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28 September 2021

Evan Mann
PO BOX 73790
Puyallup, WA 98373

Reference: Henderson Boulevard Property
Subject: Mazama Pocket Gopher Screening to Satisfy City of Tumwater Permitting Requirements

Dear Evan Mann:

At your request, EnviroVector prepared this report to satisfy City of Tumwater requirements for Mazama pocket gopher screenings on the Subject Property (**Table 1; Figure 1**).

Table 1. Parcels Comprising Subject Property

No#	Property Address	Parcel Number	Section Township Range	Property Size (Acres)
1	---	12701320105	Section 02 Township 17N Range 2W	0.34
2	---	79300000101		4.77
3	---	79300000100		4.62
3 Parcels	Total Size			9.73 acres

The permitting jurisdiction is City of Tumwater.

1.0 INTRODUCTION

The Mazama pocket gopher is a Federally Threatened species protected under the Endangered Species Act and the City of Tumwater Code. Mazama pocket gopher screenings were performed by a qualified biologist certified by the US Fish and Wildlife Service (USFWS) for the purpose of satisfying the City of Tumwater (2018) Site Inspection Protocol and Procedures: Mazama Pocket Gopher (**Appendix E**).

A Mazama pocket gopher screening is necessary to comply with City of Tumwater Code and the Endangered Species Act.

2.0 METHODOLOGY

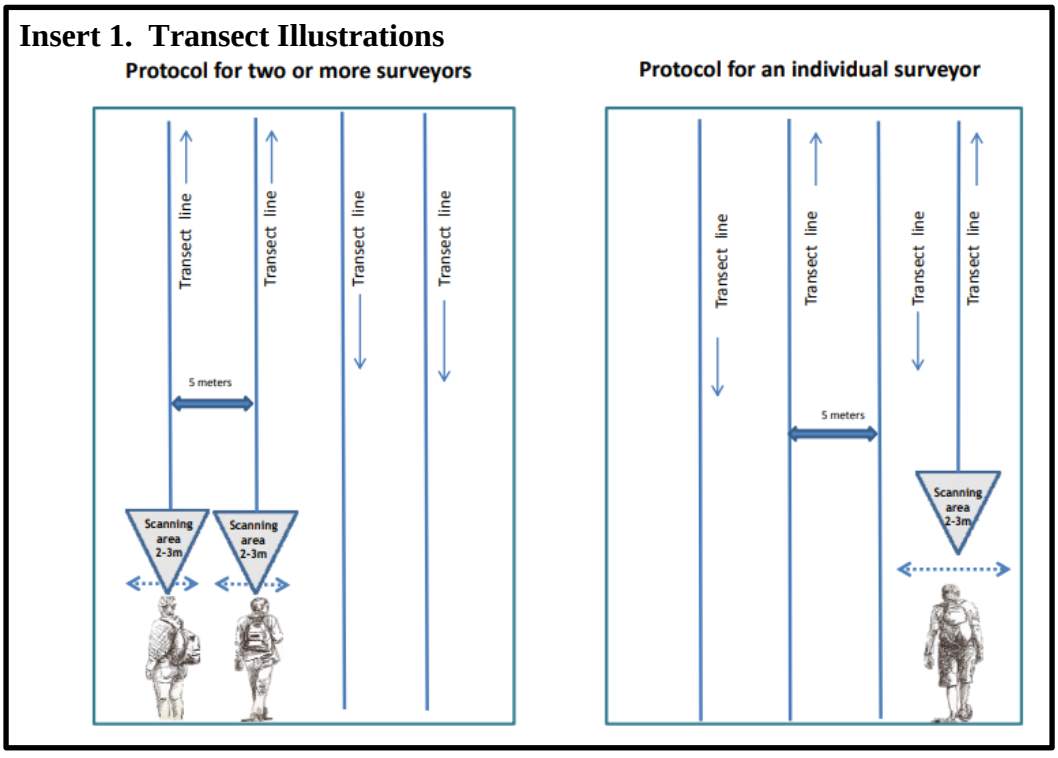
The Mazama pocket gopher screening was performed on 16 September 2020 and 27 October 2019 per City of Tumwater recommendations for two (2) site visits in compliance with the City of Tumwater (July 2018) Mazama Pocket Gopher Screening Protocol (**Appendix E**). The screening was performed within the USFWS prescribed survey window (June 1 through October 31).

In compliance with the USFWS and City of Tumwater (2018) Mazama Pocket Gopher Screening Protocols:

- The study has occurred during the prescribed work window of June 1 to October 31.
- A qualified biologist performed the screenings that has been trained and certified by the USFWS.
- The entire property was evaluated, not just the project footprint.
- The site was visited two (2) times at least thirty (30) days apart.
- Data was recorded on datasheets and provided in **Appendix F**.
- The areas of the property covered under the screening survey is illustrated in **Figure 2**.
- The ground was easily visible.

The site evaluation was conducted utilizing USFWS recommended protocol for one (1) surveyor (**Insert 1**). The search pattern had been performed along five (5) meter transects, including brushy and treed areas, examined for any evidence of mounding activity created by the Mazama pocket gopher.

Insert 1. Transect Illustrations



The detailed field methodology is in compliance with the City of Tumwater (2018) Site Inspection Protocol and Procedures: Mazama Pocket Gopher as follows:

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.
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.
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.
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.
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:
    a. At least one up-close photo to depict mound characteristics
    b. At least one photo depicting groups of mounds as a whole (when groups are encountered).
    c. At least one photo depicting gopher mounds with recognizable landscape features in the background, at each location where mounds are detected on a property
    d. Photos can be taken with the GPS unit or a separate, camera, preferably a camera with locational features (latitude, longitude)
    e. Photo point description or noteworthy landscape or other features to aid in relocation. Additional photos to be considered
    f. The approximate building footprint location from at least two cardinal directions.
    g. Landscape photos to depict habitat type and in some cases to indicate why not all portions of a property require gopher screening.
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.

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.
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 information shall be submitted in a form approved by the County.

Soils known to be associated with the Mazama pocket gopher are listed in **Insert 2**.

Insert 2. Mazama pocket gopher soils

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

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

3.0 BACKGROUND INFORMATION

3.1 Thurston County Geodatabase Soils

Two (2) soil types were identified on the subject property, Indianola loamy sand, 0 to 3 percent slopes, which is classified as "More preferred" gopher soils and Indianola loamy sand, 3 to 15 percent slopes "Less preferred" gopher soils (**Appendix B & C, Table 1**)

Table 1. Summary of Soil Preference

Soil Unit	Gopher Soil	Preference	Comments
Indianola loamy sand, 0 to 3% slopes	Yes	More preferred	Mapped on the eastern portion and the northwestern corner of the subject property
Indianola loamy sand, 3 to 15% slopes	Yes	Less preferred	Mapped on the ¾ of subject property

3.2 WDFW PHS Database

No priority habitats or species have been mapped on the subject property by the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species (PHS) database (**Appendix D**).

The Mazama pocket gopher has been mapped to occur south of the subject property.

4.0 FIELD RESULTS

4.1 Mazama Pocket Gopher Site Evaluation

No mounds exhibiting characteristics typically associated with the Mazama pocket gopher have been identified on the subject property during this study. Mole mounds were identified on the site (**Appendix A, Photos 3-9**). A summary of findings is provided in **Table 2**.

The site is made up of three (3) contiguous parcels. The eastern portion of the subject property contains building and internal roads. The western portion of the subject property is forested with herbaceous understory. Maintained lawn and grassy areas are located throughout the property (**Appendix A, Photos 1-12**). The parcel west of the subject property is currently under development (**Appendix A, Photos 3, 4, & 11**).

Mounds created by the Mazama pocket gopher: 1) are crescent or oddly-shaped, 2) contain a plugged tunnel opening that extends diagonally underground from the mound edge, 3) exhibit a fine texture, and are 4) typically in a scattered distribution.

Mole mounds have centrally-located tunnel entrances that extend vertically below the surface, blocky texture, an in-line distribution pattern, and have a conical shape.

Table 2. Summary of Results

Site Visit	Date of Visit	Gopher Occurrence Observed	Comments
1st	7 July 2021	No	Site consists of buildings, maintained grass lawn, and forest
2nd	9 August 2021	No	Site consists of buildings, maintained grass lawn, and forest

4.2 Mazama Pocket Gopher Habitat Evaluation

Potential Mazama pocket gopher habitat occurs on the subject property and in the vicinity. Areas of flat grassland dominated by European pasture grasses is mapped as gopher soils.

5.0 CONCLUSION

This Mazama pocket gopher summary report was prepared to satisfy the Thurston County Mazama pocket gopher screening requirements and to comply with the City of Tumwater (2018) Site Inspection Protocol and Procedures: Mazama Pocket Gopher.

The entire subject property was evaluated for the Mazama pocket gopher on 7 July 2021 and on 9 August 2021 in accordance with the latest version of City of Tumwater (2018) Site Inspection Protocol and Procedures: Mazama Pocket Gopher. The site evaluation was performed within the prescribed survey window (June 1 through October 31).

Two (2) soil types were identified on the subject property, Indianola loamy sand, 0 to 3 percent slopes, which is classified as “More preferred” gopher soils and Indianola loamy sand, 3 to 15 percent slopes “Less preferred” gopher soils

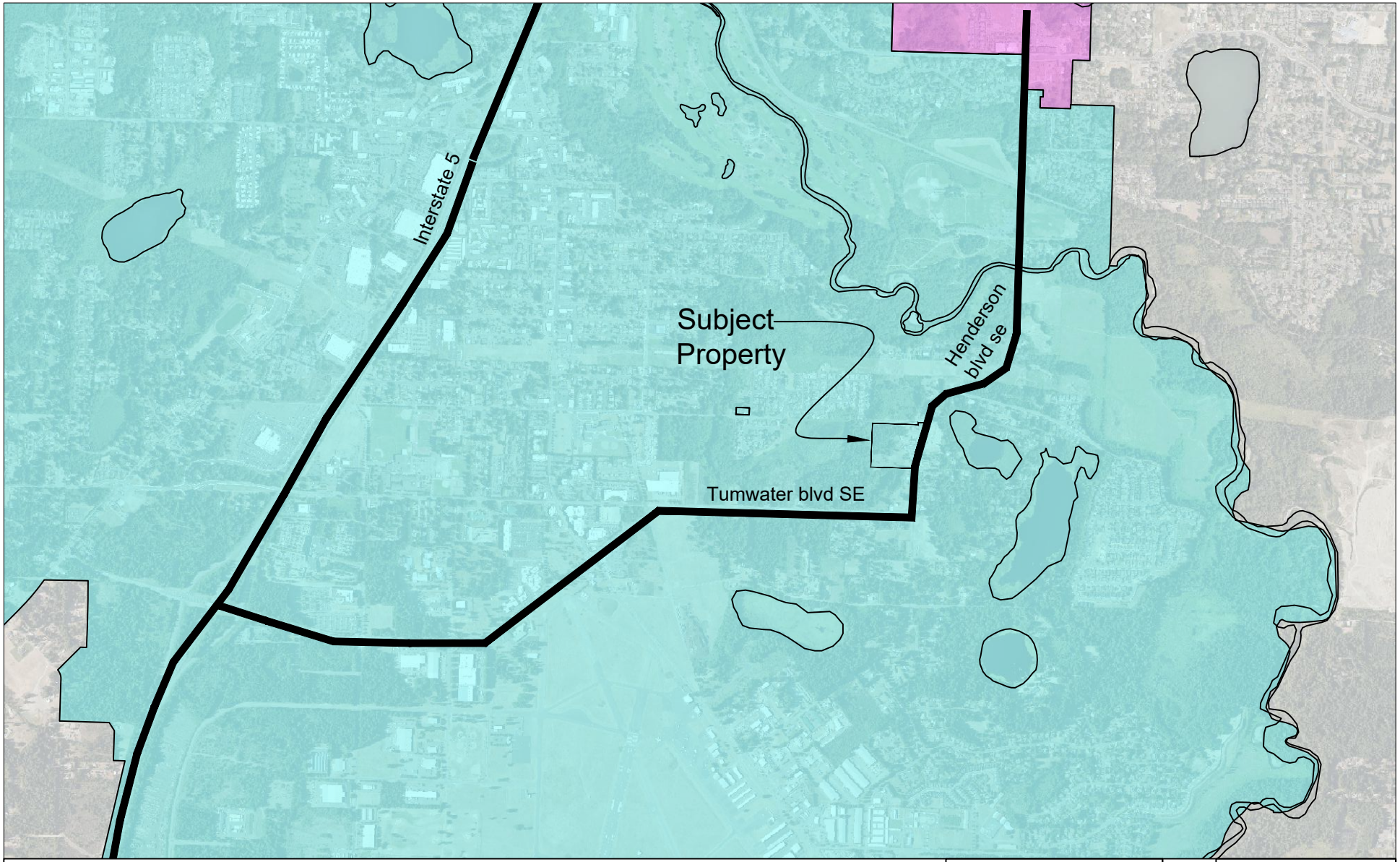
No mounds exhibiting characteristics typically associated with the Mazama pocket gopher have been identified on the subject property during this study.

If you have any questions or require further services, you can contact me at (360) 790-1559.

Sincerely,

Curtis Wambach, M.S.
Senior Biologist and Principal
EnviroVector

FIGURES



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City of Tumwater

City of Olympia

Figure 1

Henderson Property

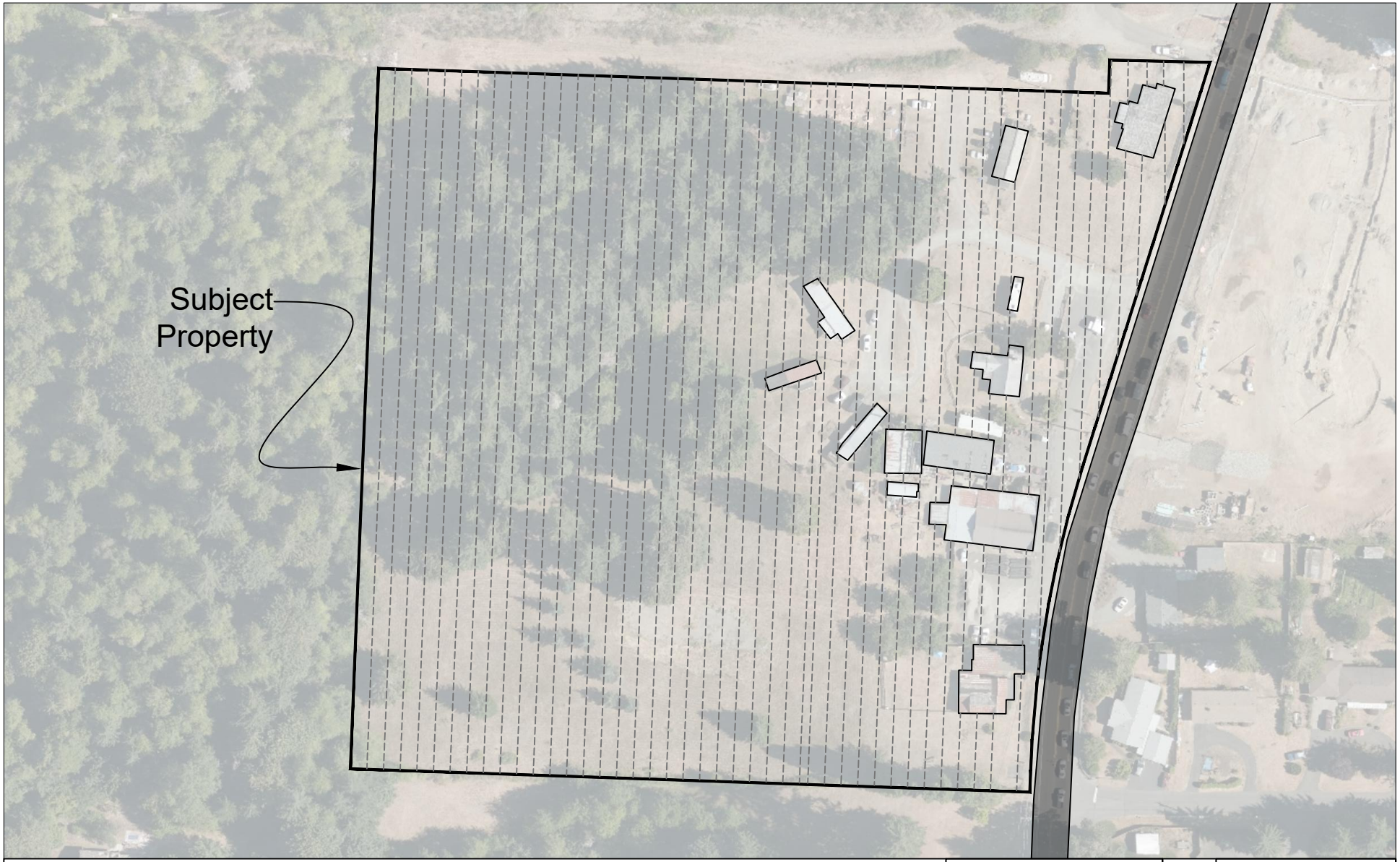
Vicinity Map

N

Scale: 1" = 2000'

0 2000'

6 October 2021



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----- Transects

Figure 2

Henderson Property

Gopher Screening

N

Scale: 1" = 125'

0 125'

6 October 2021

APPENDIX A

Photo Documentation

First Gopher Screening

Photo 1. A frontage of property

Photo 2. At frontage of property

Photo 3. Mole mound on western portion of property

Photo 4. Photo 3. Mole mound on western portion of property

Photo 5. Fmole mound on proeprty

Photo 6. Distinctive mole mound on proeprty

Second Gopher Screening

Photo 7. Mole mounds at frontage of property

Photo 8. Mole mounds at frontage of property

Photo 9. Mole mound near existing building

Photo 10. Grass lawn area, no mounds

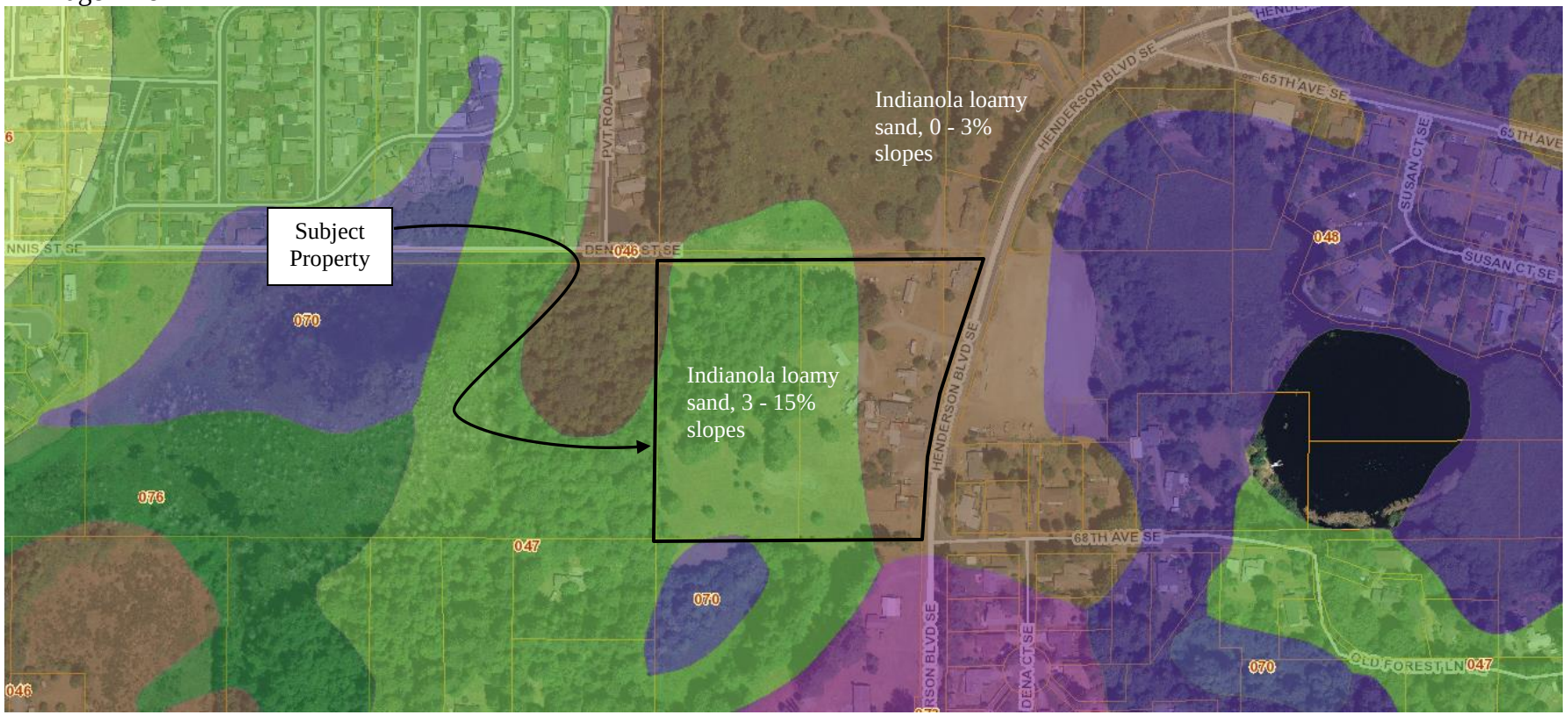
Photo 11. Western edge of property, near off-site development

Photo 12. Grass lawn area, no mounds

APPENDIX B

Thurston County Geodatabase

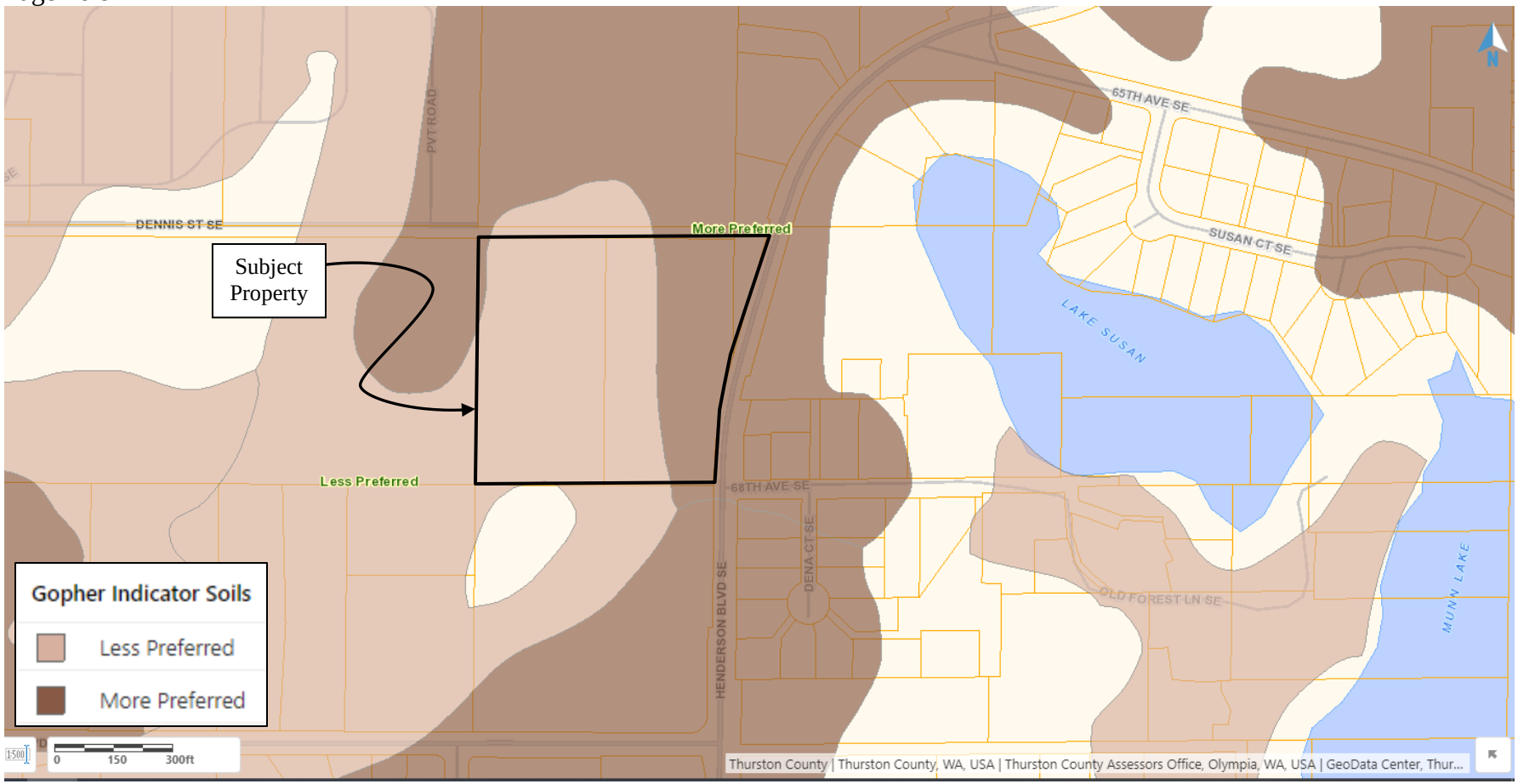
Soils


Subject Property
Indianola loamy sand, 0 - 3% slopes
Indianola loamy sand, 3 - 15% slopes
HENDERSON BLVD SE
65TH AVE SE
SUSAN CT SE
PVT ROAD
DENA CT SE
68TH AVE SE
OLD FOREST LN
070
046
047
048
076

APPENDIX C

Thurston County Geodatabase

Gopher Indicator Soils

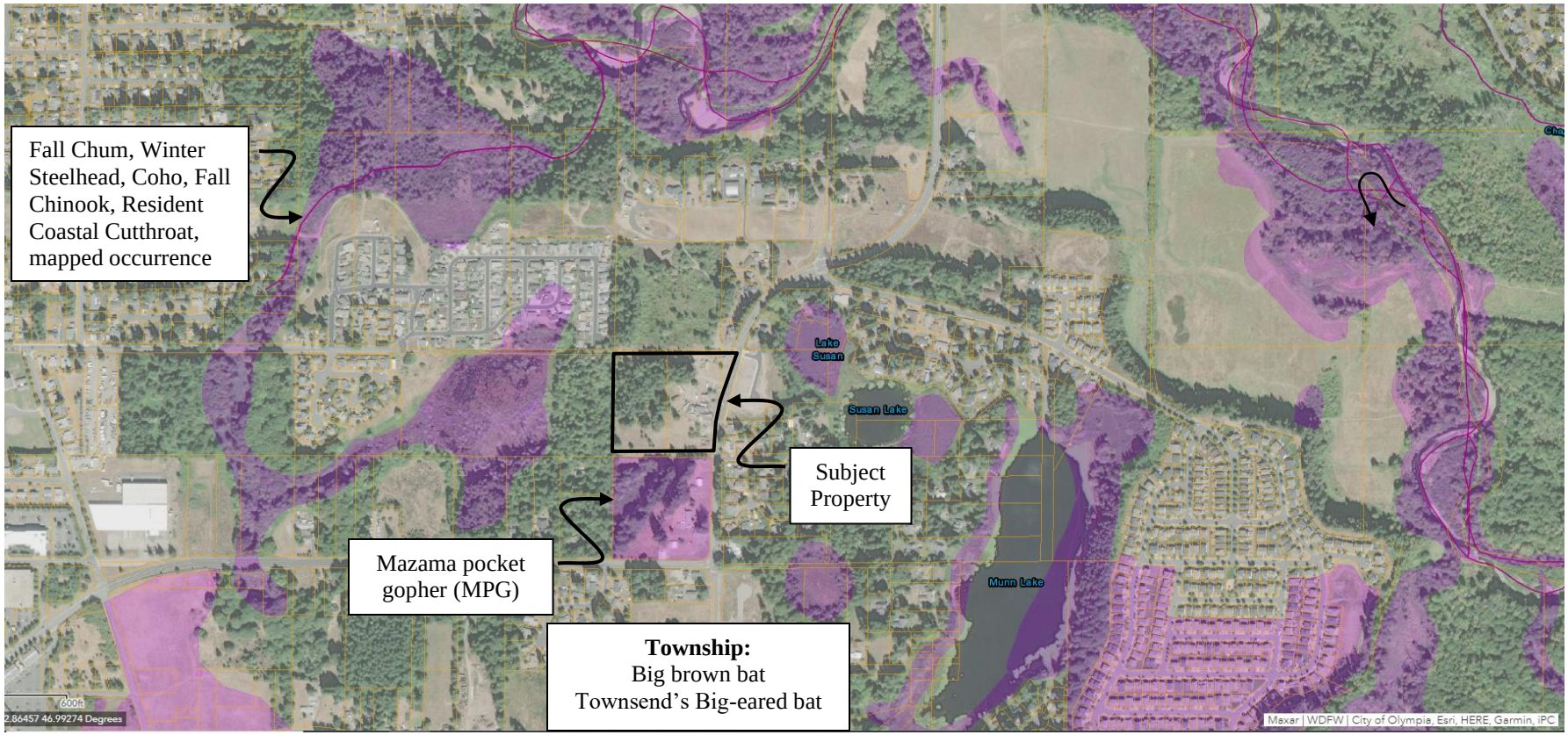

Subject Property
More Preferred
Less Preferred
DENNIS ST SE
PVT ROAD
65TH AVE SE
SUSAN CT SE
LAKE SUSAN
68TH AVE SE
DENA CT SE
HENDERSON BLVD SE
OLD FOREST LN SE
MUNN LAKE
Gopher Indicator Soils
Less Preferred
More Preferred
0
150
300ft
Thurston County | Thurston County, WA, USA | Thurston County Assessors Office, Olympia, WA, USA | GeoData Center, Thur...

APPENDIX D

Washington Department of Fish and Wildlife

Priority Habitat Species (PHS)

Database


Fall Chum, Winter Steelhead, Coho, Fall Chinook, Resident Coastal Cutthroat, mapped occurrence
Lake Susan
Susan Lake
Subject Property
Mazama pocket gopher (MPG)
Munn Lake
Township:
Big brown bat
Townsend's Big-eared bat
600ft
2.86457 46.99274 Degrees
Maxar | WDFW | City of Olympia, Esri, HERE, Garmin, iPC

APPENDIX E

City of Tumwater

Site Inspection Protocol and Procedures:

Mazama Pocket Gopher

COMMUNITY DEVELOPMENT DEPARTMENT

ADMINISTRATIVE DETERMINATION

TOPIC: Mazama Pocket Gopher Screening

APPROVED: Michael Matlock DATE: 7/25/18

Michael Matlock, AICP
Community Development Director

BACKGROUND: The Mazama Pocket Gopher (MPG) became a federally listed endangered species in April 2014. This memo addresses the City regulatory structure. The Endangered Species Act (ESA) is a separate regulatory structure from the Growth Management Act, the State statute the City does implement, so compliance with City regulations does not necessarily mean an applicant complies with the ESA. While the City routinely addresses questions from property owners on how to comply with its local development regulations, it does not do so with respect to the ESA.[1] ESA compliance is the property owner's responsibility.

FINDINGS: In implementing the City's critical areas ordinance (CAO), and based on analysis prepared by qualified professionals, staff have found that projects in certain areas and with certain features lack gopher habitat, so do not require CAO review by a qualified professional. While the CAO governs these issues, the below summarizes what staff have found to date.

DETERMINATION: Based on the findings above, Tumwater summarizes assessment findings for MPG presence as follows:

1. **Geographic** – Due to lack of habitat, no properties in the City north of Trosper Road have required CAO review.
2. **Vegetative Cover** – Project Sites, parcels, or portions of these sites with 30% or greater forested cover have not required CAO review, although where there are adjacent unforested and undeveloped lots exceeding 7,600 square feet (SF) in area, CAO review may be needed.
3. **Project Use Level** –
   a. Single-family, manufactured homes, and duplexes for lots 7,600 SF or less
      1) New or additions to single-family, manufactured homes, and duplexes – CAO review has typically not been required on existing lots 7,600 SF

[1] For land owners seeking guidance on ESA compliance, while the City cannot assist, see USFWS Memorandum, Guidance on Trigger for an Incidental Take Permit Under Section 10(a)(1)(B) of the Endangered Species Act Where Occupied Habitat or Potentially Occupied Habitat is Being Modified, issued April 26, 2018.

or less in size. Unforested and undeveloped lots exceeding 7,600 SF may require CAO review.

2) Developed lots surrounded by existing development (homes, streets, storm ponds, sidewalks, etc.) that are of a similar size have not required CAO review. This would not exclude sites on the periphery areas where adjacent lands are not developed at an urban density level.

3) Single-family lots vested under RCW 58.17 and/or TMC 15.44.040 will likely not require CAO review.

b. Commercial/Industrial/Institutional

1) New or additions to buildings proposed in areas with 30% or greater forested coverage, existing impervious surfaces or significantly disturbed pervious areas (i.e. evidence of compacted gravel, formal landscape areas or other scenarios that would exclude the proposed developed area as being defined as habitat) have typically not required CAO review.

4. **Approved United States Fish and Wildlife Service (USFWS) Avoidance/Mitigation Strategy** – Any projects that have consulted with USFWS and have a documented avoidance/mitigation strategy that is acceptable to USFWS can typically proceed with normal permitting.

5. **Site Screening** – Properties may be screened by a qualified professional. Alternately, USFWS may screen properties by arrangement between the property owner and USFWS. At least two screenings, no less than 30 days apart, between June 1 and October 31, are consistent with best available science to determine the presence or absence of MPG.

PRIOR GUIDANCE: This Administrative Determination supersedes and replaces the City's prior Administrative Determination on Mazama Pocket Gopher Screening Protocol dated October 31, 2017.

APPEAL: This code determination shall become effective on the above date. Any person affected by this determination may appeal this decision to the Tumwater Hearing Examiner pursuant to Chapter 18.62 of the Tumwater Municipal Code.

APPENDIX F

Datasheets

Sample Mazama Pocket Gopher Screening Field Form

Site Visit Date: 7 July 2021

If 2nd or 3rd site visit, date(s) of previous visits: 9 August 2021

Site Information	**Parcel #:** #12701320105, 79300000101, 79300000100 **Site/Landowner:** Soundbuilt Homes	
How were the data collected? (circle the method for each)	**Transect:** **(GPS)** **Aerial** **Mounds:** **(GPS)** **Aerial** **Notes:**	
Field team names: (Note who filled out form and others conducting screening)	Curtis Wambach	
Others onsite (name/affiliation)		
Site visit # (CIRCLE all that apply)	**(1st)** **2nd** **3rd**	**Notes:**
Do onsite conditions throughout the entire parcel preclude the need for MPG surveys? **(CIRCLE and DESCRIBE)**	**Yes** **(No)** **Dense woody cover (trees/shrubs) that appears to preclude any MPG use** **Impervious Compacted Graveled Flooded Slope** **Other_____** **Notes:**	
Describe ground visibility for mound detection: (CIRCLE and DESCRIBE)	**Poor Fair (Good) Notes:**	

	MPG Mounds	**Indeterminate**	**Mole Mounds**
Quantify or describe amount of MPG mounds and approx. # of mounds or groups of mounds (specify whether count is individual mounds or groups)	0	0	25
	No MPG mounds observed (CIRCLE)		

Sample Mazama Pocket Gopher Screening Field Form

Does woody vegetation onsite match aerial photo? (CIRCLE and DESCRIBE)	**(Yes)** **No – describe differences and show on parcel map/aerial:**
What portion of the property was screened? (CIRCLE and DESCRIBE)	**(All)** **Part - describe and show on parcel map/aerial:**
Notes	
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	**Yes No** **Reviewed by: ____ ____ ____ _____ _____** **Notes:**

Sample Mazama Pocket Gopher Screening Field Form

Site Visit Date: 7 July 2021

If 2nd or 3rd site visit, date(s) of previous visits: 9 August 2021

Site Information	**Parcel #:** #12701320105, 79300000101, 79300000100 **Site/Landowner:** Soundbuilt Homes	
How were the data collected? (circle the method for each)	**Transect:** **(GPS)** **Aerial** **Mounds:** **(GPS)** **Aerial** **Notes:**	
Field team names: (Note who filled out form and others conducting screening)	Julie Lewis/Curtis Wambach	
Others onsite (name/affiliation)		
Site visit # (CIRCLE all that apply)	**1st** **(2nd)** **3rd**	**Notes:**
Do onsite conditions throughout the entire parcel preclude the need for MPG surveys? **(CIRCLE and DESCRIBE)**	**Yes** **(No)** **Dense woody cover (trees/shrubs) that appears to preclude any MPG use** **Impervious Compacted Graveled Flooded Slope** **Other_____** **Notes:**	
Describe ground visibility for mound detection: (CIRCLE and DESCRIBE)	**Poor Fair (Good) Notes:**	

	MPG Mounds	**Indeterminate**	**Mole Mounds**
Quantify or describe amount of MPG mounds and approx. # of mounds or groups of mounds (specify whether count is individual mounds or groups)	0	5	14
	No MPG mounds observed (CIRCLE)		

Sample Mazama Pocket Gopher Screening Field Form

Does woody vegetation onsite match aerial photo? (CIRCLE and DESCRIBE)	**(Yes)** **No – describe differences and show on parcel map/aerial:**
What portion of the property was screened? (CIRCLE and DESCRIBE)	**(All)** **Part - describe and show on parcel map/aerial:**
Notes	
Team reviewed and agreed to data recorded on form? (CIRCLE, and EXPLAIN if "No")	**Yes No** **Reviewed by: ____ ____ ____ _____ _____** **Notes:**