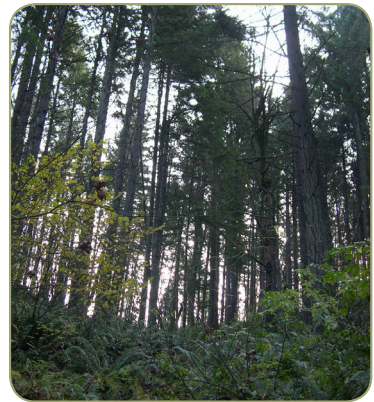
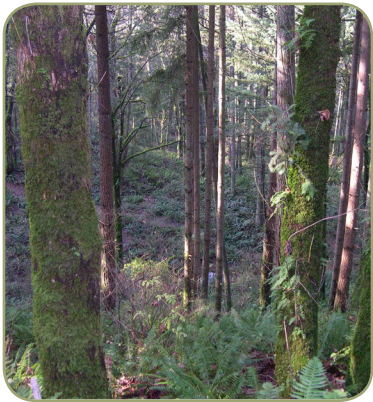


**SITE CONSERVATION PLAN**

# East Buttes Complex

East Bliss, West Bliss, Towle and Sunshine Buttes; Gabbert and East Gabbert Hills; and Chastain Creek natural areas



March 2014



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# MAKING A GREAT PLACE



## TABLE OF CONTENTS

Introduction .....	1
Planning area .....	1
Existing planning documents .....	2
Site description .....	3
Recent management history.....	3
Natural resources of special interest.....	4
Conservation targets.....	5
Current and desired future condition of conservation targets .....	5
Threats and their sources for the next 10 years.....	8
Natural resource strategies .....	8
Specific actions and funding requirements .....	10
Monitoring plan .....	10
Partners.....	11

### Maps

Map 1 – Vicinity map

Map 2 – Site map

Map 3 – Soils

Map 4 – Topography

Map 5 – Hydrology

Map 6 – Historical vegetation

Map 7 – Current cover

Map 8 – Conservation targets

Map 9 – Management status



## INTRODUCTION

The East Buttes area is one of Metro's largest target areas and has some of the largest ownership by Metro, with total acquisitions topping 1,000 acres. There is some overlap with the Johnson Creek target area, which was addressed in the target area assessment. Many other public and private open spaces are part of the East Buttes landscape, including Mt. Scott and Powell Butte. This site conservation plan considers all Metro-managed East Buttes sites because they share topography and conservation targets.

## PLANNING AREA

This site conservation plan includes Metro-managed property in the East Buttes and considers adjacent parcels that contain important habitat features or would connect Metro ownership. A separate site conservation plan for Mt. Talbert Nature Park, currently managed by North Clackamas Parks and Recreation District, is planned for spring 2014.

### KEY STAFF

Elaine Stewart, senior regional scientist  
Chris Hagel, natural resource specialist  
Katy Weil, wildlife monitoring coordinator  
Laurie Wulf, property services coordinator (rentals/leases)  
Tim Richard, parks and natural areas planner  
Tom Heinicke, negotiator

### OTHER STAKEHOLDERS

City of Gresham: Kathy Majidi and Laura Guderyahn (natural resources planners); Steve Fancher (environmental services director).

### KEY PRIVATE LANDOWNERS

NAME	ADDRESS	NOTES
Fred and Mary Ramsey	8536 SE 190 <sup>th</sup> Drive, Damascus	Shared property boundary on south line of West Bliss
Fred and Sarah Schroedl	8341 SE 190 <sup>th</sup> Drive, Gresham	Live across street from West Bliss
Lynn and Sharon Davis	8301 SE 190 <sup>th</sup> Drive, Gresham	Live across street from West Bliss
Al Mirati	7959 SE Rodlun Road., Gresham	Seller of Mirati parcel; rents house back from Metro

## ACQUISITIONS

The following table lists Metro's East Buttes Complex natural area acquisitions under the 1995 and 2006 bond measures.

### Acquisitions listed by site for the East Buttes Complex

PROPERTY NAME (current site/seller)	BOND YEAR	DATE ACQUIRED	MANAGEMENT
<i>East Bliss Butte</i>			
Nicholson (02.062)	1995	10/28/1998	Metro
Buturoaga	1995	01/14/1999	Metro
Surgeon	1995	09/20/1999	Metro

<b>PROPERTY NAME (current site/seller)</b>	<b>BOND YEAR</b>	<b>DATE ACQUIRED</b>	<b>MANAGEMENT</b>
Burt	1995	02/13/1997	Metro
Holbrook	1995	02/13/1997	Metro
Yonemura	1995	02/13/1997	Metro
Papageorges/Menard	1995	02/13/1997	Metro
Nicholson (02.056)	1995	02/24/1998	Metro
Marincus	1995	10/27/1998	Metro
Boros	1995	11/10/1998	Metro
Mirati	1995	11/27/2000	Metro
Vanport	1995	05/22/1998	Metro
<b>West Bliss Butte</b>			
Mirati	1995	11/27/2000	Metro
Vanport	1995	05/22/1998	Metro
<b>Towle Butte</b>			
Bailey	1995	11/29/2000	Metro
Baker	1995	03/12/1999	Metro
Higgins	1995	04/27/2001	Metro
Hughes	1995	12/21/2000	Metro
Kurlan	1995	03/21/2002	Metro
Loan Oak Construction	1995	04/21/2000	Metro
TPL (Campbell)	1995	03/13/1998	Metro
<b>Sunshine Butte</b>			
McMorihara, Inc.	2006	10/14/2008	Metro
Persimmon	2006	07/20/2007	Metro
<b>Gabbert Hill</b>			
Davidson	1995	03/01/2007	Metro
Van Zyl	1995	12/22/1998	Metro
<b>Gabbert Hill East</b>			
Darby Ridge/Gabbert Hill	2006	06/06/2007	Metro
<b>Chastain Creek and Regner Road</b>			
Chambers (02.090A)	1995	12/03/1999	Metro
Chambers (02.090B)	1995	12/30/1999	Metro

## EXISTING PLANNING DOCUMENTS

A target area assessment for East Buttes can be found here: M:\suscntr\Natural Areas and Parks\Regional Properties\East Buttes TA\Planning\Target Area Assessment.

Gabbert Hill (aka Darby Ridge) was used for hiking by neighbors prior to Metro's purchase. We lacked resources for a master plan for the site but have been working with the City of Gresham on an interim access plan to clarify and agree on appropriate access for the near-term and develop a strategy for trail location and maintenance and signage. Relevant files can be found here: M:\suscntr\Natural Areas and Parks\Regional Properties\East Buttes TA\Planning\Gabbert Butte.

## SITE DESCRIPTION

From the 2006 East Buttes Refinement Plan:

*A group of extinct volcanoes and lava domes in north Clackamas and east Multnomah counties lend unique geographic character to the region, providing wildlife habitat and panoramic vistas. The East Buttes target area is Metro's largest, stretching from Rocky Butte in Portland to the Clackamas River in the south, and from I-205 in the west to Highway 26 in the east. Primary goals are to secure a regionally and biologically significant natural area between Gresham and Damascus, and to help protect several urban buttes and extinct rugged lava domes rising 500 to 1,000 feet above the Willamette Valley floor.*

*The area contains some of the largest contiguous wildlife habitat and wildlife corridors in the region. South of Gresham on North and South Butler Buttes, a broad forested corridor of natural area stretches along a section known as "Butler Ridge" and the adjacent North Damascus Buttes. Part of this area along Regner Road has commanding mountain views to the north, northeast and east. At almost 2,000 feet elevation, a meadow near the crest of a forested butte north of Borges Road and east of 190th Avenue offers panoramic views of Mt. Hood, the entrance to the Columbia River Gorge and mountains of Washington state.*

*Sunshine Butte, adjacent to and east of Butler Ridge, provides excellent wildlife connectivity between upper Johnson Creek and upper Sunshine Creek and important linkages to North Butler Ridge and Tower Butte. Tower Butte and Zion Butte contain healthy forested areas and provide high-quality habitat and excellent connectivity with headwaters of Johnson Creek, Deep Creek, Noyer Creek, Sunshine Creek and Badger Creek.*

The East Buttes Complex is dominated by coniferous and mixed deciduous-coniferous forest and riparian areas. Much of the forested habitat is relatively intact, however, there are gaps and areas that need revegetation work. One such gap, on Gabbert Hill, was planted in shrubs with limited trees as requested by City of Gresham staff.

Cascade silt loam comprises nearly 90 percent of soils in this area. This soil is highly desirable for farming; however, the steep slopes on the buttes limit their value for agriculture.

## RECENT MANAGEMENT HISTORY

### RECENT STEWARDSHIP ACTIVITIES

More than 35 acres on several parcels scattered throughout the complex have been restored from fields to young forest. This included site preparation, invasive control, planting and maintenance for 5 years. Some of the stands have been thinned but will need to be thinned again in the future. Other completed work includes:

- Removal of several homes that impacted the East Buttes Complex. Sites have been restored.
- The entire target area was treated for English holly (*Hedera* spp.) and English and Irish ivy (*Ilex*) in 2008.
- Early detection and rapid response treatment of *Brachypodium sylvaticum* (false brome) and *Daphne laureola* (spurge laurel).
- At Gabbert Hill, removal and restoration of casual trails, improved stream crossing on a remaining trail, interim access plan developed with Gresham.
- The Johnson Creek Watershed Council treated *Fallopia japonica* (Japanese knotweed) in Kelley Creek on Metro Property.

**Metro property stewardship classification (acres)**

	0	1	2	3	4	9	TOTAL
	PRE-INITIATION	INITIATION	ESTABLISHMENT	CONSOLIDATION	MAINTENANCE	DEVELOPED	
Developed						4	4
Riparian forest				37			37
Upland forest	3	18	19	481			520
<b>Total</b>	<b>3</b>	<b>18</b>	<b>19</b>	<b>518</b>		<b>4</b>	<b>562</b>

**NATURAL RESOURCES OF SPECIAL INTEREST**

**SCIENCE FINDINGS LISTED IN 2006 EAST BUTTES REFINEMENT PLAN**

- The East Buttes provide critical habitat to migratory wildlife and important linkages to the Clackamas River and Cascade Mountains.
- Larger patches of intact native vegetation should be protected in preference to smaller ones.
- Headwaters of urban creeks surround the buttes in all directions. These valuable riparian corridors serve as important wildlife corridors and protect water quality. Sustaining wildlife habitat connectivity moderates the isolation of habitat fragments.
- Land acquisition strategies within the target area should promote contiguous core wildlife habitat, retain unique and at-risk habitats, and connections between wetlands, riparian corridors and upland habitat.
- High quality habitat adjoining lands already in public ownership is of high priority for conserving core wildlife habitat. This includes the land areas of South Butler Ridge, Sunshine Butte, North Butler Ridge and connectivity to Johnson Creek where a significant investment in publicly owned lands already exists.
- Sunshine Butte is one of the largest forested buttes in the target area and provides connectivity to upper Johnson Creek and Sunshine Creek riparian corridors and important linkages to North Butler Ridge and Tower Butte.
- Mt. Talbert, Zion Butte and Tower Butte areas have the best connectivity, better wildlife corridor and greater amounts of undeveloped land. The Tower Butte and Zion Butte areas have high-valued wildlife habitat but require the acquisition or protection of larger areas. The Zion Butte and Tower Butte areas provide a significant north-south corridor from the Deep Creek system to the Butler Ridge system.
- Scouters Mountain, Johnson Creek Uplands and Damascus Buttes are important areas that buffer and connect habitats of concern. The areas are surrounded by dense urban development and several major arterial roads, both of which negatively affect the value of the core areas and connectivity. Within this area, it is recommended that priority be given to acquiring undeveloped land adjoining public land holdings on Scouters Mountain, which is a candidate for Oregon white oak habitat restoration.

The sites located south of Butler Road are of special interest because of the intact nature of the forest and relatively large habitat patch sizes. A limited bird survey conducted in 2008 confirmed the value of these sites by documenting the presence of diverse birds, including neotropical



migrants, that are indicative of interior habitat in healthy forests. The headwaters of Kelley Creek are located here, and macroinvertebrate surveys conducted in Johnson and Kelley creeks showed the highest-quality invertebrate community at stations closest to these Metro holdings. These sites south of Butler Road serve as important reservoirs of biodiversity in the East Buttes and further consolidation of public or otherwise protected ownership would benefit them. Restoration and protection would also be beneficial.

**Conservation goals from the East Buttes target area assessment (2012)**

RESOURCE	CURRENT STATUS	KEY THREATS	KEY STRATEGIES	COMMENTS
Wildlife habitat connectivity	Many of the buttes are becoming isolated from each other; less-mobile wildlife like frogs and turtles suffer	Development, land conversion, barriers	Work with transportation and trail planners to protect/improve connectivity and crossings	EMCP and Mt. Scott/Scouters Mountain plans are key opportunities for collaboration
Mature conifer forest; neotropical migratory birds and terrestrial amphibians such as Oregon slender salamander are nested targets and present in the target area holdings	Best examples are at Vanport and Mirati; all parcels require active management to move to this state	Overstocking, invasive plants, neglect, development for facilities and trails	Protect holdings south of Butler road from development and consolidate protected areas; EDRR and active management of ivy, holly, other invasives; manage stand densities to promote proper development	West Bliss Butte field provides opportunity to plant at old-growth tree density and promote shrubs for wildlife habitat
Water quality	Kelley Creek has some of best invertebrate communities in the Johnson Creek watershed	Development, loss of riparian buffer, invasive species	Protect Kelley Creek headwaters at Vanport (south of Butler Rd); improve and maintain stream buffers	All of the buttes are headwaters

**CONSERVATION TARGETS**

There are two conservation targets for the East Buttes Complex:

1. Upland forest (with nested targets of neotropical migratory birds and terrestrial amphibians).
2. Riparian forest (with a nested target of the stream invertebrate community).

**CURRENT AND DESIRED FUTURE CONDITION OF CONSERVATION TARGETS**

**Non-technical status and desired future condition of conservation targets**

TARGET	CURRENT CONDITION	DESIRED FUTURE CONDITION
Upland forest	Moderately good condition, primarily due to previous weed control efforts	Further reductions in weed load across the sites, as well as recruitment of young conifers to advance the forest development
Riparian forest	Moderately good condition, primarily due to previous weed control efforts	Further reductions in weed load across the sites, as well as recruitment of young trees and shrubs to advance the forest development



**Key ecological attributes for riparian forest – East Buttes Complex**

CATEGORY	KEA	INDICATOR	----- INDICATOR RATING -----				CURRENT RATING	DFC* FOR THIS SCP	LONG TERM DFC	COMMENTS
			POOR	FAIR	GOOD	VERY GOOD				
Condition	Vegetative structure: tree layer	% native tree canopy cover	<20% cover	20-30% cover	30-40% cover	40% or more	Unknown	Very good	Very good	
Condition	Native herbaceous layer richness	# native species of grasses, herbs, forbs and ferns, at least half of which are riparian-associated, per 0.4 ha (1 ac)	<5 species	6-12 species	12-18 species	>18 species	Unknown	Very good	Very good	
Condition	Native tree and shrub richness	# native tree and shrub species per 0.4 ha (1 ac)	<5 species	5-10 species	10-15 species	>15 species	Unknown	Very good	Very good	

\*Desired future condition

**Key ecological attributes for upland forest – East Buttes Complex**

CATEGORY	KEA	INDICATOR	----- INDICATOR RATING -----				CURRENT STATUS	DFC* FOR THIS SCP	LONG TERM DFC	COMMENTS
			POOR	FAIR	GOOD	VERY GOOD				
Size	Forested habitat patch size	Patch size (includes native shrub patches or natural clearings)	< 12 ha (30 ac)	12-40 ha (30-100 ac)	40-61 ha (100-150 ac)	>61 ha (150 ac)	Varies – Fair to Good	No change	No change	
Condition	Native tree and shrub richness	Number of native tree and shrub species per acre	<5 species per 0.4 ha (1 ac)	5-8 species 0.4 ha (1 ac)	8-12 species per 0.4 ha (1 ac)	>12 species per 0.4 ha (1 ac)	Unknown	Very good	Very good	
Condition	Mature trees	Number and size (dbh) of species such as Douglas fir, western red cedar, western hemlock and grand fir	Mature trees lacking	<3 per ac with dbh >24 in	3-5 per ac with dbh >24 in	>5 per ac with dbh >24 in	Unknown	Good?	Very good	
Condition	Standing and downed dead trees	Average # snags and large wood (> 50 cm, or 20 in, DBH) per acre	< 5 snags and <5% down wood	5-11 snags and 5-10% down wood	12-18 snags and 10-20% down wood with moderate variety of size and age classes	>18 snags and >20% cover down wood in a good variety of size and age classes	Unknown	Fair	Very good	
Landscape context	Edge condition	% of edge bordered by natural habitats and/or managed for conservation	Patch surrounded by non-natural habitats (0-25% natural habitat)	25%+ of patch bordered by natural habitats	50-75% of patch bordered by natural habitats or managed for conservation	75-100% of patch bordered by natural habitats or managed for conservation	Unknown	Good	Fair**	

\*Desired future condition

\*\*Expect long-term conditions to decline with urbanization



**Threats to conservation targets – East Buttes Complex**

CONSERVATION TARGET	STRESS (DEGRADED KEA)	SEVERITY	SCOPE	OVERALL STRESS RANK	SOURCE (THREAT)	CONTRIBUTION	IRREVERSIBILITY	OVERALL SOURCE RANK	OVERALL THREAT RANK	COMMENTS
Riparian forest	Reduced % native tree canopy	Low	High	Low	Climate change (altered hydrology, increased summer temperatures with decreased water availability)	Very high	Very high	Very high	Low	Potential long term effects due to climate and microclimate changes
Riparian forest	Reduced species richness of native species of grasses, herbs, forbs and ferns.	Medium	High	Medium	Invasive species	Very high	Medium	High	Medium	False brome, other species
Riparian forest	Reduced richness of native tree and shrub species; altered ecological function	Low	Medium	Low	Invasive species	Very high	Medium	High	Low	Trails, roads and nearby development are seed sources
Upland forest	Reduced patch size and increased edge	Low	Low	--	Habitat destruction/conversion, fragmentation due to development	Low	Very high	Medium	Low	Threat depends on development in UGB/ Damascus development patterns and timing
Upland forest	Reduced native tree and shrub richness and lack of recruitment; altered ecological function	Low	Very high	Low	Invasive species, altered hydrology, previous forest management	Very high	Low	High	Low	Currently under active management – plantings to increase species richness
Upland forest	Mature trees reduced due to lack of recruitment, altered habitat structure of native trees and shrubs	Medium	High	Medium	Previous forest management	Very high	Medium	High	Medium	Long term management issue
Upland forest	Standing and downed dead trees scarce; altered structure and ecological function	Medium	High	Medium	Previous forest management	Very high	Medium	High	Medium	Could potentially create snags and downed wood
Upland forest	Edge condition; KEA rating may decline in long term – see notes	Low	High	Low	Habitat destruction/conversion due to development	Very high?	Very high?	Very high?	Low	Threat depends on development in UGB/ Damascus development patterns and timing



## THREATS AND THEIR SOURCES FOR THE NEXT 10 YEARS

### CLIMATE CHANGE CONSIDERATIONS

As noted in the stress/source table, climate change is anticipated to affect summer temperatures and availability of water in summer to riparian areas and upland forests. Other indirect effects of climate change may include range shifts of plants, some native to North America and some not, and increased competition by these plants. It is possible that climate change may touch every key ecological attribute, though effects on some attributes may be more important than others.

Direct effects that may occur:

- Increased summer temperatures
- Increased severity of winter rain events
- Decreased water availability in summer

Indirect effects that may occur:

- Increased risk of erosion, including landslides, on steep slopes with severe rain events
- Increased risk of wildfire in hotter, dryer summers
- Range shifts by undesirable plants increasing competition
- Disease introductions and/or increased vulnerability to disease
- Loss of synchronicity of plant reproduction and pollinators
- Loss of synchronicity of resident and migratory animals and food sources (e.g., insect hatches)

In upland forest, plant growth and survival may be affected by increased summer temperatures and reduced water availability in summer.

As discussed in other planning documents, the East Buttes Complex provides important macro-refugia and corridors for associated plants and animals. These habitat values will become increasingly important as organisms shift their ranges in response to climate change. The long-term conservation of the Buttes, and maintaining/improving connectivity among them, will help conserve these biota through coming decades.

### Threats and actions for key ecological attributes of important targets affected by climate change

TARGET	KEA	THREAT	ACTION	NOTES
Upland forest	Native tree and shrub richness	Invasive species, altered hydrology	Aggressively treat weeds to reduce stress on system	May need to under-plant if recruitment is not occurring
Riparian forest	% native tree canopy cover	Altered hydrology, increased summer temperatures	Treat weeds, plant native woody plants, improve canopy cover to protect micro-climate	

## NATURAL RESOURCE STRATEGIES

### HIGH-PRIORITY STRATEGIES

- Secure protection, via ownership or other means, to consolidate holdings in West/East Bliss and Towle Buttes to gird them against fragmentation from future urban development and to facilitate the system's adaptation to a changing climate.

- Improve the health of the East Buttes Complex, including relief from existing stressors, to the extent possible to position it for better resiliency as climate change proceeds.
- Continue surveying for and controlling *Brachypodium* on properties to prevent spread.

### MEDIUM-PRIORITY STRATEGIES

- Control invasive plants that are capable of modifying forest and riparian systems.
- Seek ways to improve connectivity for wildlife across barriers such as Butler Road and Regner/222<sup>nd</sup>, to reduce the isolation of sites and the likelihood of localized extinctions.

### LOWER-PRIORITY STRATEGIES

- Work with City of Gresham staff and other stakeholders on common natural resources goals and coordinated actions.
- Support City of Gresham in its natural hazard mitigation planning work.

#### List of proposed strategies

STRATEGY	SOURCES OF STRESS ADDRESSED	FOCAL CONSERVATION TARGETS AND KEAS AFFECTED	WHY IS IT IMPORTANT/ ANY TIMING ISSUES	MEASURE(S) OF SUCCESS	RANK
Weed treatments, early detection and rapid response	Invasive species	Riparian and upland forest; species richness, recruitment of native plants	Prevent infestations of weeds that will compromise ecological function; retain native plant community	Site walk with visual inspection every 5 yrs	High
Protection by acquisition or other method	Habitat destruction, conversion via development, fragmentation	Upland forest; edge condition, patch size; connectivity	Jigsaw-puzzle shaped ownership leaves many gaps and holes that need consolidation	GIS inspection annually	High
Thin planted areas	Previous forest management	Upland forest; species richness, recruitment of trees and shrubs	Trees are much too dense and need thinning soon; conduct work in fall or winter; provides source of wood on forest floor	Site walk with visual inspection every 5 yrs	High
Plant native trees and shrubs	Climate change, previous forest management	Riparian and upland forest; canopy cover of trees and shrubs, mature trees and down wood	Conserve micro-climates in riparian zones and forests, improve recruitment of large trees, snags and down wood	Site walk with visual inspection every 5 yrs	Medium
Forest survey and general mapping, treatment prescription	Previous forest management	Upland forest; lack of mature trees, lack of snags and down wood	Lack of habitat complexity limits the forests' value to wildlife	Site walk with visual inspection every 5 yrs	Medium

#### STRATEGY RANK:

**High:** Must do within 5 years to protect target viability

**Medium:** Target will persist without it but will degrade over 5-10 years or require additional future management

**Low:** Addresses a non-critical threat or one that is unlikely to threaten target viability within 10 years



## SPECIFIC ACTIONS AND FUNDING REQUIREMENTS

### Specific actions to implement strategies

STRATEGY	TARGET	PRIORITY	SPECIFIC TASKS	ESTIMATED COST
Weed treatments, early detection and rapid response	Riparian and upland forest	ASAP	Walk all sites, map all weeds of concern (e.g., <i>Brachypodium sylvaticum</i> ), schedule and implement treatments	\$1,000 chemical and equipment costs; remainder is NALM staff time
Protection by acquisition or other method	Upland forest	High priority	Meet with acquisition staff, identify top priority gaps/holes to fill in ownership; develop strategy for protection	Unknown, but bond funds may be available
Thinning planted areas	Upland forest	High; in the next year	Contract crew cut and buck trees as instructed	\$10,000
Forest survey and general mapping, treatment prescription	Upland forest	Within 2 years	Forestry consultant walk selected sites and generally map areas for treatments (e.g., snag creation, thinning, under-planting, etc.)	\$20,000
Plant native trees and shrubs	Riparian and upland forest	In 2-3 years (follows mapping)	Purchase bare-root plants and install across an estimated 70 acres	\$25,000

## MONITORING PLAN

Monitoring for key ecological attributes associated with the two conservation targets is shown in the table below.

### Monitoring

TARGET KEA(S)	INDICATOR	METHOD	THRESHOLD FOR ACTION?	FREQUENCY AND COST
Riparian vegetative structure: tree layer	% native tree canopy cover	Visual estimate on site visit	Less than Very good	2-4 days of staff time every 5 years
Riparian native herbaceous layer richness	# native species of grasses, herbs, forbs and ferns, at least half of which are riparian-associated, per 0.4 ha (1 ac)	Visual estimate on site visit	Less than Very good	2-4 days of staff time every 5 years
Riparian native tree and shrub richness	# native tree and shrub species per 0.4 ha (1 ac)	Visual estimate on site visit	Less than Very good	2-4 days of staff time every 5 years
Upland forested habitat patch size	Patch size (includes native shrub patches or natural clearings)	Estimate via GIS	Reduction from current size	1-2 hours of staff time every year
Upland native tree and shrub richness	Number of native tree and shrub species per acre	Visual estimate on site visit	Less than Very good	2-4 days of staff time every 5 years
Upland mature trees	Number and size (dbh) of species such as Douglas fir, western red cedar, western hemlock and grand fir	Visual estimate on site visit	Less than Good	2-4 days of staff time every 5 years
Upland standing and down dead trees	Average # snags and down wood (> 50 cm, or 20 in, DBH) per acre	Visual estimate on site visit	Less than Good	2-4 days of staff time every 5 years
Upland edge condition	% of edge bordered by natural habitats and/or managed for conservation	Estimate via GIS	Less than Good	1-2 hours of staff time every year

## **PARTNERS**

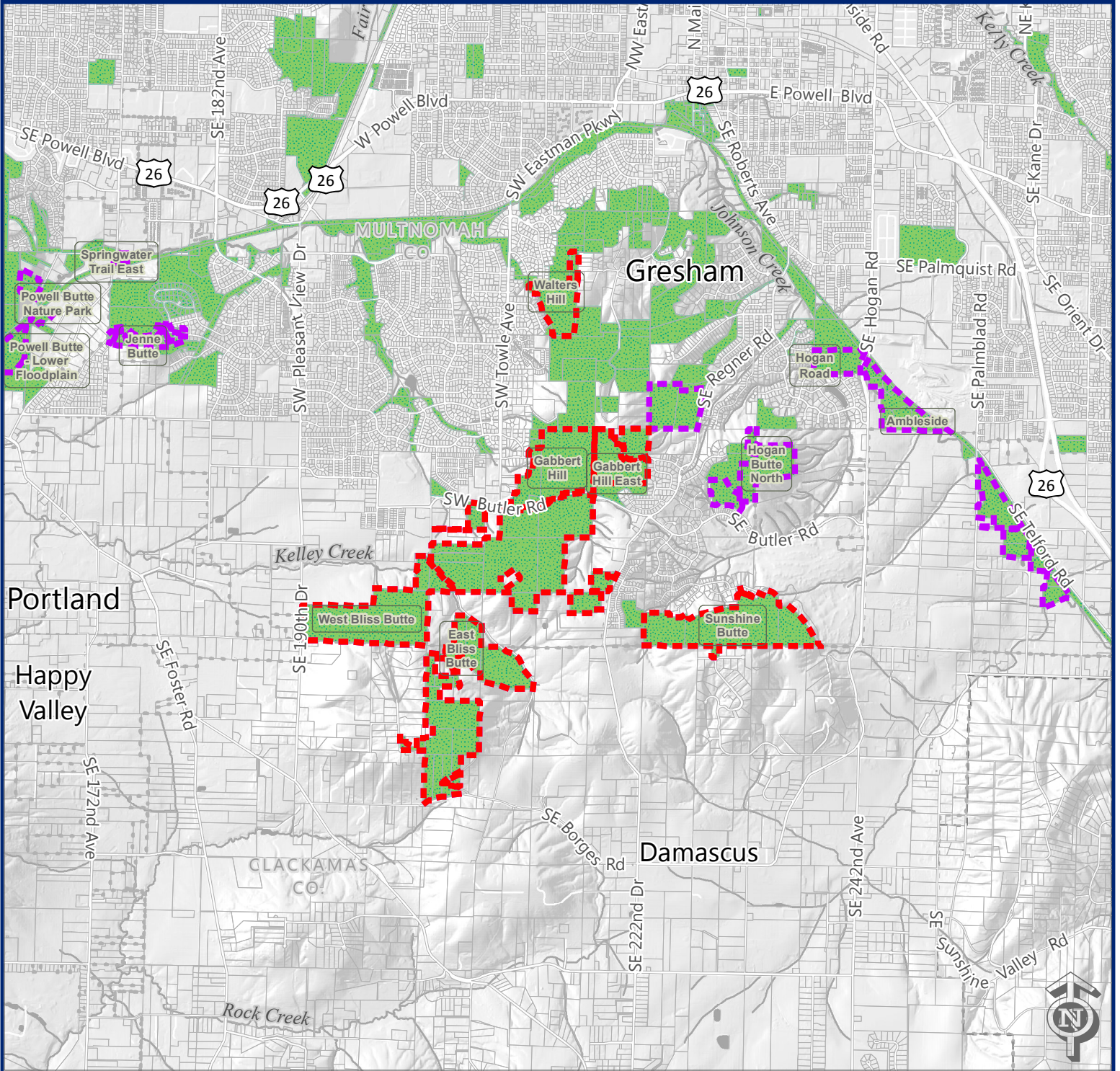
### **CURRENT PARTNERS**




City of Gresham – Gabbert Hill shared ownership and access plan.

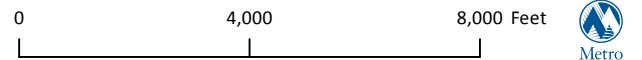
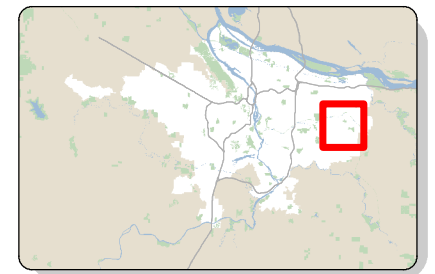
### **POTENTIAL PARTNERS**

East Multnomah and Clackamas SWCDs – EDRR and best practices for invasive plant treatments, potential funders for riparian and other planting projects.

# Vicinity Map

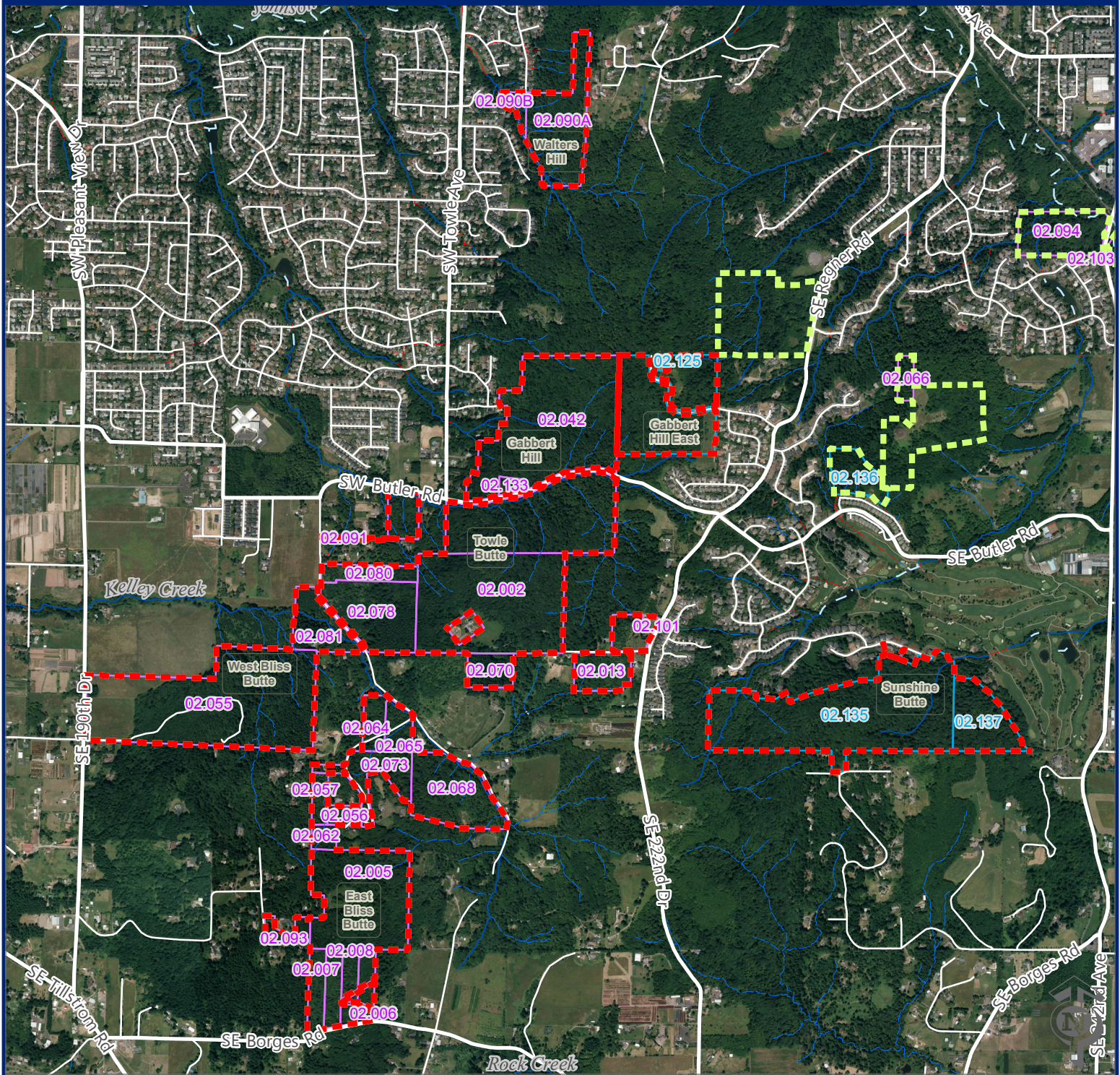










-  East Buttes sites
-  Other Metro sites
-  Park and/or natural area



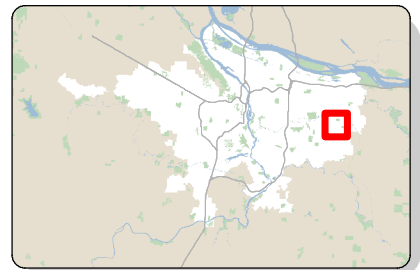


# Site Map



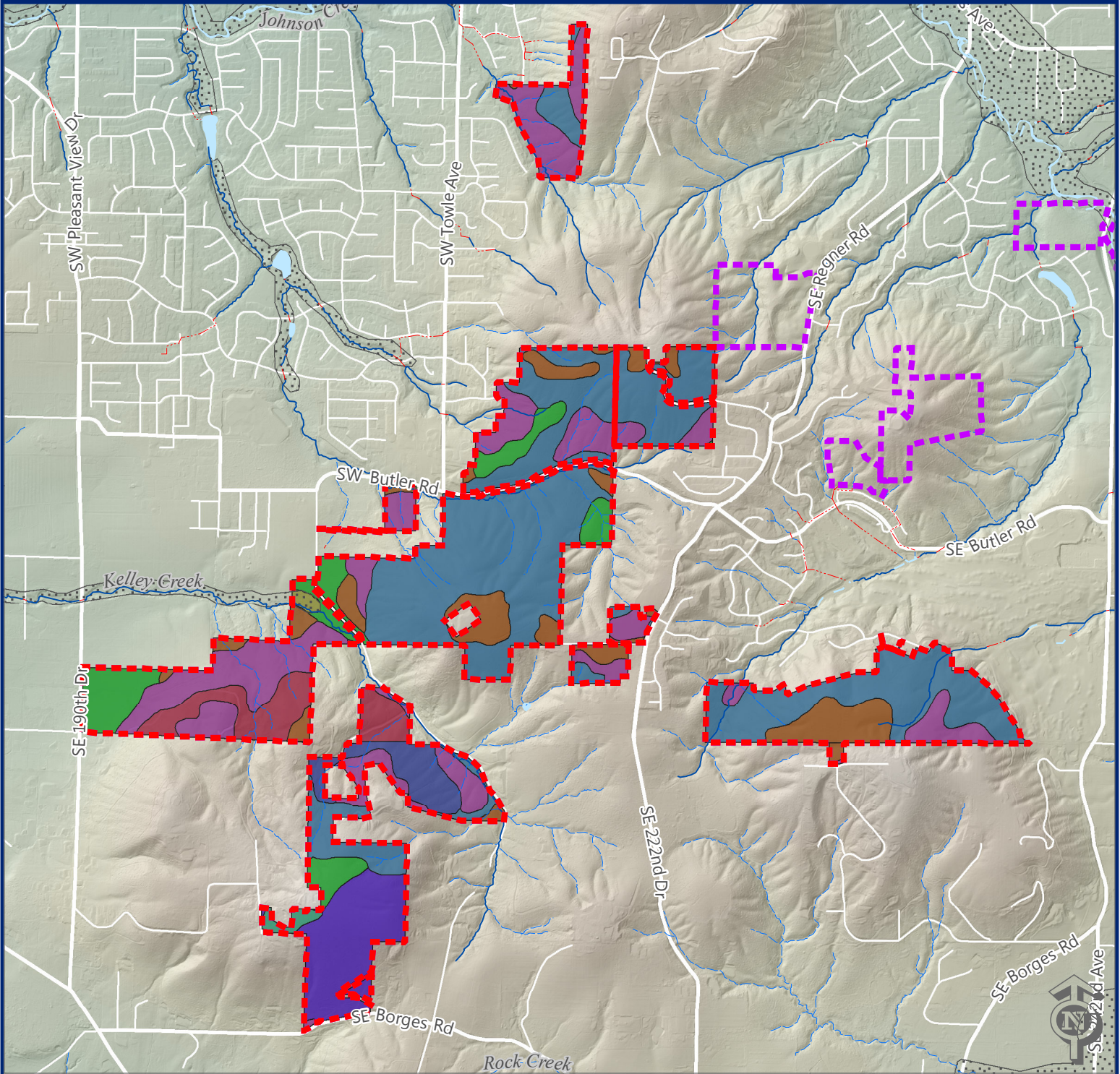
- |  |                   |   |
|--|-------------------|---|
|  | East Buttes sites | <b>NHD Flowlines</b>  |
|  | Other Metro sites |  Intermittent stream |
| <b>Bond Measure</b>  |                   |  Perennial stream    |
|  | 1995 Bond Measure |  Pipeline            |
|  | 2006 Bond Measure |  Artificial path     |













0 2,000 4,000 Feet

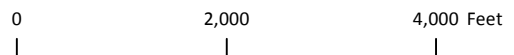




# Soils



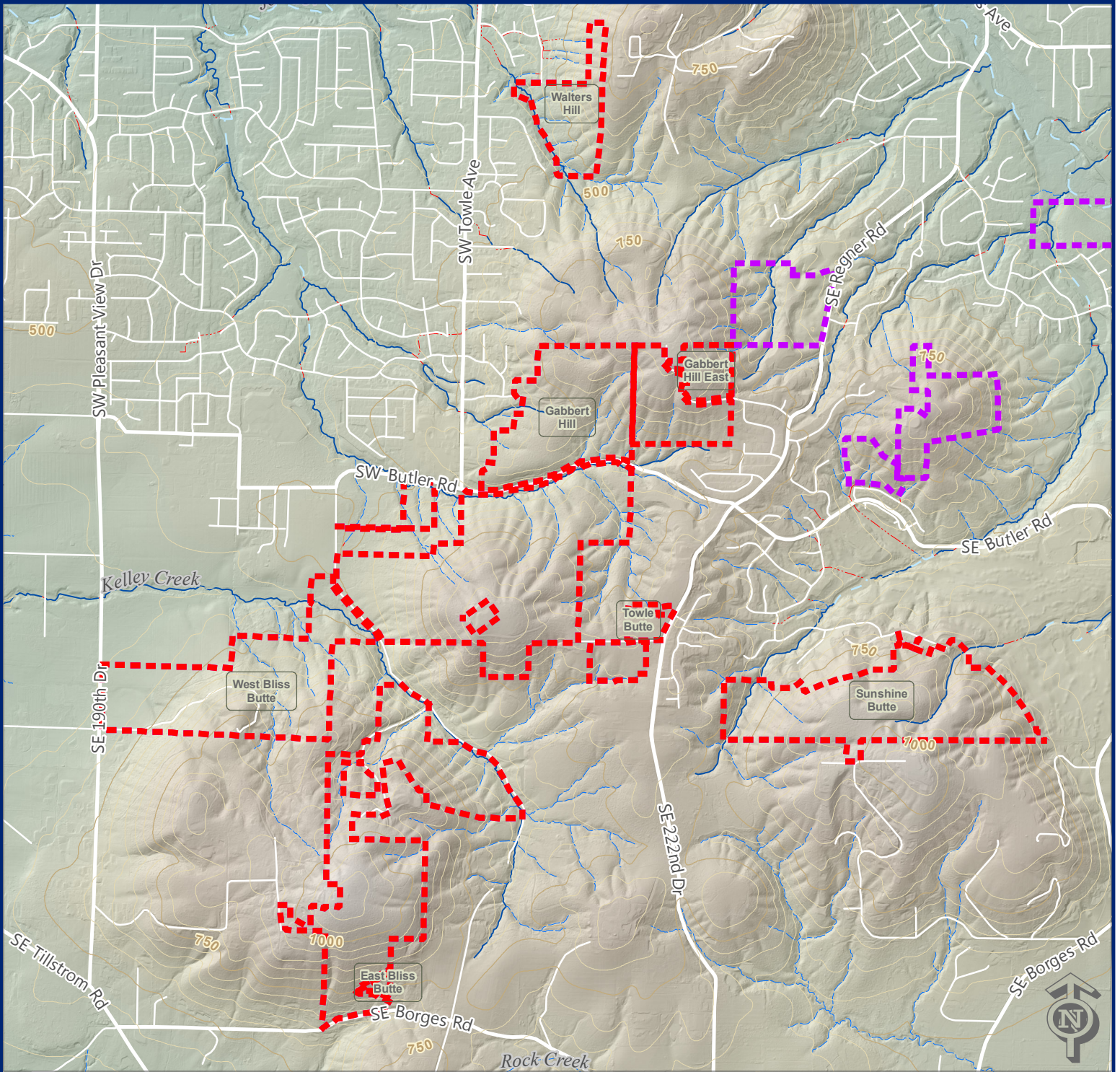
	East Buttes Sites	<b>Site soils</b>		Cascade silt loam, stony substratum, 15 to 30 percent slopes	
	Other sites		Cascade silt loam, 15 to 30 percent slopes		Cascade silt loam, stony substratum, 30 to 60 percent slopes
	Hydric soils		Cascade silt loam, 3 to 8 percent slopes		Haploxerolls, steep
			Cascade silt loam, 30 to 60 percent slopes		Wapato silt loam
			Cascade silt loam, 8 to 15 percent slopes		Xerochrepts and Haploxerolls, very steep













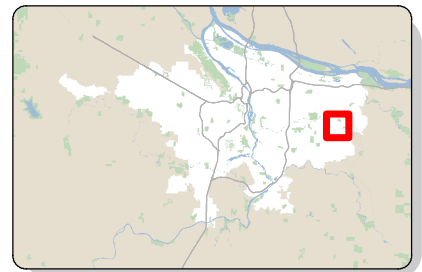
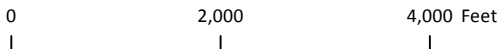
# Topography



-  East Buttes sites
-  Other Metro sites

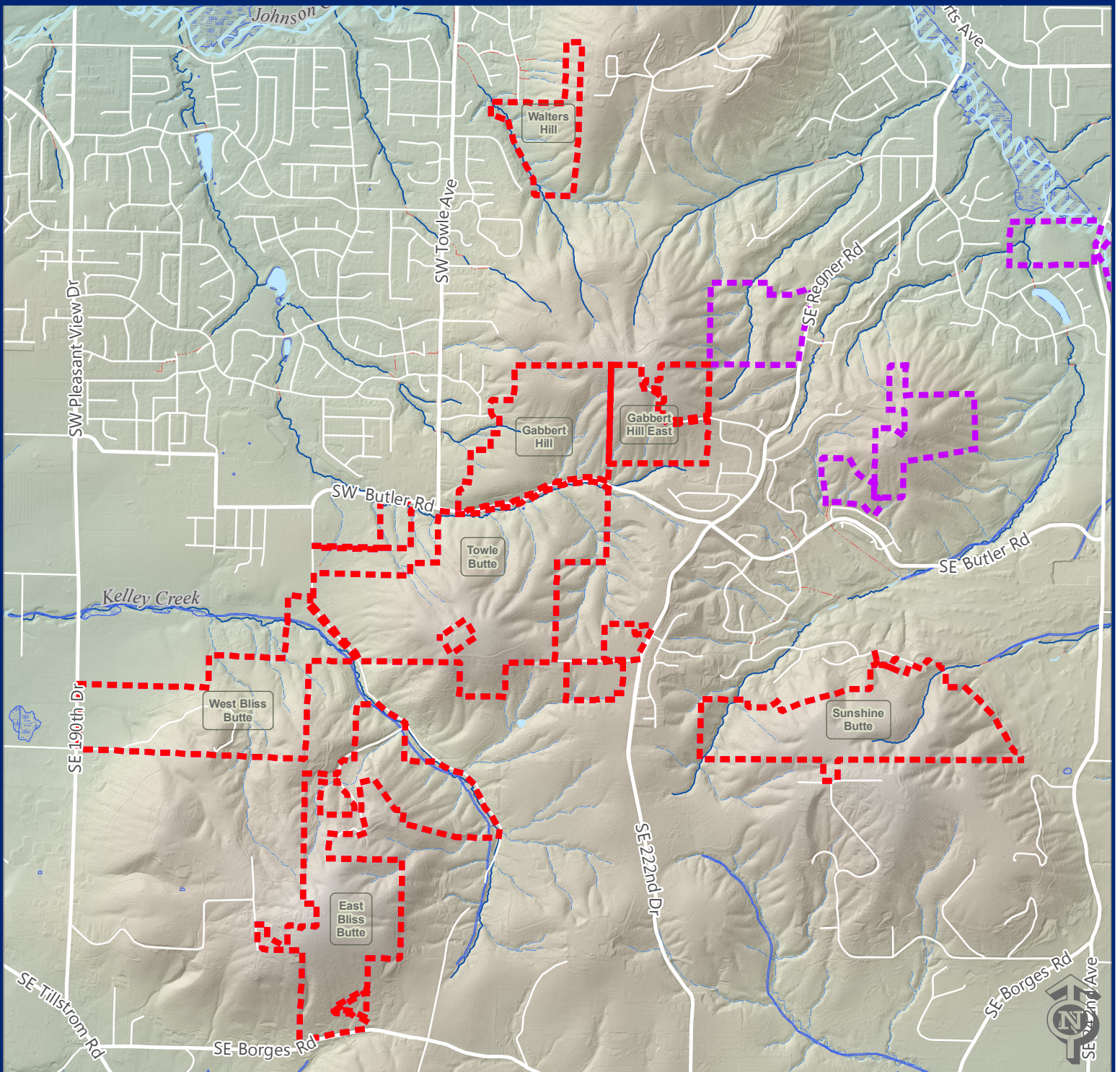
### NHD Flowlines


-  Intermittent stream
-  Perennial stream
-  Pipeline
-  Artificial path







# Hydrology




 East Buttes sites

 Other Metro sites


 100 year floodplain

 Wetlands

## NHD Flowlines

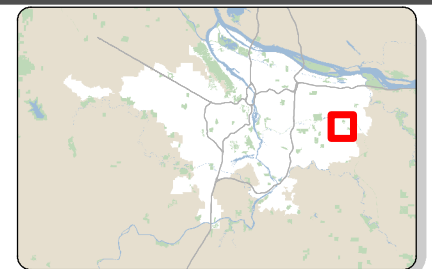
 Intermittent stream

 Perennial stream

 Pipeline

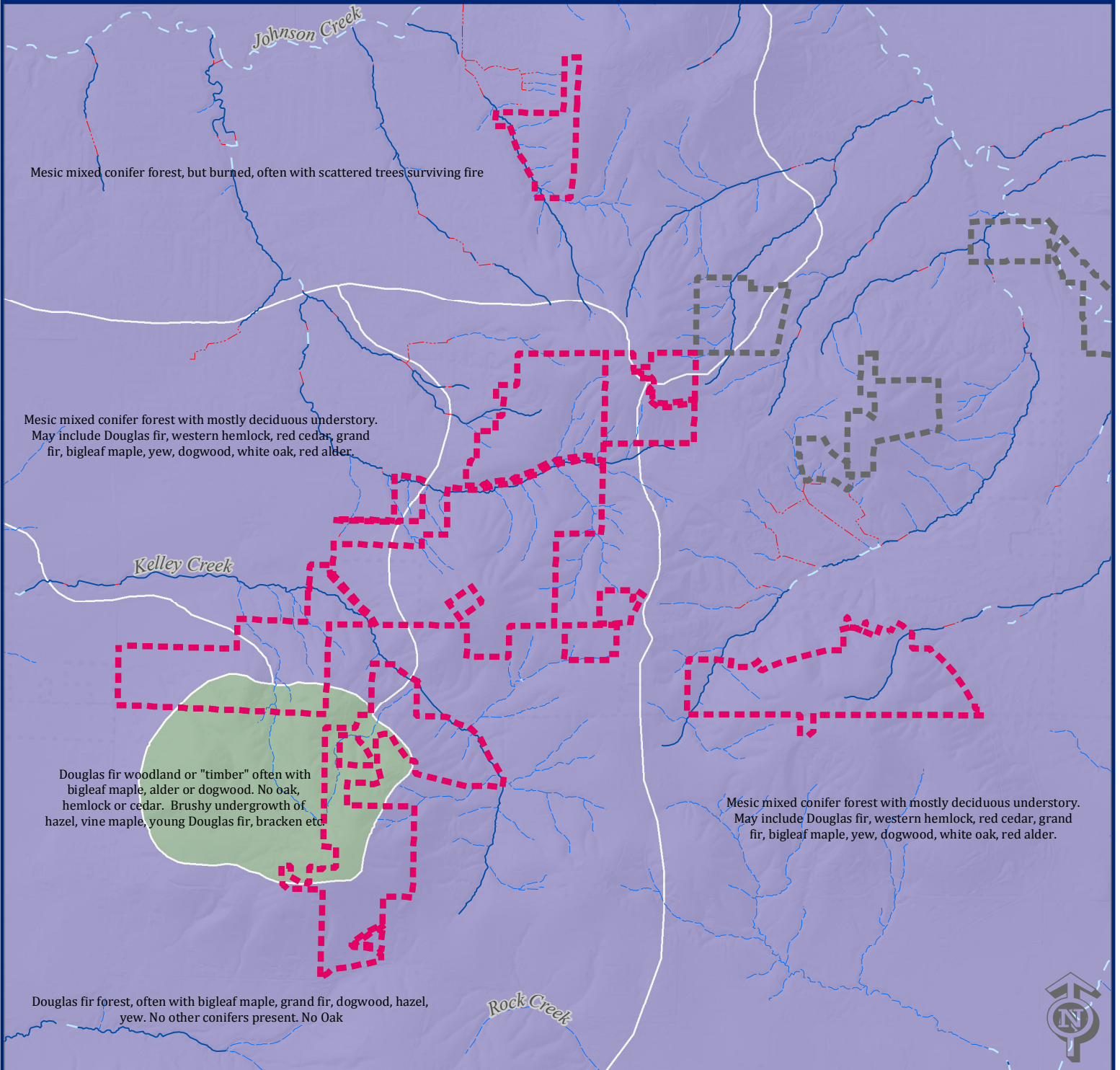
 Artificial path

0                      2,000                      4,000 Feet





# Historical Vegetation (1851-1910)



East Buttes sites



Other Metro sites

## Historical vegetation



Closed forest; Riparian & Wetland



Closed forest; Upland



Woodland

## NHD Flowlines



Intermittent stream



Perennial stream



Pipeline



Artificial path

**\* The historical vegetation map should be interpreted as a coarse resolution view into existing vegetation types in the late 1800s.**

0

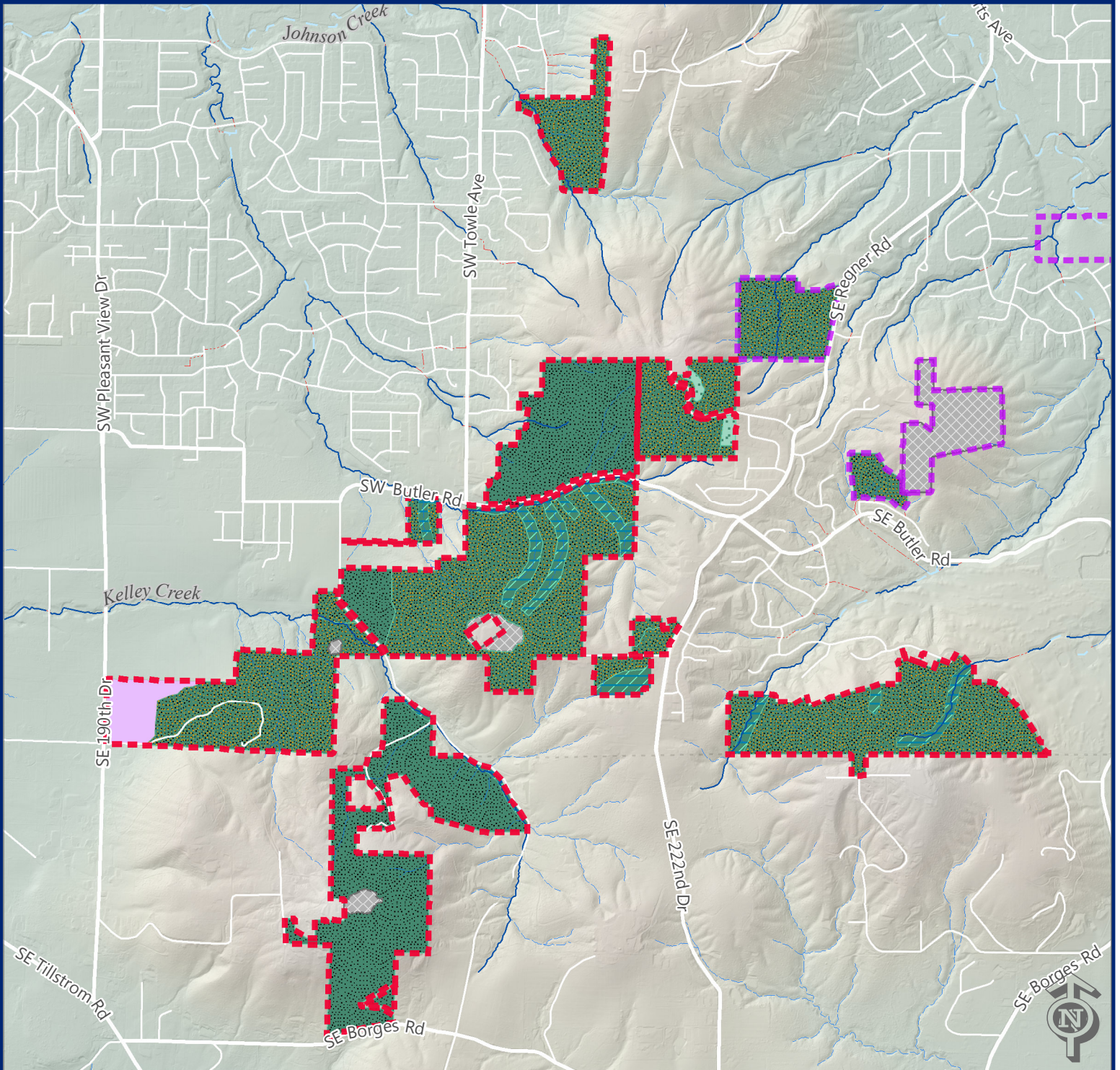
2,000



4,000 Feet















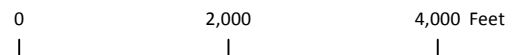
# Current Cover



-  East Buttes sites
-  Other Metro sites

- Current cover**
-  Agriculture
  -  Developed - (pervious/non ag)
  -  Riparian forest
  -  Upland forest - coniferous
  -  Upland forest - mixed
  -  Upland forest - shrub (stage)

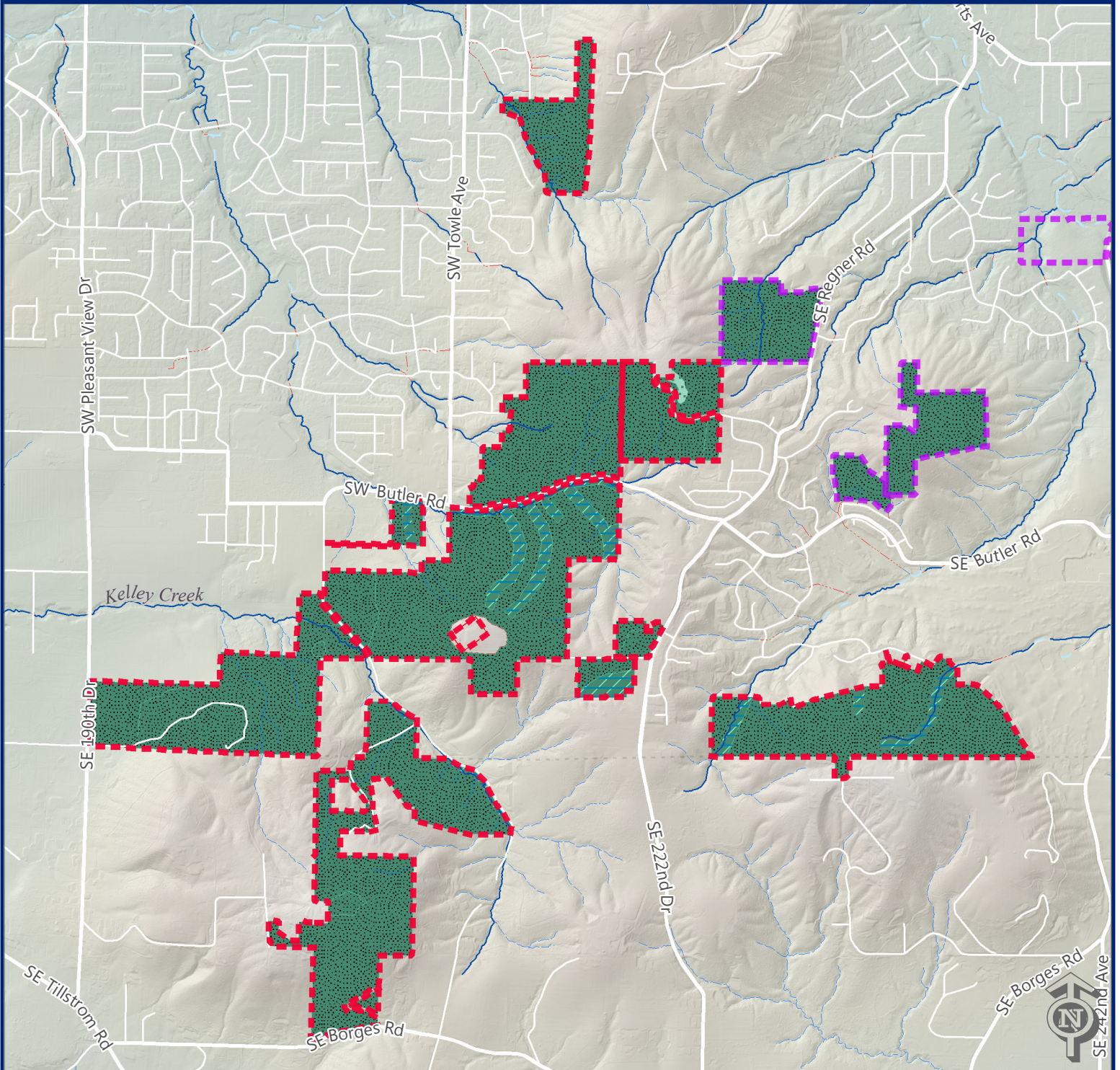
- NHD Flowlines**
-  Intermittent stream
  -  Perennial stream
  -  Pipeline
  -  Artificial path













# Conservation Targets







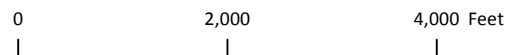
-  East Buttes sites
-  Other Metro sites

### Conservation targets

-  No targets
-  Riparian forest
-  Upland forest
-  Upland forest - shrub (early successional)

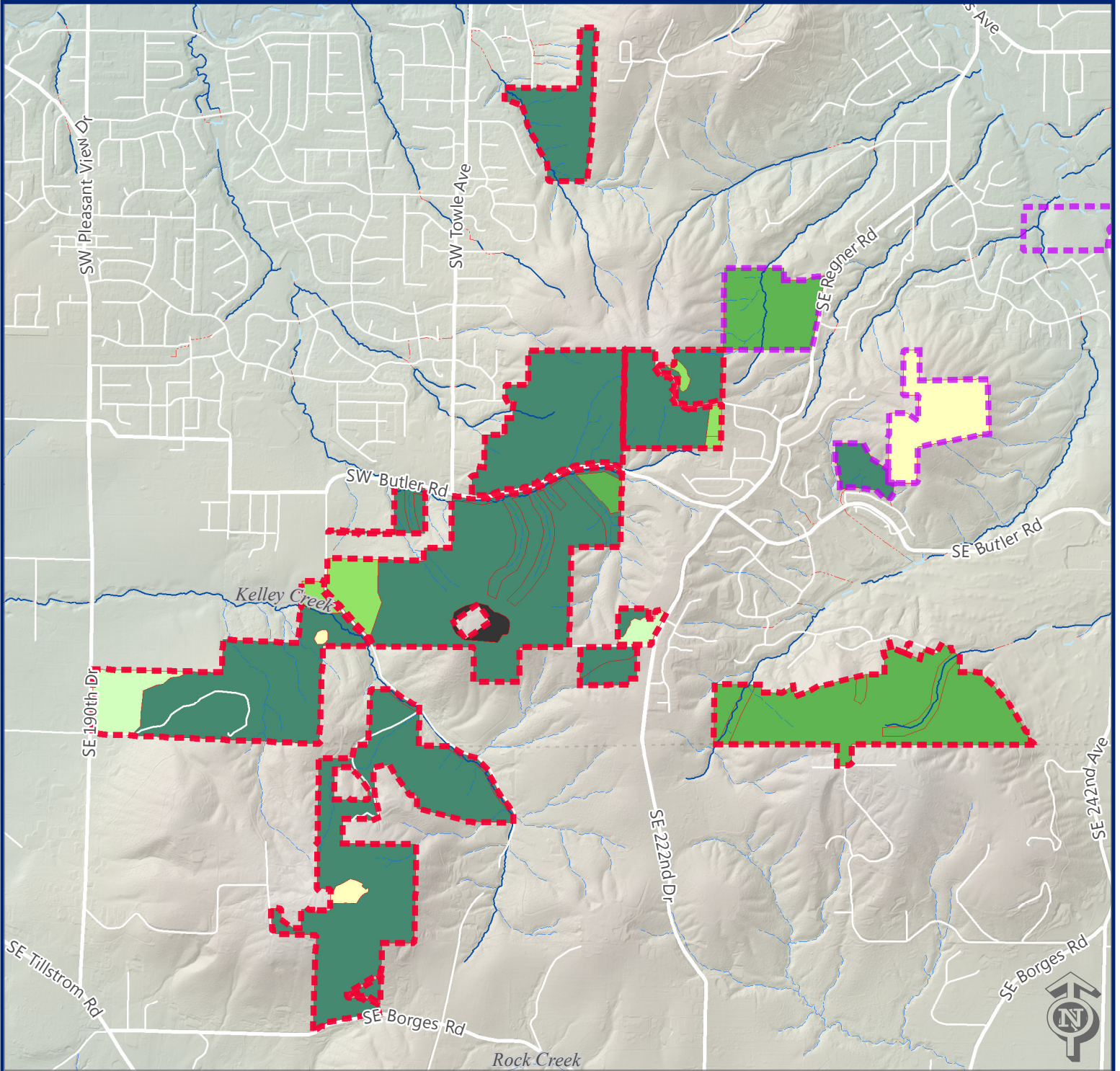
### NHD Flowlines



-  Intermittent stream
-  Perennial stream
-  Pipeline
-  Artificial path











# Management Status







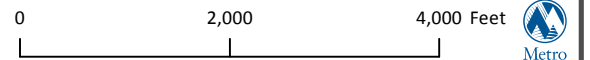
-  East Buttes sites
-  Other Metro sites

### Management status

-  0 - Pre-Initiation
-  1 - Initiation
-  2 - Establishment
-  3 - Consolidation
-  4 - Refinement and long-term maintenance
-  9 - No targets (developed)

### NHD Flowlines

-  Intermittent stream
-  Perennial stream
-  Pipeline
-  Artificial path





## East Buttes Complex

### Approvals for Site Conservation Plan

Date routed: March 5, 2014

*Please return to Lori Hennings*

**Jonathan Soil**

Signature



Date

3/6/14

**Dan Moeller**

Signature

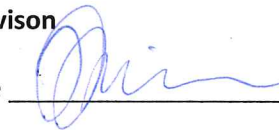


Date

3/11/14

**Mark Davison**

Signature



Date

3/26

**Kathleen Brennan-Hunter**

Signature



Date

4/2/14