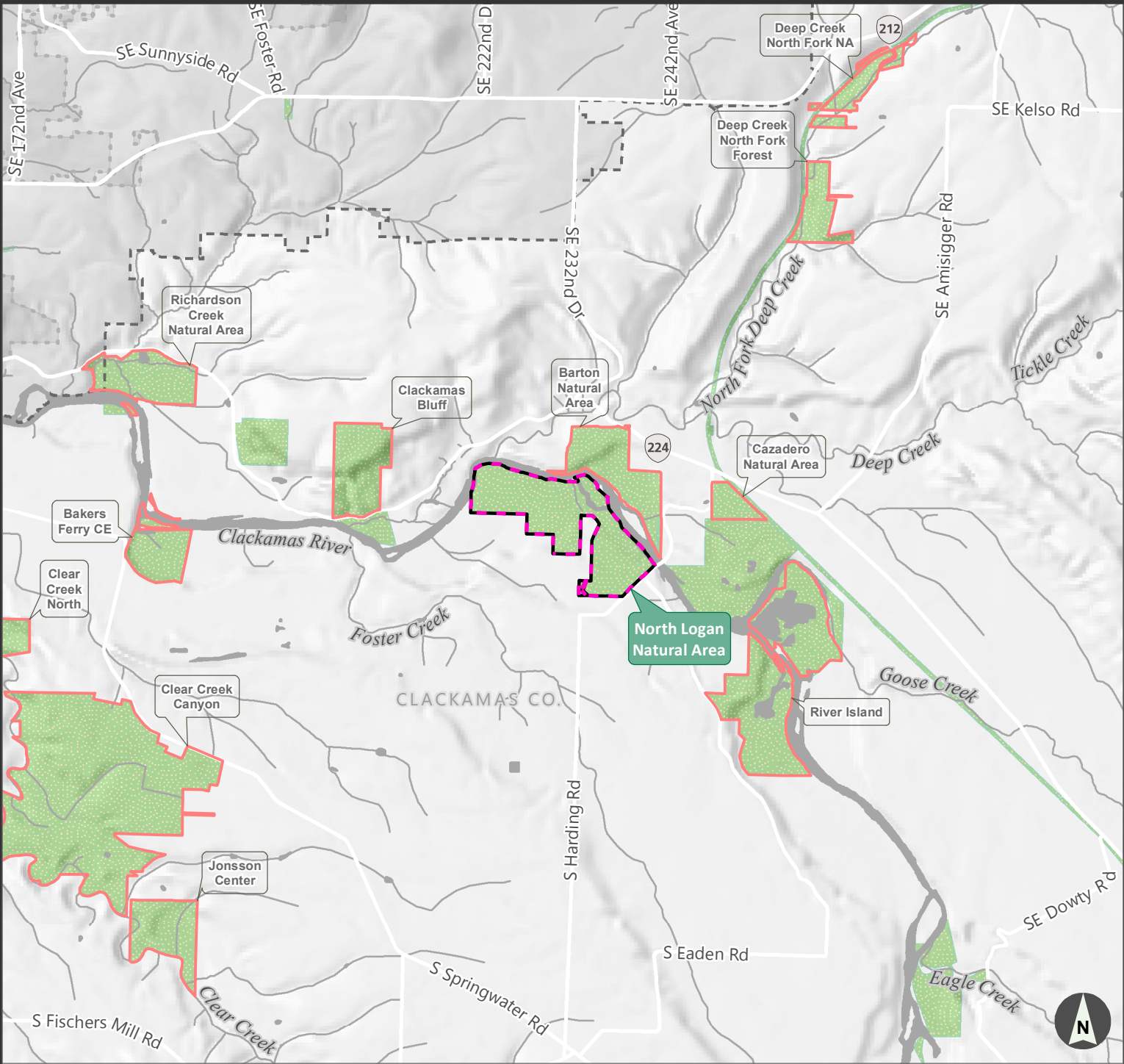
Residential Lease




Morgan McNamara	503-457-8347
15265 S. Latourette Rd.	

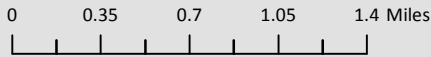
**Please see Terramet for most up to date contact information.*



Vicinity map



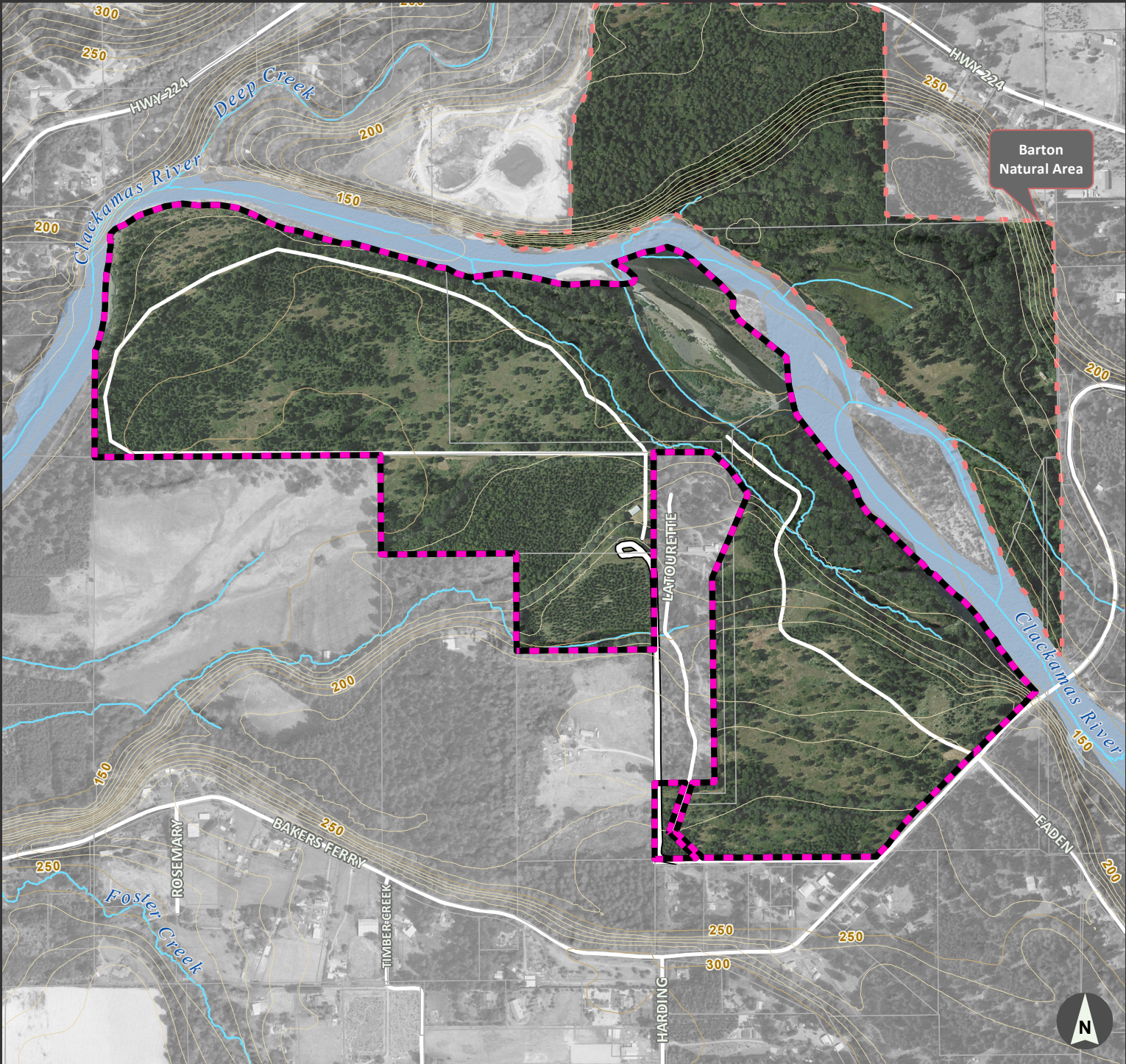
-  North Logan Natural Area
-  Other Metro sites
-  Parks and/or Natural Areas











North Logan Natural Area



Site map

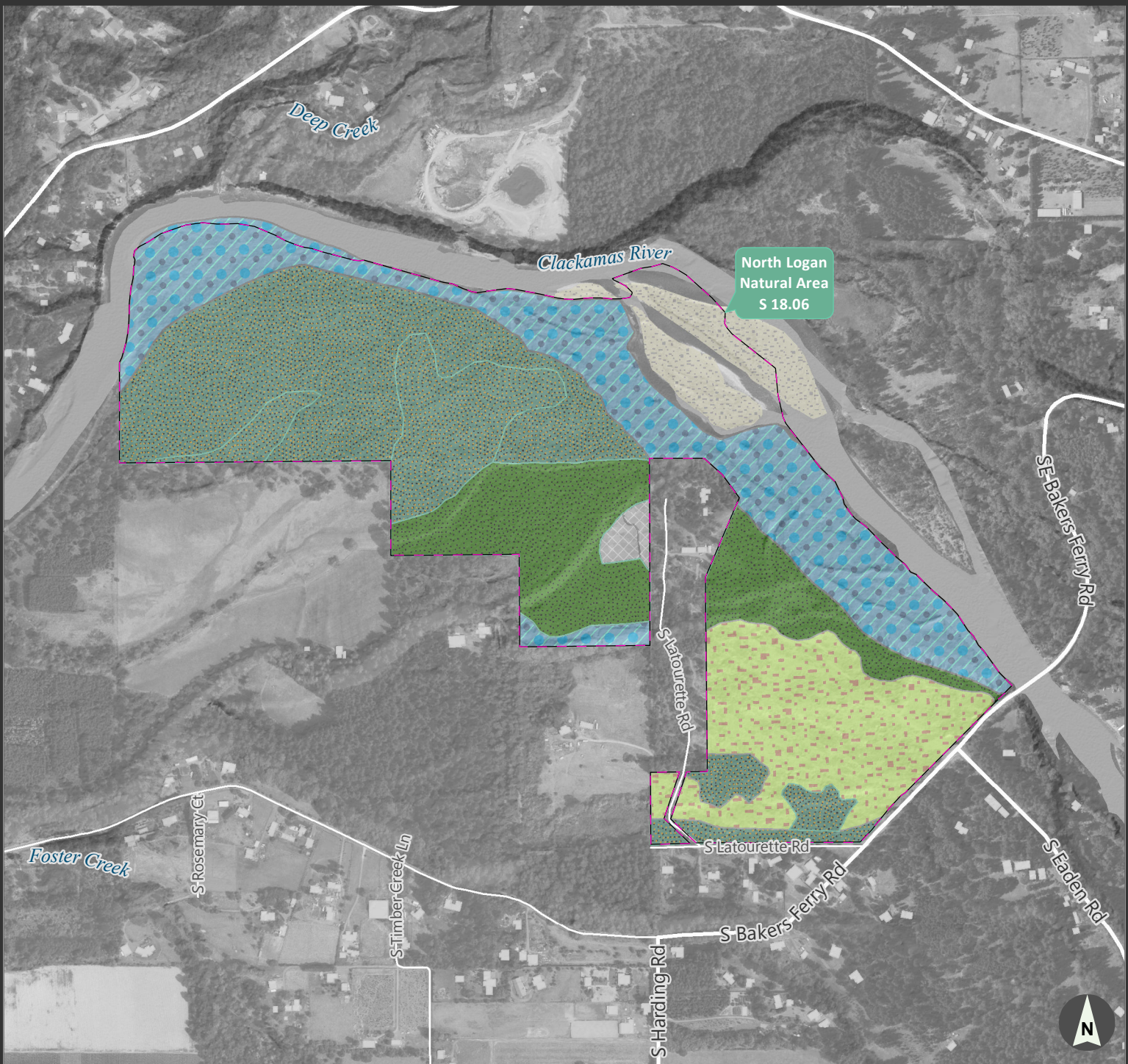









-  North Logan Natural Area
-  other Metro managed site
-  Streams
-  10 ft contour
-  50 ft contour
-  Taxlot
-  paved; driveway
-  dirt/gravel

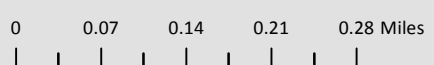


North Logan Natural Area

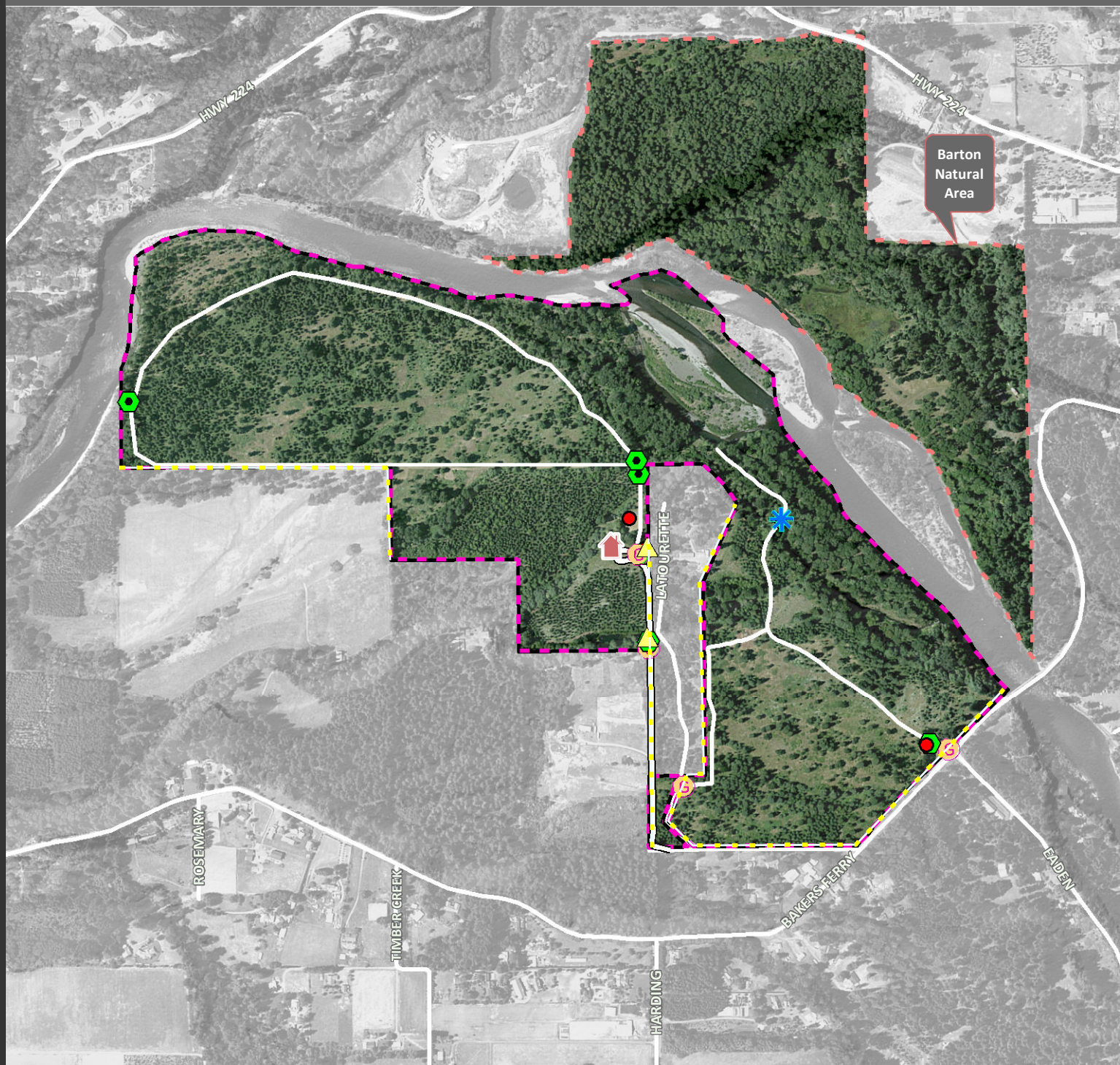
Current cover map















-  North Logan Natural Area site
-  Beaches, bars, and mudflats
-  Upland forest - coniferous
-  Developed - (pervious/non ag)
-  Riparian forest
-  Upland forest - mixed
-  Savanna - oak

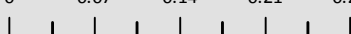


Site infrastructure map



 Featured site	 no attributte yet	 Pump House	 Water Control Structure	 Fence
 other Metro site Labels	 Culvert	 Signs	 gate	
 Residential rental				
Road network on site				
 paved; driveway				
 dirt/gravel				

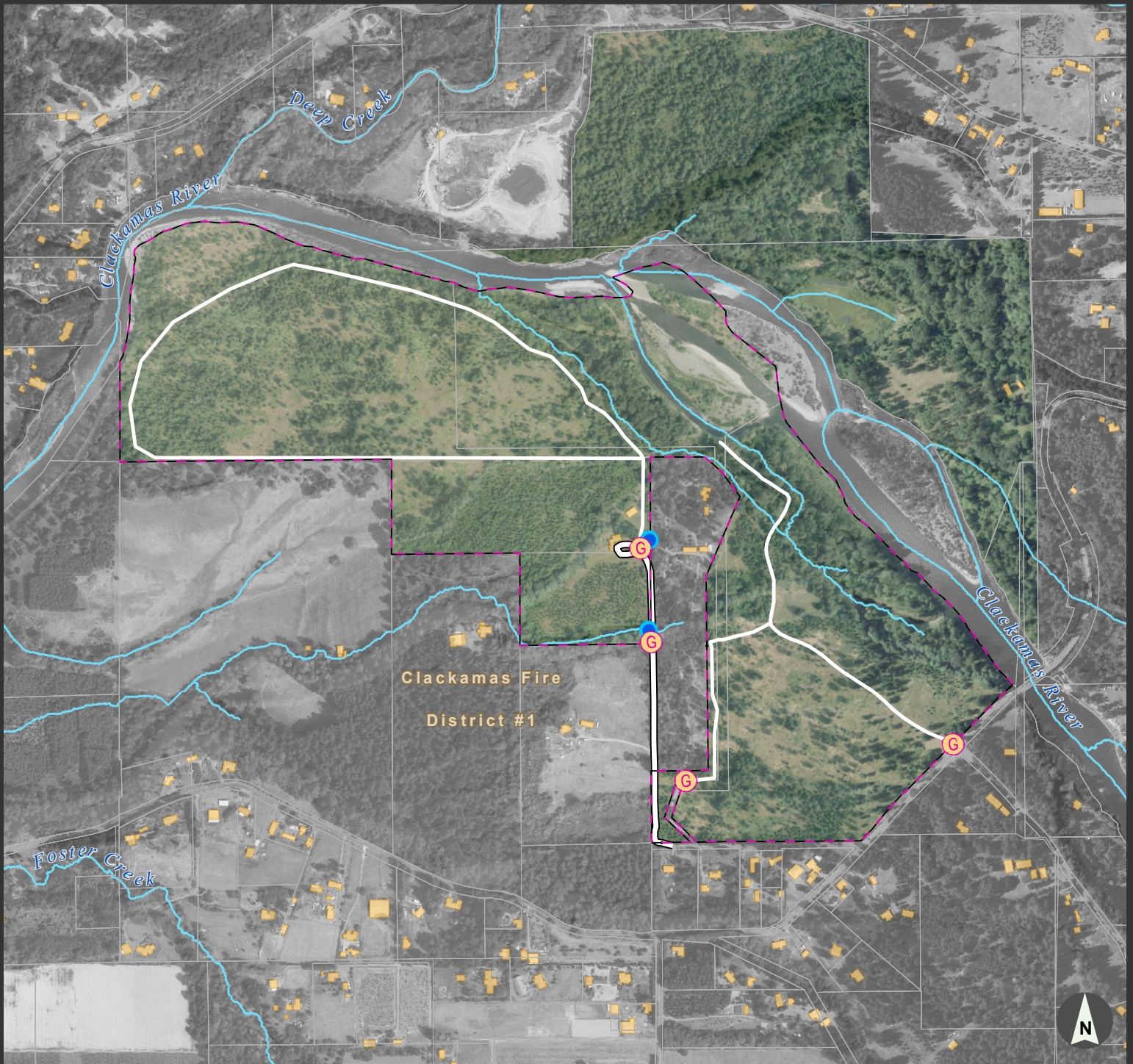
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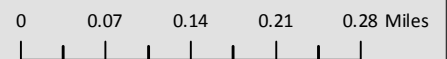
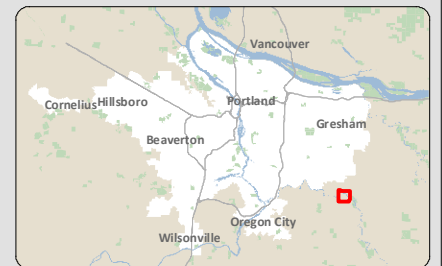
Fire Incident Action Plan



primary entrance: approx 21849 S Bakers Ferry Rd, Oregon City, OR 97045



- Featured site
- potential water source
- gate
- paved; driveway
- dirt/gravel
- Structures
- Fire districts

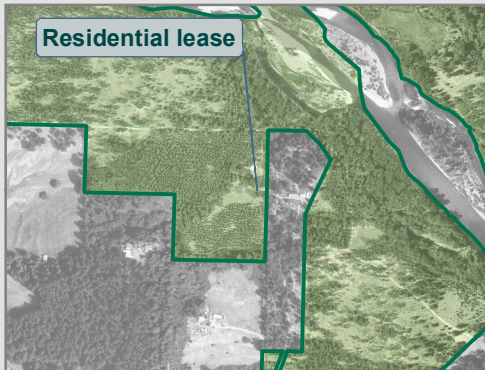


North Logan Natural Area



lat/long for primary entrance: ((45.38089743, -122.41551919))

Residential lease area map

15265 S. Latourette Road Oregon City, OR 97045



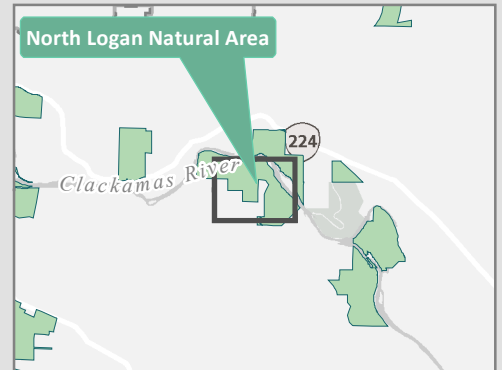
Legend

-  Featured Site
-  Lease area



1 inch = 83 feet

0 80



North Logan Natural Area