
**MAZAMA POCKET GOPHER (*Thomomys Mazama*) AND
THURSTON COUNTY REGULATED PRAIRIE ABSENCE REPORT**

Prepared for Kingswood Capital Inc.

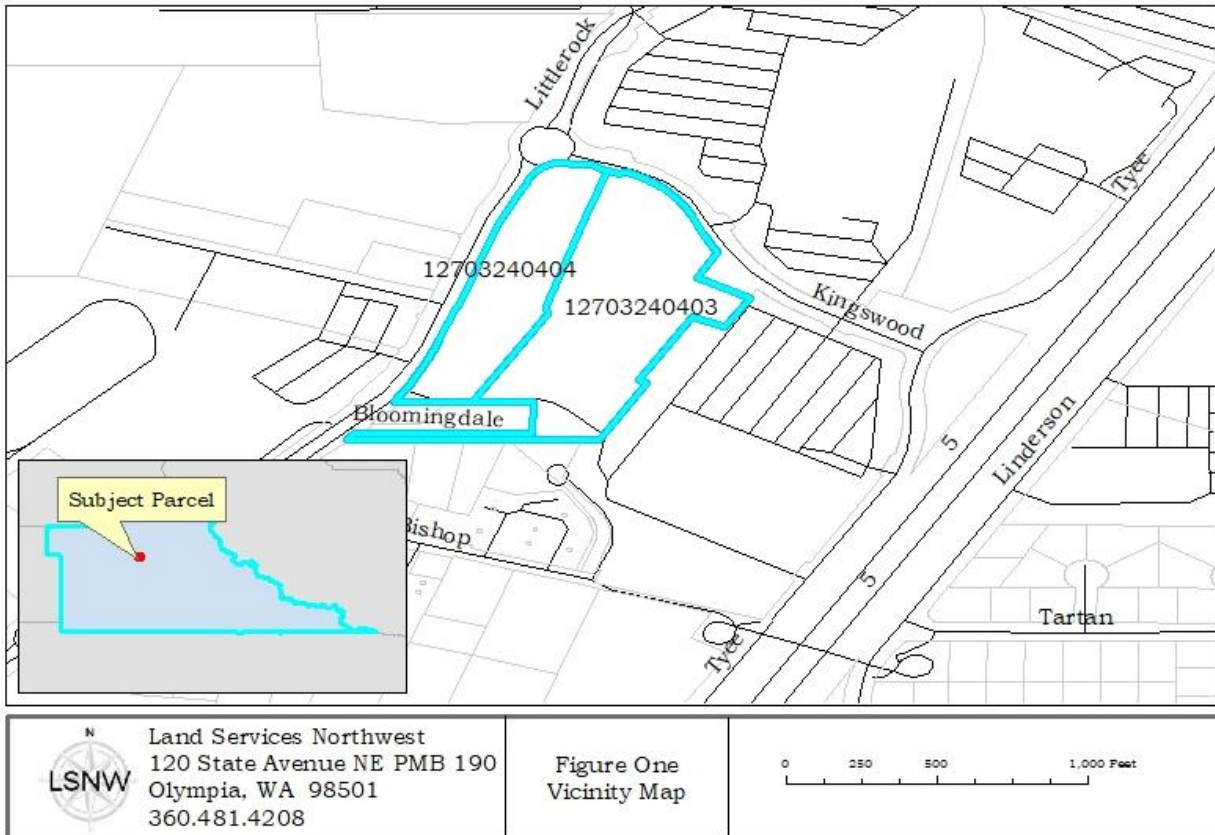


Prepared By:

ALEXANDER CALLENDER, M.S. PWS
LAND SERVICES NORTHWEST
OLYMPIA, WASHINGTON
OCTOBER 15, 2021

1.0 INTRODUCTION

This report is the result of a Mazama Pocket Gopher and regulated prairie survey of the 5.76-acre and 3.24-acre parcel numbers 12703240403 and 12703240404 at 1401 KINGSWOOD DR SW and 1551 KINGSWOOD DR SW, with the legal descriptions of Section 03 Township 17 Range 2W Quarter NE NW & SE NW TR B BLA03744 3500815 EXCEPT PTN DEDICATED TO CITY OF TUMWATER PER AFN 3539066 and Section 03 Township 17 Range 2W Quarter NE NW BLA027432 TR D Document 3472425 EXC PTN TO CITY OF TUMWATER PER AFN:3539066; EXC PTN FOR RD PER AFN:3991167; ALSO EXC PTN FOR RD PER AFN:4158266 in the City of Tumwater, WA (**Figure 1**).



The Purpose of this report is to provide a study of the presence or absence of indicators of the Mazama Pocket Gopher (*Thomomys Mazama*) (MPG) and Regulated Prairie Under Tumwater City Code (TCC) Chapter 24.

Mazama Pocket Gopher

Four subspecies of Mazama pocket gophers found in Thurston County are listed as threatened under the Endangered Species Act (ESA). Impacts to Mazama pocket gophers should be avoided or addressed through USFWS permitting processes. The presence of this species on a property may have regulatory implications that may limit the amount or type of development that can occur on a property in order to avoid “take” of the species. Take is defined under the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect any threatened or endangered species.

This study should allow the reader to assess whether the Mazama pocket gopher is likely to be found on site and what the implications of its presence or absence may have with regard to permitting a residence or other structures or development.

Regulated Prairie, Garry Oaks and Mima Mounds

The parcel contains soil types associated with prairies as defined in the Thurston County Critical Areas Ordinance (CAO 24.25). Transects were walked throughout the parcel (or at least throughout the building envelope and 50-foot buffer area). A list of plant species encountered during the survey was recorded and CAO target prairie plants were noted. Regulated prairie can be either wet or dry outwash prairie and is critical habitat for the Taylors checkerspot butterfly and the Mardon skipper butterfly. Prairie habitat is regulated if three indicator species are found within 5 meters (15 feet) of each other with 25 or more of each species in the plot.

2.0 METHODS

2.1 Review of Existing Information

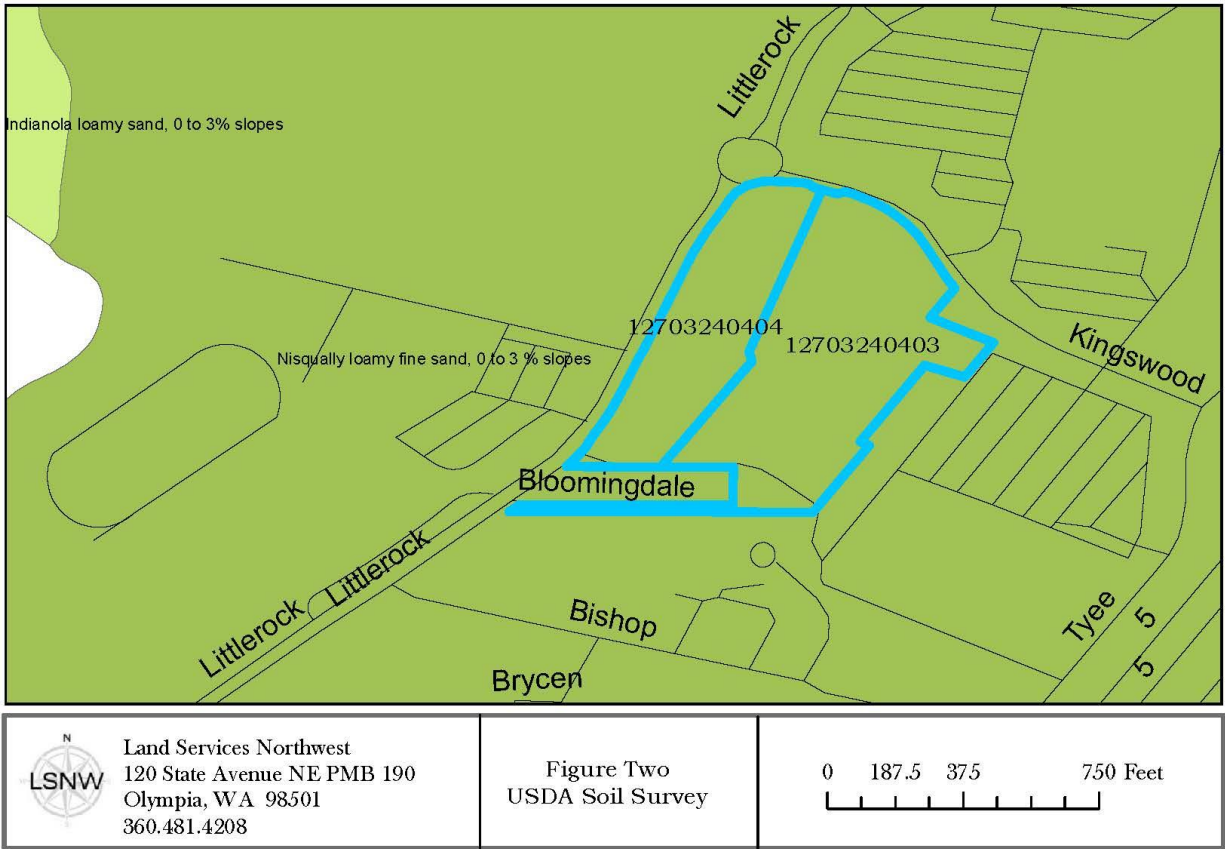
Background Review

Background information on the subject property was reviewed prior to field investigations and included the following:

- Thurston County Geodata Gopher Soils Shapefiles
- WDFW Priority Habitats and Species Information
- USFWS species list information
- WDFW species information

2.2 Summary of Existing Information

The existing information shows Nisqually loamy fine sand, 0 to 3 percent slopes, which is more preferred by the MPG, withing 300 feet of the subject parcel (**Figure 2**) and (**Attachment A**).



Attachment A

Table 1. Soils known to be associated with Mazama pocket gopher occupancy.

Mazama Pocket Gopher Preference	Soil Type
<p>More Preferred</p> <p>(formerly High and Medium Preference Soils)</p>	<p>Nisqually loamy fine sand, 0 to 3 percent slopes</p> <p>Nisqually loamy fine sand, 3 to 15 percent slopes</p> <p>Spanaway-Nisqually complex, 2 to 10 percent slopes</p> <p>Cagey loamy sand</p> <p>Indianola loamy sand, 0 to 3 percent slopes</p> <p>Spanaway gravelly sandy loam, 0 to 3 percent slopes</p> <p>Spanaway gravelly sandy loam, 3 to 15% slopes</p>
<p>Less Preferred</p> <p>(formerly Low Preference Soils)</p>	<p>Alderwood gravelly sandy loam, 0 to 3 percent slopes</p> <p>Alderwood gravelly sandy loam, 3 to 15 percent slopes</p> <p>Everett very gravelly sandy loam, 0 to 3 percent slopes</p> <p>Everett very gravelly sandy loam, 3 to 15 percent slopes</p> <p>Indianola loamy sand, 3 to 15 percent slopes</p> <p>Kapowsin silt loam, 3 to 15 percent slopes</p> <p>McKenna gravelly silt loam, 0 to 5 percent slopes</p> <p>Norma fine sandy loam</p> <p>Norma silt loam</p> <p>Spana gravelly loam</p> <p>Spanaway stony sandy loam, 0 to 3 percent slopes</p> <p>Spanaway stony sandy loam, 3 to 15 percent slopes</p> <p>Yelm fine sandy loam, 0 to 3 percent slopes</p> <p>Yelm fine sandy loam, 3 to 15 percent slopes</p>

The WDFW Priority Habitats and Species Map shows MPG occupancy in 1995 within 600 feet of the subject parcel. (**Appendix B**).

2.3 2021 Mazama Pocket Gopher Protocol

A. General Information – 2021 Approach

1. The MPG review season will run June 1-October 31, 2021.
2. The protocol described in this memorandum will only apply to properties not known to be occupied by MPG since April 2014, the date of the federal listing.

The property was not known to be occupied by the MPG since April 2014.

3. Negative determinations will be valid for the length of the underlying County permit or approval, per County code.

The determination is negative.

4. Qualified consultants may perform field reviews and submit results for County evaluation, per the CAO. Consultants must have received training from USFWS at one of the two trainings offered in May/June 2021 and is certified to conduct these surveys.

Alex Callender is qualified as a consultant as he received training and certification during the May 2019 class conducted by the United States Fish and Wildlife Service.

B. In-Office Procedures

1. Staff will review land use applications to determine if the MPG field screening protocols described in this memorandum must be initiated for the following:

- a. Within 600 feet of a site known to have positive MPG occurrence ; or

The properties are within 600 feet of a site known to have a positive MPG occurrence.

- b. On or within 300 feet of a soil type known to be associated with MPG occupancy.

The existing information shows Nisqually loamy fine sand, 0 to 3 percent slopes within 300 feet of the subject parcel.

2. County staff will determine if other factors preclude the need for field screening. See Preliminary assessment below.

3. County staff will notify applicants if their application cannot be excluded from further review.

4. Applicants may hire a consultant to perform field review, or may request that field review be conducted by County staff according to the protocol described in this memorandum.

5. County staff will review critical area reports submitted by consultants.

6. For sites to be screened by the County, staff will coordinate site visits with landowners/applicants, ensure advance notification and property access, and develop site visit schedules.

7. For sites where no MPG activity is observed, the County will provide applicants with a project condition that requires them to stop construction activity and alert the County and USFWS if evidence of MPG occupancy is observed.

N/A - No activity observed

8. Thurston County landowners who know or learn that Mazama pocket gophers are present on their property can move forward with their proposed development by: 1) proposing

mitigation to the County as directed in the County's Critical Areas Ordinance (Title 24 TCC); or 2) contacting USFWS directly to discuss the review, assessment, and mitigation process most appropriate for their site(s) and proposed activities; or 3) waiting to participate in the yet to be completed Thurston County HCP.

C. Preliminary Assessment

As land use applications are received, properties mapped with or within 300 feet of gopher and/or prairie soils undergo the following preliminary assessment in-office.

1. For properties or project areas that appear to meet County criteria below, an internal review is conducted by staff biologist to determine if the project may be released from the full gopher review process. The following criteria may release a project from further gopher review:

- Locations west of the Black River, or on the Steamboat Island or Cooper Point peninsulas.
N/A
- Sites submerged for 30 consecutive days or more since October 31, 2017.
N/A
- Sites covered with impervious surfaces (as defined in CAO Chapter 17.15 and Title 24).
N/A
- Fully forested (>30%) sites with shrub and fern understory.
N/A
- Sites that consist of slopes greater than 40 percent, or that contain landslide hazard areas (per existing County regulations).
N/A
- Sites on less preferred MPG soils north of Interstate 5.
N/A
- Building to take place in the footprint of an existing structure (also mobile home replacements in the same footprint).
N/A
- Mobile home replacements in existing lots in an existing mobile home park.
N/A
- Heating oil tank removal
N/A
- Foundation repair
N/A
- Projects which lie >300 feet from mapped gopher soils.
The parcel is within 300 feet of mapped gopher soils.

2. If a property and/or project area do not meet internal review criteria, the project is put on a list to be scheduled for full MPG review during the appropriate seasonal review period.

3. In addition to the in-office preliminary assessment, the County HCP biologist may, if time allows, visit properties prior to the first gopher review in order to screen for prairie habitat. This screening process focuses on the presence or absence of native prairie plants, Oregon white oak trees (*Quercus garryana*), or Mima mounds protected under the Critical Areas Ordinance (CAO).

The site was evaluated for Regulated prairie plants on August 27 and during the two gopher studies on September 14 and October 14, 2021. No CAO regulated prairie plants were found.

No Mima mounds were found.

Garry oaks were found and locations are shown on the transect maps in Appendix C.

D. Implementation Measures

In order to ensure the review process runs efficiently, the following measures will be implemented as part of the 2021 screening approach. These are intended to reduce costs and staff time, and ensure that MPG screening requests, especially those associated with building permit applications, are screened during the screening season.

1. No soil verification will be required in conjunction with MPG field screening.
2. Site mowing or brushing will be required to initiate first site visits, where necessary and feasible, and completed two to four weeks in advance of the site visit.

The ground was visible.

3. No further screening will be conducted in 2021 following the detection of MPG mounds on a property. The County will notify landowners that MPG evidence has been detected within two weeks.

The Mazama pocket gopher mounds were **not** found.

4. At the end of the 2021 season, County staff will provide data regarding MPG occupancy to USFWS.
5. No additional site visit will be required if indeterminate mounds are detected, if the full number of required visits has been completed.

N/A

6. The County will prioritize project specific applications over non-project applications. This will help ensure that applicants that have projects ready for construction will receive necessary permits and may initiate construction in a timely manner.

E. Site Visit Overview

County field personnel or hired consultants will conduct field observations to determine MPG presence on sites with potential habitat. These site visits will be conducted as follows:

1. All valid site visits must be conducted from June 1 through October 31, 2021. Site visits outside that survey window will not be considered valid.

Site visits were conducted on September 14 and October 14, 2021.

2. A site or parcel is considered to be the entire property, not just the footprint of the proposed project.

A portion of the properties are excluded and is shown on the transect maps in Appendix C.

3. Sites with less preferred soils (see Attachment A) will be visited two (2) times, at least 30 days apart.

The site was visited to two times during the proper study period 30 days apart.

4. Sites with more preferred soils (see Attachment A) will be visited two (2) times, at least 30 days apart.

5. Site conditions must be recorded on a data sheet or similar information documented in narrative form. A template data sheet can be found on the County website at <http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html>

The data sheets are provided in Appendix C.

6. Document and describe which areas of the parcel cannot be screened due to limited accessibility and/or dense understory. This should be depicted on an aerial or site plan submitted to the County.

The entire parcel was surveyed.

7. The ground must be easily visible to ensure mound observation and identification. Request mowing if necessary to ensure visibility. Wait two to three weeks after mowing before beginning screening.

The ground was visible.

<http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html> F. Detailed Field Methodology

1. The survey crew orients themselves with the layout of the property using aerial maps, and strategizes their route for walking through the property.
2. Start GPS to record survey route.
3. Walk the survey transects methodically, slowly walking a straight line and scanning an area approximately 2-3 meters to the left and right as you walk, looking for mounds. Transects should be no more than five (5) meters apart when conducted by a single individual.

4. If the survey is performed by a team, walk together in parallel lines approximately 5 meters apart while you are scanning left to right for mounds.

The survey was conducted according to the protocol.

5. At each mound found, stop and identify it as a MPG or mole mound. If it is a MPG mound, identify it as a singular mound or a group (3 mounds or more) on a data sheet to be submitted to the County. (County has developed data sheets for your use on <http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html>)

No MPG mounds were found. The mounds found on site were typical of moles which are round, clumpy and the show was in a linear fashion.

6. Record all positive MPG mounds, likely MPG mounds, and MPG mound groups in a GPS unit that provides a date, time, georeferenced point, and other required information in County GPS data instruction for each MPG mound. Submit GPS data in a form acceptable to the County. County GPS Data instruction can be found at <http://www.co.thurston.wa.us/permitting/gopher-reviews/index.html>

N /A

7. Photograph all MPG mounds or MPG mound groups. At a minimum, photograph MPG mounds or MPG mound groups representative of MPG detections on site.

No MPG mounds found.

8. Photos of mounds should include one that has identifiable landscape features for reference. In order to accurately depict the presence of gopher activity on a specific property, the following series of photos should be submitted to the County:

- At least one up-close photo to depict mound characteristics
No MPG mounds were found.
- At least one photo depicting groups of mounds as a whole (when groups are encountered).
N/A
- At least one photo depicting gopher mounds with recognizable landscape features in the background, at each location where mounds are detected on a property
N/A
- Photos can be taken with the GPS unit or a separate, camera, preferably a camera with locational features (latitude, longitude)
N/A
- Photo point description or noteworthy landscape or other features to aid in relocation. Additional photos to be considered.
N/A
- The approximate building footprint location from at least two cardinal directions.
N/A

- Landscape photos to depict habitat type and in some cases to indicate why not all portions of a property require gopher screening.

Appendix A Photos

9. Describe and/or quantify what portion and proportion of the property was screened, and record your survey route and any MPG mounds found on either an aerial or parcel map.

A portion of the properties is excluded and is shown on the transect maps in Appendix C.

10. If MPG mounds are observed on a site, that day's survey effort should continue until the entire site is screened and all mounds present identified, but additional site visits are not required.

No mounds were found.

11. In order for the County to accurately review Critical Area Reports submitted in lieu of County field inspections the information collected in the field (GPS, data sheets, field notes, transect representations on aerial, etc.) shall be filed with the County. GPS

No mounds were found, the information was submitted in an acceptable format.

2021 Regulated Prairie, Garry Oaks and Mima Mounds Protocol

The parcel contains soil types associated with prairies as defined in the Thurston County Critical Areas Ordinance (CAO 24.25).

Transects were walked throughout the parcel. A list of plant species encountered during the survey was recorded and CAO target prairie plants were noted. Regulated prairie can be either wet or dry outwash prairie and is critical habitat for the Taylors checkerspot butterfly and the Mardon skipper butterfly. Prairie habitat is regulated if three indicator species are found within 5 meters (15 feet) of each other with 25 or more of each species in the plot.

The site was evaluated for Regulated prairie plants on August 27 during the gopher studies on September 14 and October 14, 2021.

No prairie plant species identified in the Thurston County CAO were detected on the parcel.

No Mima mounds were found.

Garry oaks were found and their locations are shown on the transect maps in Appendix C.

If prairie habitat is detected elsewhere on the property, the landowner must be informed in order to avoid future disturbance of this habitat. Target plant species may be hand-drawn on the aerial map or logged using GPS equipment, depending on availability. Existing and ongoing agricultural activities may continue.

The landowner was informed regarding the Garry oaks.

3.0 CURRENT CONDITIONS AND METHODS

Land Services Northwest conducted a survey on September 14 and October 14, 2021, walking the area and looking for signs of the MPG and regulated prairie in accordance with the protocol.

The 5.76-acre and 3.24-acre parcels are undeveloped vacant fields with uneven terrain. There are large retail stores to the north and east, small commercial businesses to the south and a school, single family residences and a commercial business to the west. The surveyed area unmowed prior to the prairie survey and then mowed according to the protocol in this document and left unmowed for three weeks.

4.0 RESULTS

No Mazama pocket gophers were found on site. The mounds found on site were typical of moles which are round, clumpy and the show was in a linear fashion.

No CAO prairie plants were found.

No Mima mounds were found.

Garry oaks were found and their locations are shown on the transect maps in Appendix C.

Appendix A

Photos

















Appendix B

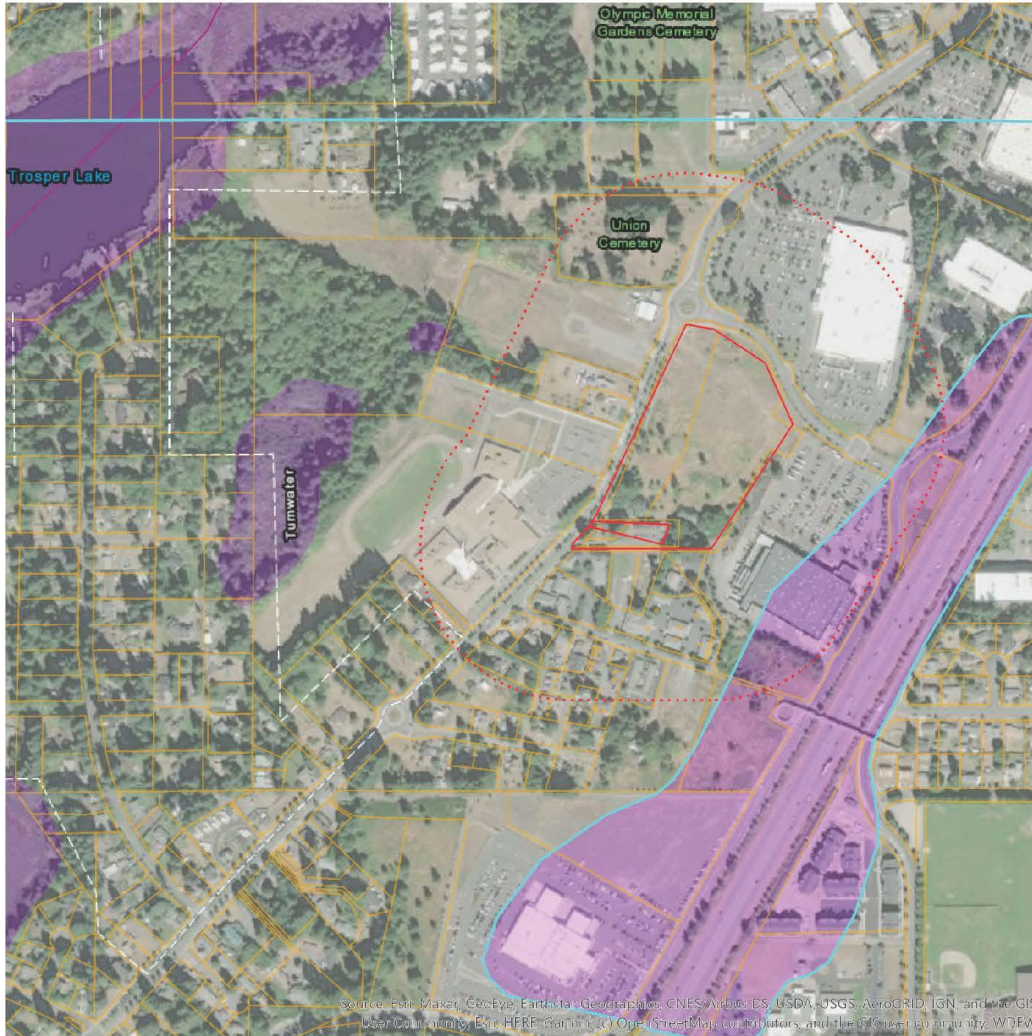
WDFW Priority Habitats and Species Map

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PHS Report



Priority Habitats and Species on the Web



Buffer radius: 600 Feet

Report Date: 10/12/2021

PHS Species/Habitats Overview:

Occurrence Name	Federal Status	State Status	Sensitive Location
Mazama (Western) pocket gopher	Threatened	Threatened	No
Big brown bat	N/A	N/A	Yes
Townsend's Big-eared Bat	N/A	Candidate	Yes

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PHS Report

PHS Species/Habitats Details:

Mazama (Western) pocket gopher	
Scientific Name	<i>Thomomys mazama</i>
Priority Area	Occurrence
Site Name	BUSH PRAIRIE
Accuracy	1/4 mile (Quarter Section)
Notes	WESTERN POCKET GOPHER MOUND SYSTEM CROSSING NEWLY CLEARED AREA FOR 3RD SOUTH LANE TO I-5. FINE DARK SOIL WITH V. LITTLE GRAVEL. MOUNDS 1/4 MILE SO. OF TYEE INN ALONG NEW CUT BANK ON W. SIDE OF I-5. LOC UPDATED FROM PHS POLY 2009.
Source Record	3172
Source Dataset	WS_OccurPolygon
Source Date	WS_OccurPolygon
Source Name	TAYLOR, D\WDFW
Source Entity	WA Dept. of Fish and Wildlife
Federal Status	Threatened
State Status	Threatened
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	N
SGCN	Y
Display Resolution	AS MAPPED
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=01175
Geometry Type	Polygons

Big brown bat	
Scientific Name	<i>Eptesicus fuscus</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360-902-2543) for obtaining information about masked sensitive species and habitats.
Federal Status	N/A
State Status	N/A
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	N
Display Resolution	TOWNSHIP
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00605

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PHS Report

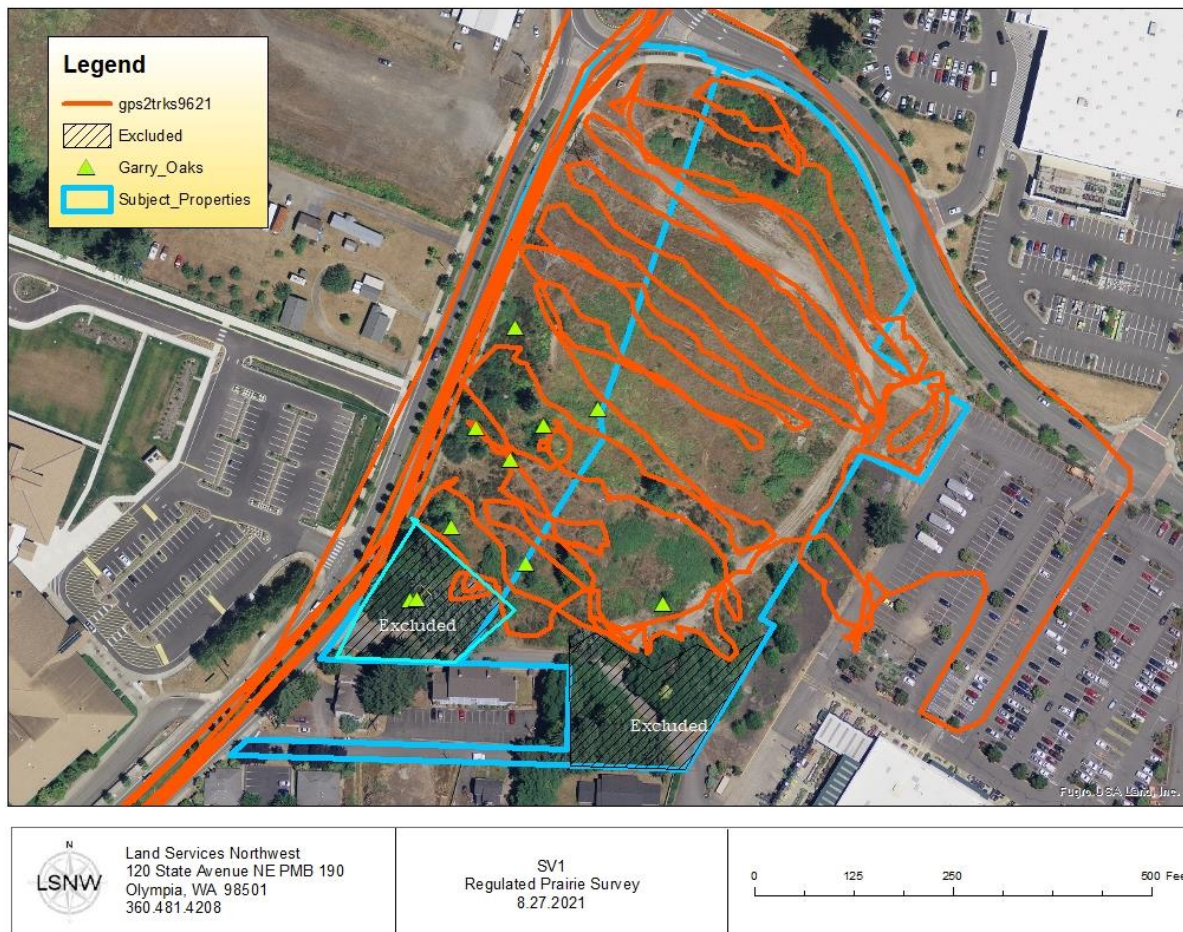
Townsend's Big-eared Bat	
Scientific Name	<i>Corynorhinus townsendii</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release (360-902-2543) for obtaining information about masked sensitive species and habitats.
Federal Status	N/A
State Status	Candidate
PHS Listing Status	PHS Listed Occurrence
Sensitive	Y
SGCN	Y
Display Resolution	TOWNSHIP
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00027

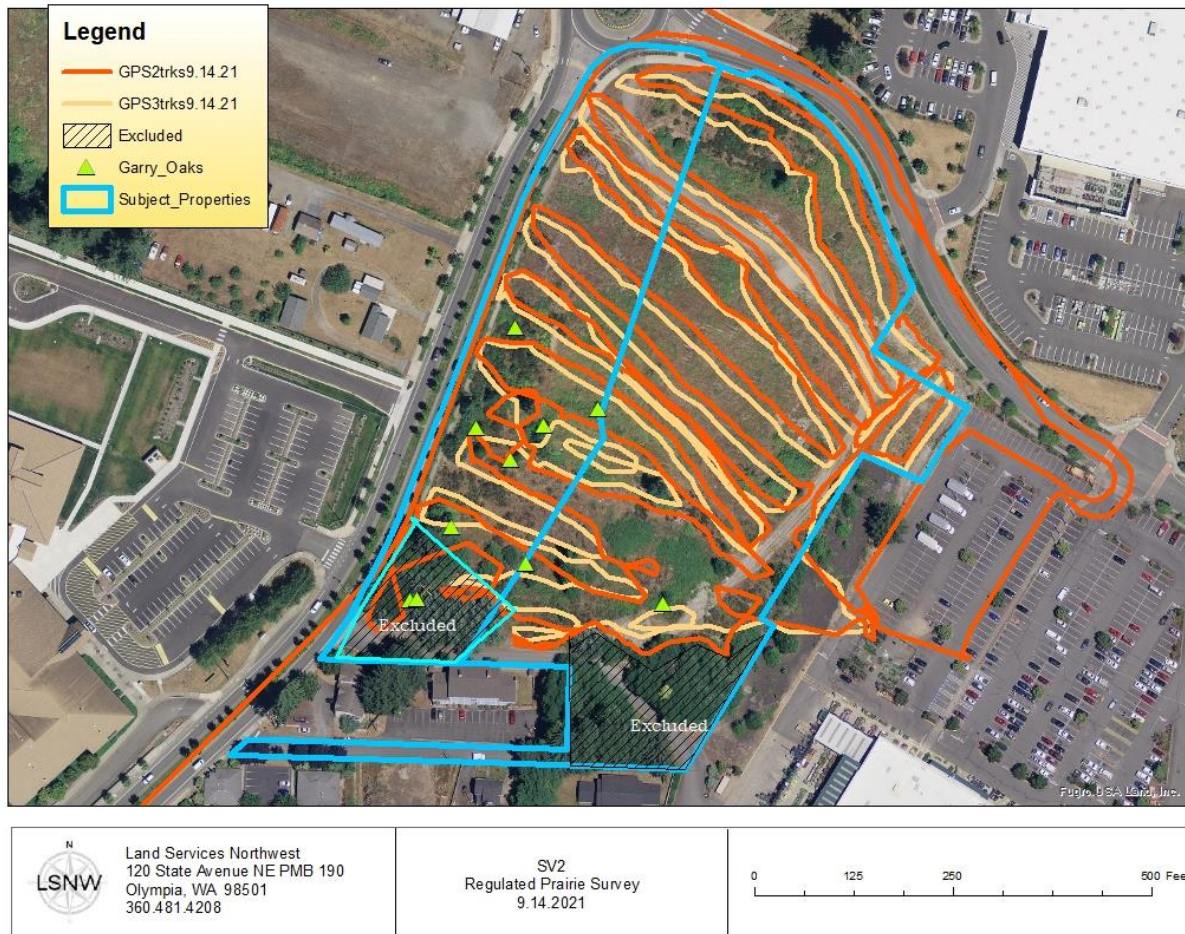
DISCLAIMER. This report includes information that the Washington Department of Fish and Wildlife (WDFW) maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the location of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using reports more than six months old.

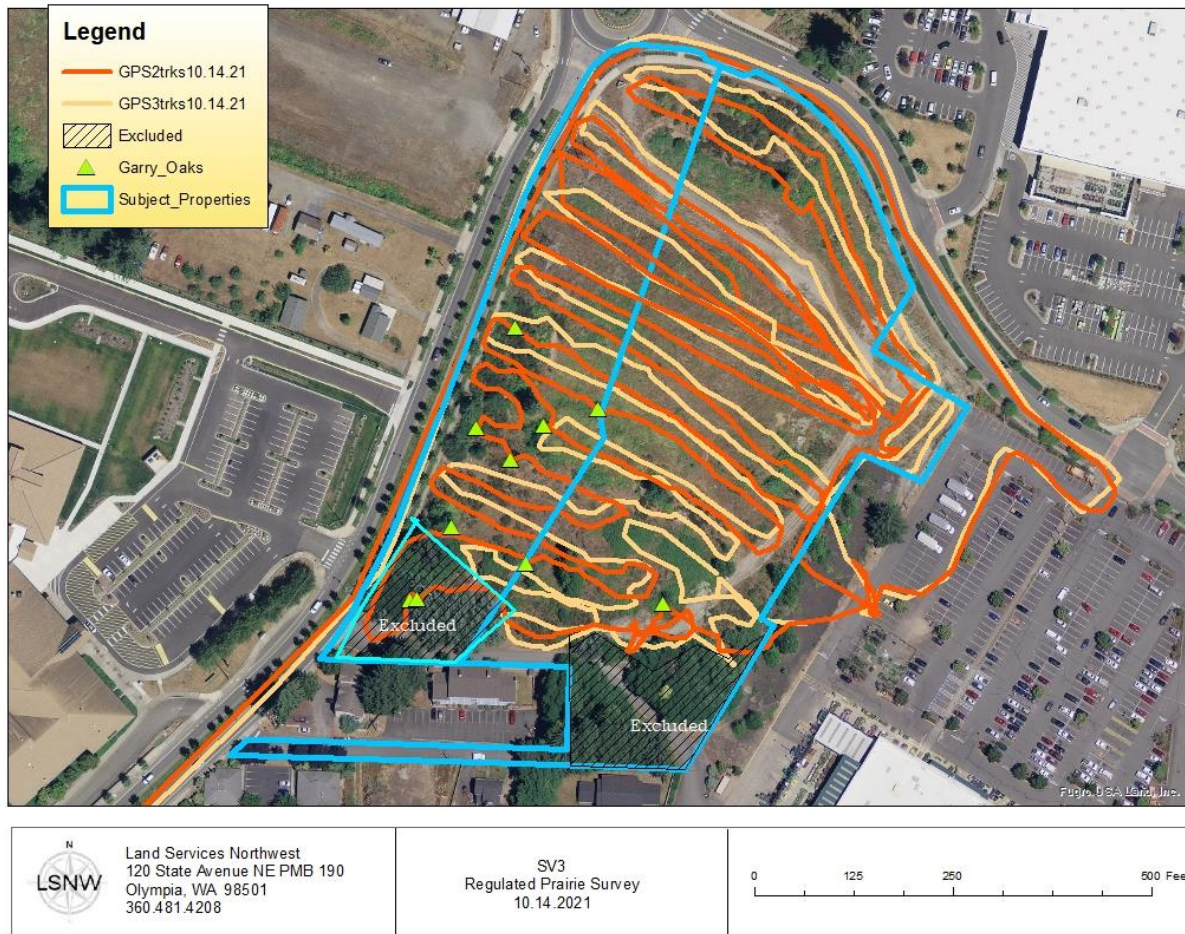
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Appendix C

MPG Survey Form and Transect Maps







2020 Thurston County Mazama Pocket Gopher Screening Field Form Site Visit Date: 9.14.2021

Site Name and Parcel #	Parcel # 12703240403 and 12703240404 Project #: Site/Landowner: Kingswood Capital Inc.
How were the data collected? (circle the method for each)	Transect: Trimble <u>Garmin</u> Aerial Mounds Trimble Garmin Aerial Notes: _____
Field Team Personnel: (Indicate all staff present, CIRCLE who filled out form)	Name: Alex Callender Name: <u>Susan Callender</u> Name:
Others onsite (name/affiliation)	
Site visit # (CIRCLE all that apply)	<u>1st</u> 2 nd Unable to screen Notes:
Do onsite conditions preclude the need for further visits?	Yes <u>No</u> Dense woody cover that encompasses the entire site (trees/shrubs) that appears to preclude any potential MPG use. Impervious Compacted Graveled Flooded Other _____ Notes:
Describe visibility for mound detection:	Poor Fair <u>Good</u> Notes:
Request mowing? (CIRCLE and DESCRIBE WHERE MOWING IS NEEDED and SHOW ON AERIAL PHOTO)	<u>Yes</u> No N/A Notes: The area was mowed according to the protocol prior to the MPG surveys.

Mounds observed over the whole site are characteristic of:	MPG Mounds	Likely MPG Mounds	Indeterminate	Likely Mole Mounds	Mole Mounds
Quantify or describe amount of each type and approx. # of mounds <i>Group = 3 mounds or more</i>	0	0	0	0	20
No MPG mounds (circle)					
MPG mounds in GPS? (CIRCLE and DESCRIBE) If MPG mounds present, entered in GPS?	None All Most Some Notes: Yes No N/A				
Does woody vegetation onsite match aerial photo?	Yes No - describe differences and show on parcel map/aerial:				
What portion(s) of the property was screened? (CIRCLE and DESCRIBE)	All Part - describe and show on parcel map/aerial: Portions of the parcels are excluded and shown on the transect maps in Appendix C				
Notes -	Describe, and show on parcel map/aerial if applicable:				
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	Yes No Reviewed by initials: AC, SC Notes:				

2020 Thurston County Mazama Pocket Gopher Screening Field Form Site Visit Date: 10.14.2021

Site Name and Parcel #	Parcel # 12703240403 and 12703240404 Project #: Site/Landowner: Kingswood Capital Inc.
How were the data collected? (circle the method for each)	Transect: Trimble <u>Garmin</u> Aerial Mounds Trimble Garmin Aerial Notes: _____
Field Team Personnel: (Indicate all staff present, CIRCLE who filled out form)	Name: Alex Callender Name: <u>Susan Callender</u> Name: _____
Others onsite (name/affiliation)	
Site visit # (CIRCLE all that apply)	1 st <u>2nd</u> Unable to screen Notes: _____
Do onsite conditions preclude the need for further visits?	Yes <u>No</u> Dense woody cover that encompasses the entire site (trees/shrubs) that appears to preclude any potential MPG use. Impervious Compacted Graveled Flooded Other _____ Notes: _____
Describe visibility for mound detection:	Poor Fair <u>Good</u> Notes: _____
Request mowing? (CIRCLE and DESCRIBE WHERE MOWING IS NEEDED and SHOW ON AERIAL PHOTO)	<u>Yes</u> No N/A Notes: _____ The area was mowed according to protocol prior to the gopher surveys.

Mounds observed over the whole site are characteristic of:	MPG Mounds	Likely MPG Mounds	Indeterminate	Likely Mole Mounds	Mole Mounds
Quantify or describe amount of each type and approx. # of mounds <i>Group = 3 mounds or more</i>	0	0	0	0	20
	No MPG mounds (circle)				
MPG mounds in GPS? (CIRCLE and DESCRIBE) If MPG mounds present, entered in GPS?	None All Most Some Notes: Yes No (N/A)				
Does woody vegetation onsite match aerial photo?	(Yes) No - describe differences and show on parcel map/aerial:				
What portion(s) of the property was screened? (CIRCLE and DESCRIBE)	All (Part) describe and show on parcel map/aerial: Portions of the parcels are excluded and shown on the transect maps in Appendix C				
Notes -	Describe, and show on parcel map/aerial if applicable:				
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	(Yes) No Reviewed by initials: AC, SC Notes:				

Appendix D

CAO Prairie Data Sheet

2019 Thurston County Critical Areas Ordinance (CAO) Prairie Screening Data Sheet

Parcel Number: 81300800000	CAO prairie criteria met?	Yes or <input checked="" type="radio"/> No
Property Owner: Vander Linden Project	Mima mounds present?	Yes or <input checked="" type="radio"/> No
Surveyor(s): Alex and Susan Callender	Oaks (<i>Quercus garryana</i>) present?	<input checked="" type="radio"/> Yes or No
Date: 9.14.21 and 10.14.2021	Mature:	
Composition of Vegetation:	Sapling:	
	Seedling:	

X Target species	Class* (circle)
<i>Apocynum androsaemifolium</i>	1 2 3 4 5 N/A
<i>Balsamorhiza deltoidea</i>	Present / Absent
<i>Bistorta bistortoides</i>	Present / Absent
<i>Brodiaea coronaria</i>	1 2 3 4 5 N/A
<i>Camassia leichtlinii</i>	1 2 3 4 5 N/A
<i>Camassia quamash</i>	Present / Absent
<i>Carex densa</i>	Present / Absent
<i>Carex feta</i>	1 2 3 4 5 N/A
<i>Carex inops</i> ssp. <i>inops</i>	1 2 3 4 5 N/A
<i>Carex tumulicola</i>	1 2 3 4 5 N/A
<i>Carex unilateralis</i>	1 2 3 4 5 N/A
<i>Castilleja hispida</i>	1 2 3 4 5 N/A
<i>Castilleja levisecta</i>	Present / Absent
<i>Danthonia californica</i>	1 2 3 4 5 N/A
<i>Delphinium menziesii</i>	1 2 3 4 5 N/A
<i>Delphinium nuttallii</i>	1 2 3 4 5 N/A
<i>Deschampsia cespitosa</i>	1 2 3 4 5 N/A
<i>Deschampsia danthonioides</i>	1 2 3 4 5 N/A
<i>Dodecatheon hendersonii</i>	1 2 3 4 5 N/A
<i>Downingia yina</i>	1 2 3 4 5 N/A
<i>Erigeron speciosus</i>	1 2 3 4 5 N/A
<i>Eriophyllum lanatum</i>	Cover: ___ m ² N/A
<i>Eryngium petiolatum</i>	Present / Absent
<i>Festuca roemerii</i> (F. <i>idahoensis</i>)	1 2 3 4 5 N/A
<i>Fragaria virginiana</i>	Cover: <u>3</u> m ² N/A
<i>Fritillaria affinis</i>	1 2 3 4 5 N/A
<i>Hieracium scouleri</i>	1 2 3 4 5 N/A
<i>Hosackia pinnata</i> (<i>Lotus pinnatus</i>)	Present / Absent
<i>Koeleria macrantha</i> (K. <i>cristata</i>)	1 2 3 4 5 N/A
<i>Leptosiphon bicolor</i> (<i>Linanthus b.</i>)	1 2 3 4 5 N/A
<i>Lomatium bradshawii</i>	Present / Absent
<i>Lomatium nudicaule</i>	1 2 3 4 5 N/A
<i>Lomatium triternatum</i>	1 2 3 4 5 N/A
<i>Lomatium utriculatum</i>	Present / Absent

<i>Lupinus albicaulis</i>	1 2 3 4 5 N/A
<i>Lupinus lepidus</i> var. <i>lepidus</i>	1 2 3 4 5 N/A
<i>Lupinus polyphyllus</i>	1 2 3 4 5 N/A
<i>Micranthes integrifolia</i> (<i>Saxifraga i.</i>)	Present / Absent
<i>Micranthes oregana</i> (<i>Saxifraga o.</i>)	1 2 3 4 5 N/A
<i>Microseris laciniata</i>	Present / Absent
<i>Perideridia gairdneri</i>	1 2 3 4 5 N/A
<i>Plagiobothrys figuratus</i>	1 2 3 4 5 N/A
<i>Plectritis congesta</i>	Present / Absent
<i>Polemonium carneum</i>	Present / Absent
<i>Potentilla gracilis</i>	Present / Absent
<i>Ranunculus alismifolius</i>	1 2 3 4 5 N/A
<i>Ranunculus occidentalis</i>	Present / Absent
<i>Ranunculus orthorhynchus</i>	1 2 3 4 5 N/A
<i>Sericocarpus rigidus</i>	Present / Absent
<i>Sidalcea malviflora</i> var. <i>virgata</i>	Present / Absent
<i>Silene scouleri</i>	Present / Absent
<i>Sisyrinchium idahoense</i>	1 2 3 4 5 N/A
<i>Solidago missouriensis</i>	1 <u>2</u> 3 4 5 N/A
<i>Solidago simplex</i> (S. <i>spathulata</i>)	1 2 3 4 5 N/A
<i>Toxicoscordion venenosum</i> var. <i>venenosum</i> (<i>Zigadenus venenosus</i>)	1 2 3 4 5 N/A
<i>Trifolium willdenowii</i> (T. <i>tridentatum</i>)	1 2 3 4 5 N/A
<i>Triteleia grandiflora</i>	1 2 3 4 5 N/A
<i>Triteleia hyacinthina</i>	1 2 3 4 5 N/A
<i>Veratrum californicum</i>	1 2 3 4 5 N/A
<i>Veratrum viride</i>	1 2 3 4 5 N/A
<i>Viola adunca</i>	1 2 3 4 5 N/A
<i>Viola praemorsa</i> var. <i>nuttallii</i>	1 2 3 4 5 N/A

*Species Count Class:

1 = < 25
 2 = 25 - 49
 3 = 50 - 74
 4 = 75 - 100
 5 = >100

Prairie Plant Manual:

<https://www.thurstoncountywa.gov/planning/planningdocuments/cao-prairie-plant-manual-4.23.2018.pdf>

Non-CAO vegetation

Species or codons (i.e. "HYPRAD" for <i>Hypochaeris radicata</i>)	Notes	No real density of prairie species
1 Narrow leafed plantain (<i>Plantago lanceolata</i>)		
2 White Clover (<i>Trifolium repens</i>)		
3 Trailing blackberry (<i>Rubus ursinus</i>)		
4 Velvetgrass (<i>Holcus lanatus</i>)		
5 Common dandelion (<i>Taraxacum officinale</i>)		
6 Ox eye daisy (<i>Leucanthemum vulgare</i>)		
7 Himalayan blackberry (<i>Rubus armeniacus</i>)		
8 Red fescue (<i>Festuca rubra</i>)		
9 Orchard Grass (<i>Dactylis glomerata</i>)		
10 Scotch broom (<i>Cytisus scoparius</i>)		
11 St. johnswort (<i>Hypericum perforatum</i>)		
12 Wild carrot (<i>Daucus carota</i>)		
13 Birds-foot trefoil (<i>Lotus corniculatus</i>)		
14 Hairy cats ear (<i>Hypochaeris radicata</i>)		
15		

Prairie Habitat Criteria: If at any point at least three target species, totaling in general at least 25 plants each are encountered within about 5 meters of each other (WDFW 2015), the area in question meets the criteria to be established as occurrence of prairie. For certain plants such as WNHP rare plants (indicated here in bold), or species which serves as nectar or host plants for both TCB and either SCC or SGCN butterflies (indicated here with underline), presence is enough to meet prairie habitat criteria for such species, even if their count is less than 25 individual plants. CAO wet and dry prairie plant lists can be found in Tables 24.25-7 and 24.25-8, respectively. More info available at: <https://www.thurstoncountywa.gov/planning/Pages/hcp-prairie-review.aspx>

Mima mounds and oak habitat definitions can be found in TCC 24.03.010



Land Services Northwest
120 State Avenue NE PMB190
Olympia, WA 98501
landservicesnw@gmail.com
360.481.4208

October 31, 2022

Trevor Colby
trevor@kciwa.com

Re: Kingswood Drive Mazama Pocket Gopher and Regulated Prairie Reconnaissance Survey

Per your request, Land Services Northwest performed a Mazama Pocket Gopher and Regulated Prairie survey on October 31, 2022 on the 5.76-acre and 3.24-acre parcel numbers 12703240403 and 12703240404 at 1401 KINGSWOOD DR SW and 1551 KINGSWOOD DR SW, with the legal descriptions of Section 03 Township 17 Range 2W Quarter NE NW & SE NW TR B BLA03744 3500815 EXCEPT PTN DEDICATED TO CITY OF TUMWATER PER AFN 3539066 and Section 03 Township 17 Range 2W Quarter NE NW BLA027432 TR D Document 3472425 EXC PTN TO CITY OF TUMWATER PER AFN:3539066; EXC PTN FOR RD PER AFN:3991167; ALSO EXC PTN FOR RD PER AFN:4158266 in the City of Tumwater, WA.

The purpose of this survey is to reconfirm the property remains unoccupied as depicted in the study submitted to the City of Tumwater in October 2021 (no Mazama Pocket Gopher indicators or regulated prairie).

Current Conditions

The 5.76-acre and 3.24-acre parcels are undeveloped vacant fields with uneven terrain and three large dirt piles. There are large retail stores to the north and east, small commercial businesses to the south and a school, single family residences and a commercial business to the west.

Methods

Land Services Northwest conducted a single survey on October 29, 2022, walking the area in 5 meter transects looking for signs of the MPG and regulated prairie in a modified USFWS protocol (USFWS, 2018) with the modification that we conducted one site visit for the verification of a previous absence determination.

Conditions

The fields were mowed in the 2021 season and the grass had not grown out much this season. The property is relatively flat with three large soil mounds in the Southeast and Southwest portions of the property. These mounds have blackberries that have been mowed so traversing the mounds was not too difficult and the ground was visible in these areas.

The rainfall for the fall has just begun (**Appendix C**). There was a light rain during the survey that was not accumulating in puddles or affecting the shape of the mounds, but earlier rains were quite heavy and older mounds were no longer discernable as the area has a fine sandy loam that does not hold up well in wet conditions. There were plenty of new mounds, but they were all obviously mole mounds as they were round clumpy and typically showed in a linear fashion.

Results

No Mazama Pocket Gophers mounds were found. The regulated prairie plant list remains the same as submitted in 2021. No regulated prairie was found. A map of the Garry oaks was submitted in 2021.

Appendix A

Pictures



Kingswood
10.30.2022 05:14 PM
1401 Kingswood Dr SW, Tumwater, WA 98512, USA



Kingswood
10.30.2022 05:15 PM
1401 Kingswood Dr SW, Tumwater, WA 98512, USA

Rain Drenched Older Mound (Some Clumping Visible)



Typical Conditions On site





Newer mounds found near older mound below



Older Mounds



Kingswood
10.30.2022 05:24 PM
5945 Littlerock Rd SW, Tumwater, WA 98512, USA



Kingswood
10/30/2022 05:26 PM
5945 Littlerock Rd SW, Tumwater, WA 98512, USA

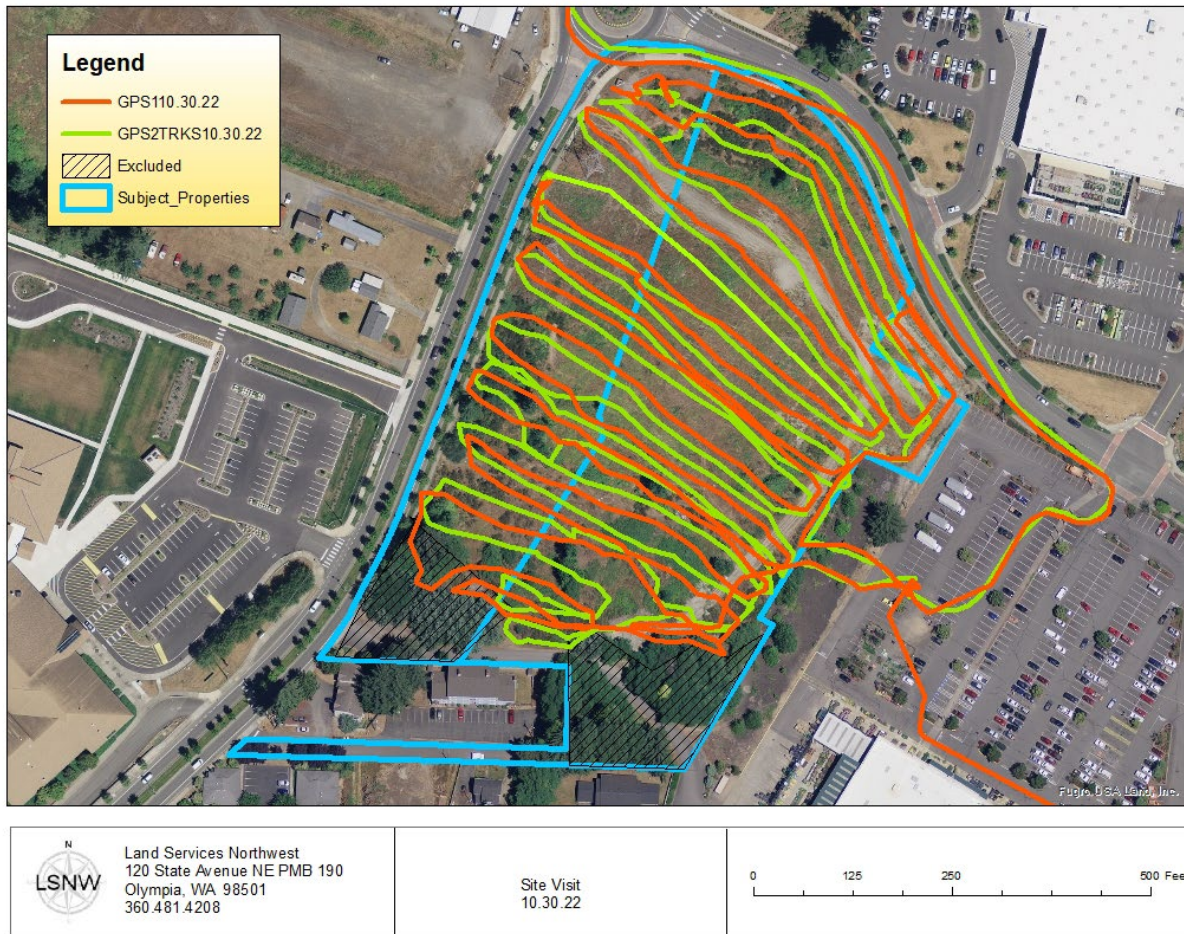




Kingswood
10.30.2022 06:13 PM
1536 Bloomingdale Ln SW, Tumwater, WA 98512, USA

Appendix B

Transect Map and Data Sheet



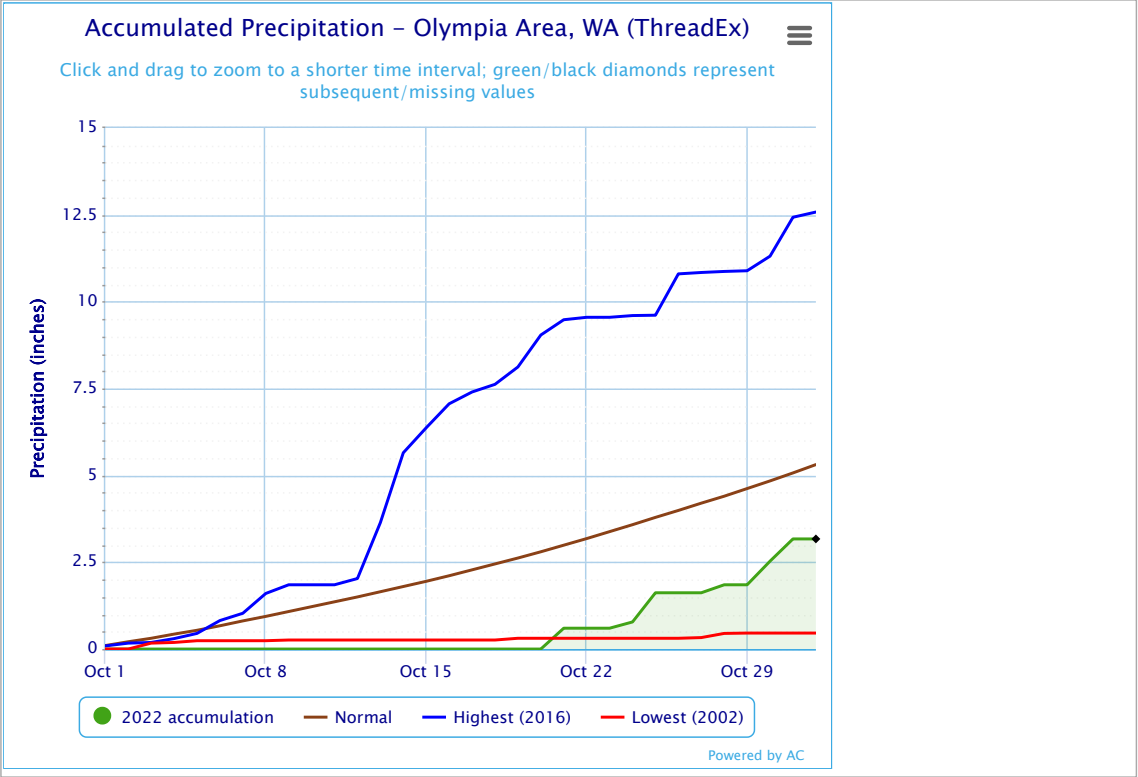
Note: Unforested area to Southwest and Northwest
has a Driving Surface

Site Name and Parcel #	Parcel #: <u>12703240403 and 12703240404</u> Project #: _____ Site/Landowner: <u>Kingswood</u>
How were the data collected? (circle the method for each)	Transect: Trimble <u>Garmin</u> Aerial Mounds Trimble Garmin Aerial Notes: _____
Field Team Personnel: (Indicate all staff present, CIRCLE who filled out form)	Name: Alex Callender Name: <u>Susan Callender</u> Name: _____
Others onsite (name/affiliation)	
Site visit # (CIRCLE all that apply)	<u>1st</u> 2 nd Unable to screen Notes: Site visit to verify no changes from 2021 MPG Report.
Do onsite conditions preclude the need for further visits?	Yes <u>No</u> Dense woody cover that encompasses the entire site (trees/shrubs) that appears to preclude any potential MPG use. Impervious Compacted Graveled Flooded Other _____ Notes: _____
Describe visibility for mound detection:	Poor Fair <u>Good</u> Notes: _____
Request mowing? (CIRCLE and DESCRIBE WHERE MOWING IS NEEDED and SHOW ON AERIAL PHOTO)	Yes <u>No</u> N/A Notes: _____

Mounds observed over the whole site are characteristic of:	MPG Mounds	Likely MPG Mounds	Indeterminate	Likely Mole Mounds	Mole Mounds
Quantify or describe amount of each type and approx. # of mounds <i>Group = 3 mounds or more</i>	0	0	0	0	50
No MPG mounds (circle)					
MPG mounds in GPS? (CIRCLE and DESCRIBE) If MPG mounds present, entered in GPS?	<input checked="" type="radio"/> None All Most Some Notes: Yes No N/A				
Does woody vegetation onsite match aerial photo?	<input checked="" type="radio"/> Yes No - describe differences and show on parcel map/aerial:				
What portion(s) of the property was screened? (CIRCLE and DESCRIBE)	All <input checked="" type="radio"/> Part describe and show on parcel map/aerial: There are two small excluded areas that are identified on the transect map.				
Notes -	Describe, and show on parcel map/aerial if applicable:				
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	<input checked="" type="radio"/> Yes No Reviewed by initials: <u>AC</u> <u>SC</u> ____ ____ Notes:				

Appendix C

NOAA Precipitation Data



Note regarding subsequent/missing values

Alex Baruch

From: Alex Callender <landservicesnw@gmail.com>
Sent: Wednesday, November 2, 2022 2:41 PM
To: Tyrell Bradley
Cc: Trevor Colby; Alex Baruch
Subject: Re: TUM 22-0234 Kingswood Commercial - Gopher Memo
Attachments: Colby MPG Survey Memo11.1.2022rev.pdf

Alex,

As Tyrell mentioned, we worked hard to get this done during the survey season.

Typically, it is not necessary to show the precipitation record, however, I wanted to show that the rain had started to fall and that was the reason some of the mole mounds that occur in the fine sandy soils appear washed out. Fortunately, there were plenty of fresh round clumpy mole mounds throughout the property to establish that the area was occupied by moles, not Mazama pocket gophers.

Thank you for the review on this project. I have attached the precipitation record to the report.

Sincerely,

On Wed, Nov 2, 2022 at 2:13 PM Tyrell Bradley <tbradley@ldccorp.com> wrote:

Hello Alex (Callendar),

Please see the comment highlighted below from Alex Baruch at the city of Tumwater, are you able to provide comment/clarification back on this?

Thank you,

Tyrell

Tyrell Bradley, PE

Principal Engineer

LDC, Inc.

Cell: 360-878-0678

tbradley@ldccorp.com

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From: Alex Baruch <ABaruch@ci.tumwater.wa.us>
Sent: Wednesday, November 2, 2022 2:10 PM
To: Tyrell Bradley <tbradley@ldccorp.com>
Cc: Trevor Colby <trevor@kciwa.com>
Subject: RE: TUM 22-0234 Kingswood Commercial - Gopher Memo

CAUTION: This email originated from outside of LDC. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Tyrell,

Thank you for coordinating the quick turnaround, I have added the document to the file. Briefly looking through it the last page is the Appendix C NOAA Precipitation Data cover sheet but I did not see any data included as page 20. Not an issue whatsoever, I just wanted to make sure it is included if it is intended to be included. I will follow-up with the red-lines in a separate email.

Sincerely,

Alex Baruch | he/him

Associate Planner, Community Development

City of Tumwater

555 Israel Rd SW | Tumwater, WA 98501

(360) 754-4180 | ABaruch@ci.tumwater.wa.us

www.ci.tumwater.wa.us

From: Tyrell Bradley <tbradley@ldccorp.com>
Sent: Wednesday, November 2, 2022 2:04 PM
To: Alex Baruch <ABaruch@ci.tumwater.wa.us>
Cc: Trevor Colby <trevor@kciwa.com>
Subject: TUM 22-0234 Kingswood Commercial - Gopher Memo

Hello Alex,

We moved heaven and earth to get another walk on the 31st....everything looked good and attached is the report from Alex Callendar. I will be giving you a call this week to discuss some of the permitting strategy on this project, we are excited to get through hearing as soon as possible.

Thank you,

Tyrell

Tyrell Bradley, PE

Principal Engineer

LDC, Inc.

Cell: 360-878-0678

tbradley@ldccorp.com

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www.LDCCorp.com

--

Alexander Callender MS, PWS
Land Services NW

120 State Avenue NE #190
Olympia, WA 98501
360-481-4208