
MCALLISTER SPRINGS

THURSTON COUNTY, WASHINGTON

PRAIRIE PLANT SURVEY

Prepared By:



Curtis Wambach, M.S.
Senior Biologist and Principal



11 June 2022

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McAllister Springs property

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1.0 INTRODUCTION

1.1 Purpose

EnviroVector has been commissioned to prepare a Prairie Plant Survey on the subject property. This report is prepared to address the potential for regulated prairie plants and habitat onsite to satisfy Thurston County reporting requirements for a Prairie Plant Survey and Report.

1.2 Property Location

The 33.73-acre subject property is located on Marvin Road in Thurston County (**Figure 1; Table 1**).

Table 1. Parcels Comprising Subject Property

No#	Address	Parcel Number	Map Coordinates	Area
1	2402 MARVIN RD SE	11823430100	Section 23 Township 18 Range 1W	18.66
2	2623 WOODGROVE ST SE	11826110000		15.07
2 Parcels	Total Size			33.73 acres

Permitting jurisdiction is Thurston County.

1.3 Site Evaluation

EnviroVector performed a prairie plant survey on 26 May 2022.

2.0 METHODOLOGY

Prairie plant screening methodology generally follows the Thurston County (2022) Community Planning Field Screening Guidelines for Prairie Habitat. Under the development of the HCP and update of the Critical Areas Ordinance (CAO) Chapter 24.25.065 Thurston County Code (TCC), Thurston County provides a methodology to survey and a framework to regulate prairie habitat.

3.0 RESULTS

3.1 Thurston County Geodata Soils

Six (6) soil types are mapped on the subject property and four (4) classify as Prairie Soil by the Thurston County Geodata Center database (**Table 2; Appendix B; Insert 2**).

Table 2. Summary of Soil Preference

Soil Unit	Prairie Soil	Comments
Cagey loamy sand	Yes	Mapped on the Northwestern corner of the property
Indianola loamy sand, 0 to 3% slopes	Yes	Mapped on Eastern portion of the subject property
Indianola loamy sand 3 to 15% slopes	Yes	Mapped in central portion of the property
Indianola loamy sand, 15 to 30% slopes	No	Mapped on Southern corner of the property
Mukilteo muck, drained	No	Mapped on the Norther middle boarder of the property
Spana gravelly loam	Yes	Mapped on the Northwestern corner of the property

3.2 Field Results

EnviroVector performed Prairie Plant Survey on 26 May 2022. The survey results are summarized in **Table 3**.

Table 3. Summary of Prairie Plant Survey Results

Parcel	Prairie Species	Jurisdictional Prairie Habitat	Regulated
11823430100	None	No	No
11826110000	None	No	No

No prairie habitat, as defined under Thurston County Code (TCC) 24.03.010---*Definitions* and under Thurston County (2022) Community Planning Field Screening Guidelines for Prairie Habitat, has been identified on the subject property (**Inserts 1 & 3**). No target prairie plant species were identified on the subject property by the DNR Natural Heritage Database or during the prairie plant screenings.

Two (2) nonnative associated prairie plants were identified on the subject property, not included in the CAO target prairie plant list. Nonnative English plantain (*Plantago lanceolata*) and nonnative common vetch (*Vicia sativa*) were positively identified on the subject property during the prairie plant screening (**Appendix A, Photos 9 & 16**). These plants were not found in association with target prairie plant species and are scattered throughout a regularly maintained lawn (**Figure 2**).

Four (4) out of the 6 (six) soil types on the subject property are mapped as prairie soils. However, the majority of the property is forested or wetlands (**Appendix A, Photos 1-22**). The western and central portion of the subject property consists of European grasses and dense native and non-native shrubs with scattered trees.

No regulated potential prairie habitat was identified on the subject property by Agency databases or during the prairie plant screenings. Thereby, no habitat management plan is required for the subject property based on this information.

Insert 1. Prairie Definition Under TCC 24.03.010---Definitions.

"Prairie" or "westside prairie," means herbaceous, non-forested (forested means greater than or equal to sixty percent forest canopy cover) plant communities that can either take the form of a dry prairie where soils are well-drained or a wet prairie. In parts of the Puget Trough, prairies can sometimes be recognized by mounded topography commonly referred to as Mima Mounds. Mima Mounds are a unique geologic feature of prairie habitat in Thurston County.

"Prairie, dry" means prairies located in areas containing prairie vegetation. Although dry prairie can occur on other soils, typically it occurs on any one of the soils known to be associated with prairie (Table 24.25-6). Locations occurring on mapped prairie soils where the surface is impervious is not considered dry prairie. Certain vegetation characteristics typify dry prairie. These include the occurrence of diagnostic grasses, sedges, and forbs. Mosses, lichens, and bare ground may also be found in the spaces between grass and forbs cover.

The presence of certain diagnostic plants is required to establish an occurrence of dry prairie. In particular, three of the diagnostic grasses, sedges, or forbs (Table 24.25-8) are required to establish the presence of dry prairie.

Shrubs such as black hawthorn (*Crataegus douglasii*), kinnikinnick (*Arctostaphylos uva-ursi*), and oval-leaf viburnum (*Viburnum ellipticum*) can be found at low densities within dry prairies. Some Oregon white oak (*Quercus garryana*) can also be present in native prairie (see Oak Habitat).

Native and nonnative invasive plants typically dominate most remaining prairie. Common invasive species are Scot's broom (*Cytisus scoparius*), colonial bentgrass (*Agrostis tenuis*), common velvetgrass (*Holcus lanatus*), tall oat-grass (*Arrhenatherum elatius*), and Kentucky bluegrass (*Poa pratensis*).

Douglas fir is also considered an invasive species with respect to prairie habitat. Other invasive grasses, forbs, and shrubs also may be present.

Marginal or fair condition areas may be dominated by non-native species with several native prairie species present (e.g. from Tables 24.25-7 and 24.25-8) or with a significant cover of native prairie species. Areas dominated by invasive species, such as Scot's broom (non-native shrub), can be restorable to prairie if they have native prairie species in the understory. Such marginal and restorable areas may have significant value if they are large in area, located close to prairies, or in a landscape that connects two or more prairies.

"Prairie, wet" means prairies located in areas containing prairie vegetation. Although wet prairie can occur on other soils, typically it occurs on any one of the soils where the surface topology and the groundwater table approach each other, and where local aquifers are present. Locations occurring on mapped prairie soils where the surface is impervious is not considered wet prairie. Wet prairies in the Puget Trough generally are found on glacial outwash soils that typically are limited to swales or low-gradient riparian areas. Three diagnostic grasses, sedges, or forbs from a combination of the wet prairie diagnostic species list (Table 24.25-7) and the dry prairie diagnostic species list (Table 24.25-8) are required to establish the presence of wet prairie. Areas dominated by invasive species, such as Scot's [Scotch] broom (non-native shrub), can be restorable to prairie if they have native prairie species in the understory.

Insert 2. Prairie Soils

Series Name	SCS Map Symbol #
Baldhill	5, 6, 7, 8
Cagey	20
Everett	32, 33
Grove	42
Indianola	46, 47
Nisqually	73, 74
Spana	109
Spanaway	110, 111, 112, 113, 114
Tenino	117

Insert 3. Prairie Definition in Thurston County (2022) Community Planning Field Prairie Screening Guidelines for Prairie Habitat

If at any point at least three different target species, totaling in general at least 25 plants each are encountered within 5 meters of each other (WDFW 2015), the area in question meets the criteria to be established as occurrence of prairie. For certain plant species, indicated in Figure 2, Tables 1. And 2. as WHNP rare plants, or as species which serve as nectar or host plants for both TCB and SCC or SGCN butterflies, presence is enough to meet prairie habitat criteria for such species, even if their count is less than 25 individual plants.

Table 4. List of Plants Identified in Area of Grass and Shrubs

Common Name	Scientific Name	Nativity	Target Prairie Plant
Beaked hazelnut	<i>Corylus cornuta</i>	Native	No
Bittercress	<i>Cardamine angulata</i>	Introduced	No
Black cottonwood	<i>Populus trichocarpa</i>	Native	No
English Hawthorne	<i>Crataegus monogyna</i>	Native	No
Cascara	<i>Frangula purshiana</i>	Native	No
Common Chickweed	<i>Stellaria media</i>	Introduced	No
English Ivy	<i>Hedera helix</i>	Introduced	No
Red sorrel	<i>Rumex acetosella</i>	Introduced	No
Common vetch	<i>Vicia Sativa</i>	Introduced	No
Clustered rose	<i>Rosa pisocarpa</i>	Native	No
Creeping buttercup	<i>Ranunculus repens</i>	Introduced	No
Douglas fir	<i>Pseudotsuga menziesii</i>	Native	No
English holly	<i>Ilex aquifolium</i>	Introduced	No
Enchanter's nightshade	<i>Circaea alpina</i>	Native	No
Inside out flower	<i>Vancouveria hexandra</i>	Native	No
Lady fern	<i>Athyrium filix-femina</i>	Native	No
Tall Oregon grape	<i>Mahonia aquifolium</i>	Native	No
Ocean spray	<i>Holodiscus discolor</i>	Native	No
Oregon white Oak	<i>Quercus garryana</i>	Native	No
Orchard grass	<i>Dactylis glomerata</i>	Introduced	No
Osoberry	<i>Oemleria cerasiformis</i>	Native	No
Oxeye daisy	<i>Leucanthemum vulgare</i>	Introduced	No
Pacific madrone	<i>Arbutus menziesii</i>	Native	No
Pacific trillium	<i>Trillium ovatum</i>	Native	No
Purple dead nettle	<i>Lamium pureum</i>	Introduced	No
Quaking aspen	<i>Populus tremuloides</i>	Native	No
Red Fescue grass	<i>Festuca rubra</i>	Introduced	No
Red huckleberry	<i>Vaccinium parvifolium</i>	Native	No
Reed canarygrass	<i>Phalaris arundinacea</i>	Introduced	No
Twisted stalk	<i>Streptopus amplexifolius</i>	Native	No
Salal	<i>Gaultheria shallon</i>	Native	No
Scotch broom	<i>Cytisus Scoparius</i>	Introduced	No
Serviceberry	<i>Amelanchier alnifolia</i>	Native	No
Small-flowered nemophila	<i>Nemophila parviflora</i>	Native	No
Snowberry	<i>Symphoricarpos albus</i>	Native	No
St Johns wort	<i>Hypericum perforatum</i>	Introduced	No
Star flower	<i>Lysimachia latifolia</i>	Native	No
Cleavers	<i>Galium aparine</i>	Native	No
Stinging nettle	<i>Urtica dioica</i>	Native	No

Table 4. List of Plants Identified on subject property (continued)

Common Name	Scientific Name	Nativity	Target Prairie Plant
Sweet vernalgrass	<i>Anthoxanthum odoratum</i>	Native	No
Sword fern	<i>Polystichum munitum</i>	Native	No
Tansy ragwort	<i>Jacobaea vulgaris</i>	Introduced	No
Thimbleberry	<i>Rubus parviflorus</i>	Native	No
Trailing blackberry	<i>Rubus ursinus</i>	Native	No
Velvet grass	<i>Holcus lanatus</i>	Introduced	No
Wild black gooseberry	<i>Ribes divaricatum</i>	Native	No
Wild chervil	<i>Anthriscus sylvestris</i>	Introduced	No
False lily of the valley	<i>Maianthemum dilatatum</i>	Native	No
Yellow and blue forget-me-not	<i>Myosotis discolor</i>	Introduced	No

4.0 REGULATORY CONSIDERATIONS

Per TCC 24.03.010, "Prairie" or "westside prairie," means herbaceous, non-forested (forested means greater than or equal to sixty percent ($\geq 60\%$) forest canopy cover) plant communities that can either take the form of a dry prairie where soils are well-drained or a wet prairie. The prairie plant screenings occurred during the prairie plant screening window, which is from mid-April through September. The survey was prepared by a team of qualified, professional biologists.

Applications for uses and activities on sites containing a habitat or species subject to this section require a Critical Areas report, prepared by a qualified professional, that evaluates the potential impacts of the proposed land use or activity on the habitat and/or species, as applicable. Critical Areas reports that pertain to important habitats and species may also be referred to as habitat management plans. The report shall be prepared in compliance with report requirements outlined in TCC 24.35.290.

5.0 CONCLUSION

No target prairie plant species were identified on the subject property during the site evaluation. No regulated prairie habitat has been identified on the subject property during the site evaluation. Thereby, based on the results of this study, no impacts to regulated prairie habitat would occur as a result of any potential land use on the subject property.

The majority of the subject property is mapped as prairie soils. However, historically, the subject property was forested and logged with a history of intensive disturbance. The eastern and southern portions of the subject property have reforested. The western and central portions of the subject property consist of European grasses and shrubs, which is the area of study focus. The northern portion of the wetland contains a wetland vegetated by monotypic reed canarygrass with a forested southern periphery.

No regulated potential prairie habitat was identified on the subject property by Agency databases or during the prairie plant screenings. An Oak Habitat Management Plan has been prepared separately for the subject property.

FIGURES



Figure 1. Vicinity Map



Figure 2. Map of subject property with transect lines, no target prairie plant species identified

APPENDIX A

Photographs



Photo 1. Red osier dogwood (*Cornus sericea*)



Photo 2. Creeping butter cup (*Ranunculus repens*) introduced



Photo 3. Tall Oregon grape (*Mahonia aquifolium*) native



Photo 4. Dusky cranesbill (*Geranium sanguineum*) introduced



Photo 5. Bull thistle (*Cirsium vulgare*) introduced



Photo 6. Wild black gooseberry (*Ribes divaricatum*) native



Photo 7. Clustered rose (*Rosa pisocarpa*) native



Photo 8. Twisted stalk (*Streptopus amplexifolius*)



Photo 9. Enchanter's nightshade (*Circaea alpina*) native

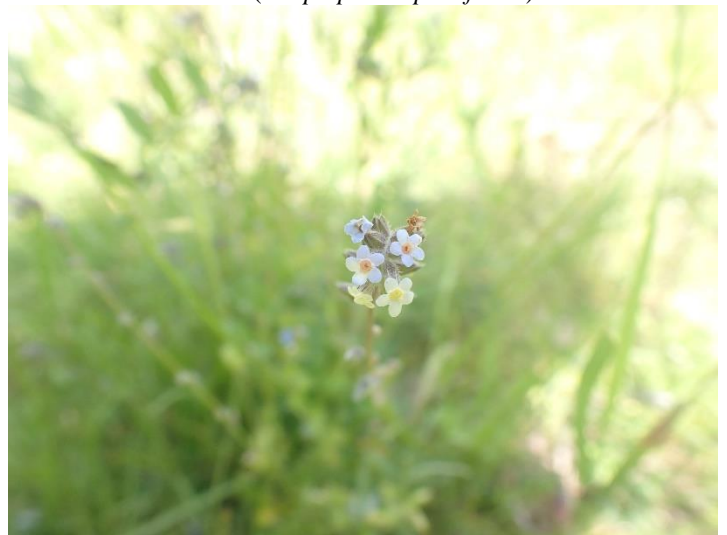


Photo 10. Yellow and blue forget-me-not (*Myosotis discolor*)



Photo 11. Vanilla Leaf (*Achlys triphylla*) native



Photo 12. Conifer forest on eastern and southern part of property



Photo 13. Dames rocket (*Hesperis matronalis*) introduced



Photo 14. Oregon white oak sapling (*Quercus garryana*) Native



Photo 15. Serviceberry (*Amelanchier alnifolia*)



Photo 16. Scotch broom (*Cytisus Scoparius*) introduced



Photo 17. Reed canarygrass (*Phalaris arundinacea*) Introduced

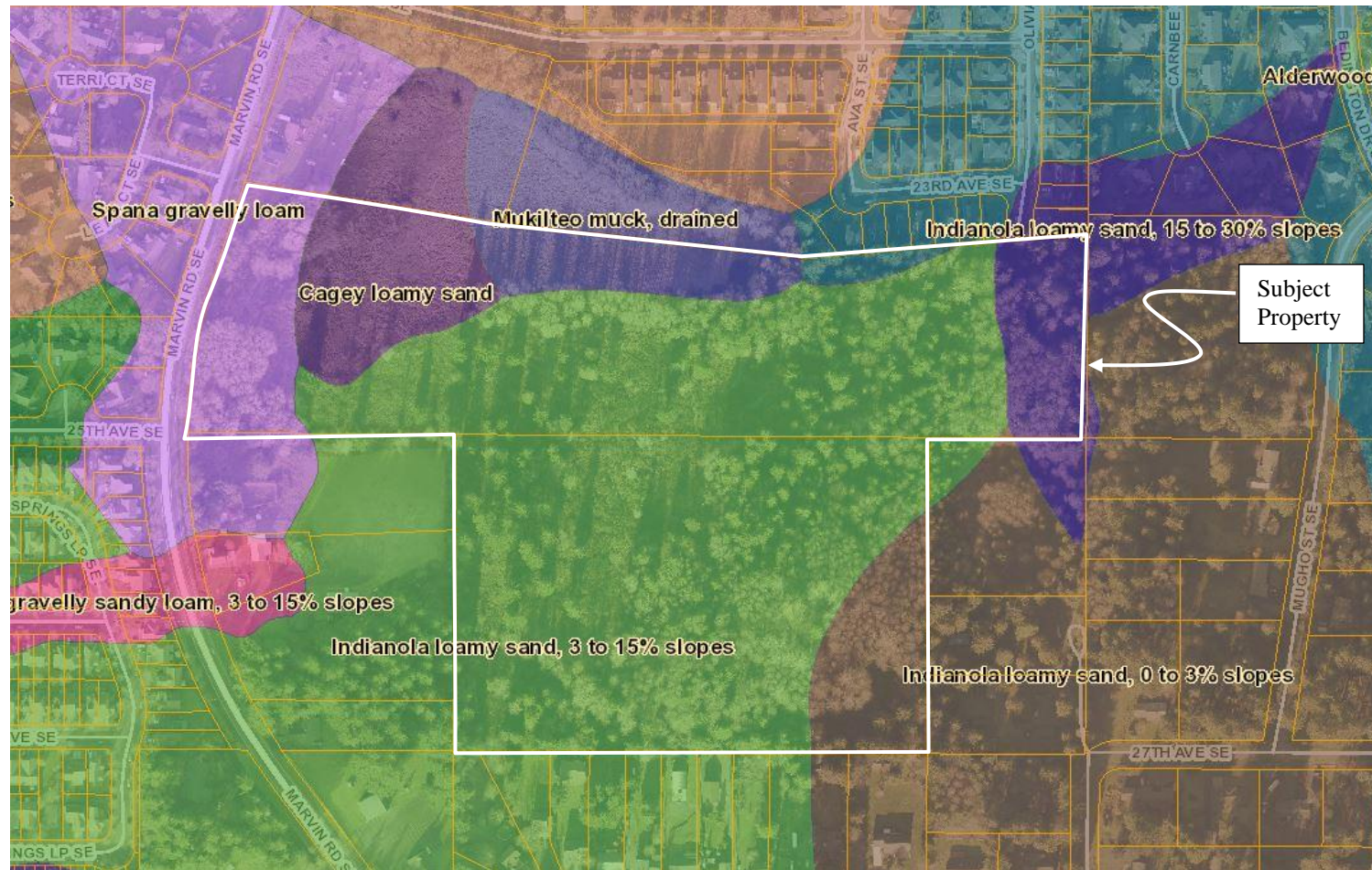


Photo 18. Cleavers (*Galium aparine*) native

APPENDIX B

Thurston County Geodatabase

Soils



Legend

- | | |
|--|---|
|  Cagay loamy sand |  Indianola loamy sand, 0 to 3% slopes |
|  Mukilteo muck, drained |  Indianola loamy sand, 3 to 15% slopes |
|  Spana gravelly loam | |
|  Indianola loamy sand, 15 to 30% slopes | |