

Prairie Mitigation Plan – Walterscheidt RUE

Site Address: 7505 Littlestone Lane SW, Olympia, WA 98512



Prepared For:

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Tax Parcel Number: 13610130108

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1.0 INTRODUCTION

1.1 Purpose

West Fork Environmental was contracted to assist the Walterscheidt's prepare a prairie mitigation plan to support a reasonable use exception (RUE) application for a 50 x 50 ft shop. This report describes critical area impacts and provides a mitigation plan for the applicant's proposed project.

2.0 SITE DESCRIPTION

2.1 Site Description and Project Background

The subject parcel is located at 7505 Littlestone Lane SW, Olympia, WA 98512 identified by Thurston County as parcel number 13610130108 (Figure 1). The legal description is Section 10 of Township 16N, Range 03 West. The 1.36-acre parcel contains a single-family home, a detached garage and two small storage sheds (eastern shed placed around 2009, western shed placed around 2022). The entire property is routinely mowed with the area around the home also routinely watered. Neighboring properties also have mowed pasture/grassland and many homes in the immediate area have mowed and watered yards. The applicant restores vintage cars and the proposed shop is necessary to hold his tools and to properly maintain an RV.

The proposed shop site is near the existing driveway in the flattest part of the property. Over the years, the property near the garage has been used to park cars and store RV and car trailers (Google Earth photos in Appendix). The Walterscheidt's were required by the manufacturer to purchase the steel shop building before obtaining the exact specification plans for submittal with the County building permit. They began preparing an area for the building's foundation in late 2022 before understanding that additional permitting steps were required, including a prairie plant study. To prepare the site for delivery of the shop, the homeowner scraped the topsoil from a 3,731 ft² area (Figure 2) and spread the topsoil to the east and south of the site. No soil material was removed from the property. A 1 to 2 foot thick gravel pad was spread over the area shown in Figure 2. Gravel originated from the SW corner of the property (Figure 2).

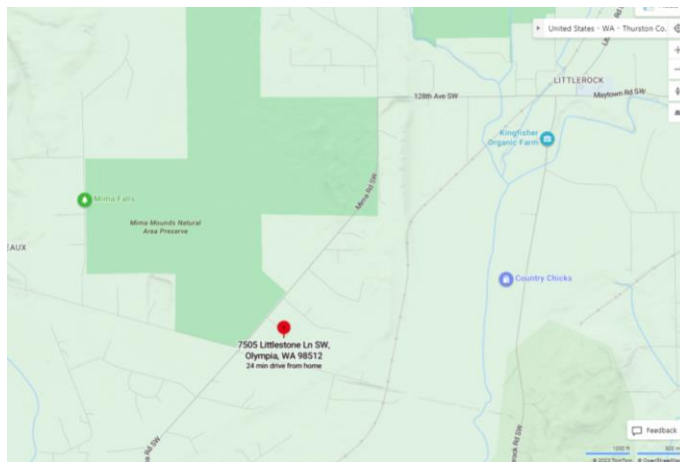


Figure 1. Vicinity Map – 7505 Littlestone Lane SW , Olympia, WA 98512 (Thurston County, Parcel 13610130108).

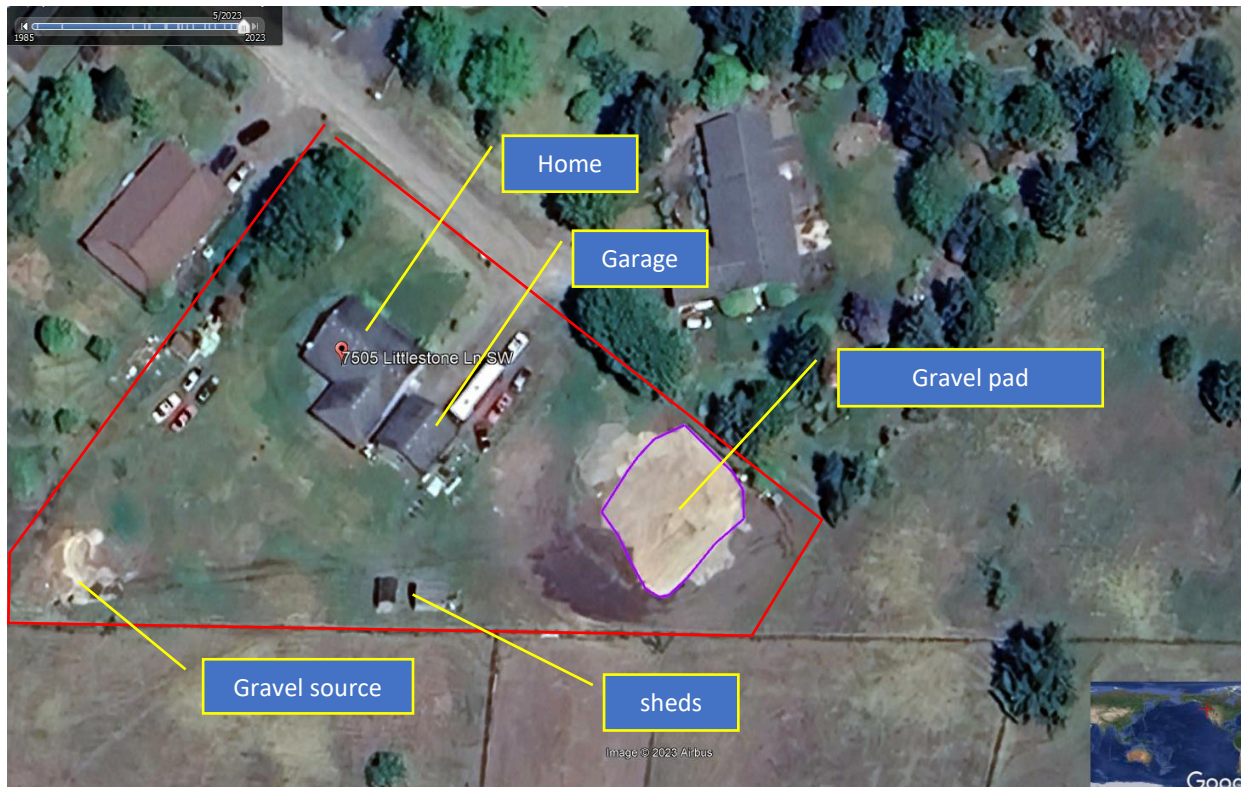


Figure 2. Current conditions on the subject parcel. A building envelope was prepared before permitting was obtained.

3.0 METHODS

Prairie habitat is defined in Thurston County municipal code 24.03.010 as:

"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.

3.1 Prairie Plant Screening

Thurston County provides methodology for conducting a prairie plant study. Properties with prairie soils must be evaluated April through September when plant morphology, flowering or fruiting will indicate the presence of the diagnostic prairie plants. The area within 50 feet of the proposed project site is evaluated for prairie conditions. The 2022 Thurston County Community Planning Field Screening

Guidelines for Prairie Habitat¹ document states that “If at any point at least three different plant species, totaling in at least 25 plants each or meeting the presence/absence criteria based on imperiled butterfly use, are encountered within 5 meters of each other, the area in question meets the criteria be established as occurrence of prairie.” If CAO protected prairie habitat is detected, the landowner may avoid impact by moving the footprint to a different location or developing a Habitat management Plan when avoidance is not possible.

4.0 RESULTS

4.1 Background Results

4.1.1 Soils

NRCS Soil Map showed the following soil types on the parcel: Spanaway-Nisqually complex, 2 to 10% slopes (USDA Soil Mapping Tool). This soil type is designated as a prairie soil.

4.1.2 Washington Department of Fish and Wildlife Priority Habitat and Species (PHS) Database

The WDFW maintains a database of Priority Habitat and Species. No threatened or endangered species were mapped on the subject property. The PHS listed Townsend’s big eared bat and the Checkerspot butterfly (Figure 5). Checkerspot butterfly location is within a township masked area that the property falls within, not a known location. Mima Mounds Reserve is 600 feet west of the property and is known to provide habitat for the species.

4.1.3 Topography

The property is relatively flat but slopes gently to the east. The home site was leveled when built and a 2-3 foot slope down to the east from the exiting driveway was created.

4.2 Field Results

4.2.1 Thurston County Review

Thurston County biologists conducted a prairie plant screening on June 22, 2023, and determined that conditions met the critical area ordinance (CAO) prairie criteria at the building site (Table 1). Eight of the target prairie species were observed near the building site at densities that met the screening criteria. Two of these plants (*Camassia quamash* and *Potentilla gracillis*) require only presence within 5 m of a third species with >25 individual plants. The County datasheet indicated that CAO prairie criteria was met.

Table 1. Target CAO prairie plants observed during June 2023 screening.

Screen Date	Species (Count Class)	Location	RUE required	Mitigation
6/22/23 Thurston County survey	<i>Brodiaea coronaria</i> (50-74) <i>Camassia quamash</i> (present) <i>Carex inops</i> (50-74) <i>Danthonia californica</i> (25-49) <i>Eriophyllum lanatum</i> (1 m ²) <i>Festuca roemerii</i> (25-49) <i>Fragaria virginiana</i> (>1 m ²) <i>Potentilla gracillis</i> (present)	Abutting clearing/grading/filling activity	Yes	Yes

¹ <https://www.thurstoncountywa.gov/planning/planningdocuments/2020-prairie-inspection-guidelines.pdf>

4.2.2 West Fork Environmental Site Visit and Review

At the applicant's request, West Fork conducted a site visit to the property to assist in preparing a mitigation plan for the proposed project. The property was visited three times from August 11 to September 7, 2023. The visit occurred late in the summer and after multiple rounds of mowing. For this reason, West Fork biologists could not accurately enumerate plants but were able to identify and confirm CAO prairie plant species presence and location on the property. There may be additional species that were not visible due to late-season conditions. Site visit information coupled with Thurston County's notes regarding on-site disturbance defined the location of prairie habitat.

West Fork observed CAO listed prairie species at the eastern and southern end of the cleared gravel pad (Table 2, Figure 3, site photos). These plants were growing in and near the topsoil that was spread next to the gravel pad. As determined by Thruston County, it appeared that CAO criteria was met east and south of the gravel pad (*Camassia quamash*, *Potentilla gracillis* and >25 individual *Carex inops* were within 5 meters to meet criteria). Two of these plants only need to be present within 5 meters of a third prairie species to meet prairie criteria. Given the proximity to the disturbed gravel pad to the pant patches meeting prairie criteria, there is potential that CAO prairie conditions were present in the disturbance area now covered with gravel (Figure 3).

The landowner removed gravel from a hole in the western side of the yard to level a low spot at the proposed project site (site photos). The property to the west contains mima mound features in the backyard more than 50 feet from the property line. Scattered *Carex inops* and *Eriophyllum lanatum* was observed in the western corner of the yard but prairie plant criteria did not appear to be met.

Table 2. Target CAO plants observed during August 2023 screening.

Screen Date	Species (Count Class)	Location	RUE required	Mitigation
8/11/23 West Fork Environmental survey	<i>Camassia quamash</i> (present but difficult to distinguish after mowing) <i>Carex inops</i> (>50) <i>Eriophyllum lanatum</i> (>1 m ² , a few small patches through southern part of property) <i>Festuca roemerii</i> (a few) <i>Fragaria virginiana</i> (<1 m ²) <i>Potentilla gracillis</i> (present) <i>Viola adunca</i> (1-25, flowering)	Primarily east of gravel pad Prairie plants sprinkled around the property – not dense enough to meet CAO criteria (<i>Camassia quamash</i> , <i>Eriophyllum lanatum</i> , <i>Carex inops</i>) Yard around the home is mowed/watered and contains lawn grass, non-CAO prairie species	Yes (disturbance at gravel pad and impacts of shop building)	Yes (proposed shop and impacted area)

The ground west of the gravel pad has been compacted by vehicles over the decades (Appendix photos), and CAO target prairie plants were not present in most of the area (Figure 3). Other native and weedy species present are listed in Table 3. Thurston County determined that because the gravel pad was already in place and CAO prairie species were observed abutting the eastern and southern ends of the gravel pad, it was assumed that the disturbed footprint met prairie criteria. In total, 7,141 ft² of prairie was identified in the east end of the property including the presumed area under the gravel pad (Figure 3).

Table 3. Non-CAO target species observed near the proposed site.

Common Name	Scientific Name	Common Name	Scientific Name
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	St. John's wort	<i>Hypericum perforatum</i>
Colonial bentgrass	<i>Agrostis capillaris</i>	Common harebell	<i>Campanula rotundifolia</i>
Tall oatgrass	<i>Arrhenatherum elatius</i>	Ribwort	<i>Plantago lanceolata</i>
Orchard grass	<i>Dactylis glomerata</i>	Tansy ragwort	<i>Jacobaea vulgaris</i>
Kentucky bluegrass	<i>Poa pratensis</i>	Sheep sorel	<i>Rumex acetosella</i>
Noble fir	<i>Abies procera</i>	Smooth hawsbeard	<i>Crepis capillaris</i>
Big leaf maple	<i>Acer macrophyllum</i>	Catsear	<i>Hypochaeris radicata</i>
Trailing blackberry	<i>Rubus ursinus</i>	Oxeye daisy	<i>Leucanthemum vulgare</i>

5.0 REGULATORY CONSIDERATIONS

5.1 Prairie Buffer

When CAO prairie habitat is identified, TCC 24.25.75 establishes that a buffer of 50 feet will be applied to the area (Figure 3).

D. Prairie Habitat. The approval authority, in consultation with the WDFW and DNR Natural Heritage Program, shall establish buffers for prairie habitat that extend outward from the outer boundary of the habitat the greater of fifty feet, measured on the horizontal plane, or the minimum distance recommended in the critical area report, whichever is greater. When setting the buffer width, the approval authority shall consider the recommendation and supporting rationale in the applicant's critical area report and the following:

- 1. The habitat functions and their sensitivity to disturbance, the risk that the adjacent proposed land use poses for those functions (e.g., from noise, light, stormwater runoff, introduction of invasive or non-native plant species, pesticides, herbicides, and domestic animals) and, if applicable,*
- 2. The minimum buffer width necessary to protect adjacent properties from fire management practices on prairies. If fire is included within the critical area report as a management element for prairie habitat, the applicant shall:*
 - a. Submit a fire management plan to the Thurston County Fire Marshal and the appropriate fire district for technical review and approval; and*
 - b. Notify the Thurston County Fire Marshal and the appropriate fire district prior to setting fires as part of the fire management plan.*

5.2 Project Planning – Mitigation Sequencing

TCC 24.01.037 - *Mitigation Sequencing* requires that “mitigation actions associated with development proposals impacting critical areas shall adhere to the following mitigation sequence.” The project proposal for the subject parcel considered these steps as described in Section 7.1 below.

- A. Avoiding the impact altogether by not taking a certain action or parts of an action;*
- B. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;*
- C. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;*
- D. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;*

E. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or

F. Monitoring the impact and taking appropriate corrective measures.

5.3 Reasonable Use Exception

Because prairie habitat was determined to be disturbed and cannot be avoided given the available area on the property, the project will require reasonable use exception (RUE) consideration described under TCC 24.45. Under TCC 24.45.030—*Review Criteria*, a hearing examiner will approve or approve with conditions, the RUE if criteria are met. As described in TCC 24-45.010,

“a reasonable use exception is required when adherence to the provisions of this title would deny all reasonable use of the subject property as a whole, due to the property's size, topography, or location relative to the critical area and any associated buffer. A reasonable use exception shall only be granted if no other reasonable alternative method of development is provided under this title and the Thurston County Code. The reasonable use exception shall comply with all provisions of this chapter.”

TCC 24.45.030 - Review criteria below must be met for the proposed project,

The hearing examiner shall approve, or approve with conditions, the reasonable use exception if:

- A. No other reasonable use of the property as a whole is permitted by this title; and*
- B. No reasonable use with less impact on the critical area or buffer is possible. At a minimum, the alternatives reviewed shall include a change in use, reduction in the size of the use, a change in the timing of the activity, a revision in the project design. This may include a variance for yard and setback standards required pursuant to Titles 20, 21, 22, and 23 TCC; and*
- C. The requested use or activity will not result in any damage to other property and will not threaten the public health, safety or welfare on or off the development proposal site, or increase public safety risks on or off the subject property; and*
- D. The proposed reasonable use is limited to the minimum encroachment into the critical area and/or buffer necessary to prevent the denial of all reasonable use of the property; and*
- E. The proposed reasonable use shall result in minimal alteration of the critical area including but not limited to impacts on vegetation, fish and wildlife resources, hydrological conditions, and geologic conditions; and*
- F. A proposal for a reasonable use exception shall ensure no net loss of critical area functions and values. The proposal shall include a mitigation plan consistent with this title and best available science. Mitigation measures shall address unavoidable impacts and shall occur on-site first, or if necessary, off-site; and*
- G. The reasonable use shall not result in the unmitigated adverse impacts to species of concern; and*
- H. The location and scale of existing development on surrounding properties shall not be the sole basis for granting or determining a reasonable use exception.*

5.3.1 Mitigation Plan Requirement

As part of the RUE application, a mitigation proposal must be submitted that ensures no net loss of critical area function and value (see F above). The requirements for mitigation plans are detailed in TCC 24.35.300.

24.35.300 - Requirements for mitigation plans.

If important habitat areas or associated buffers would be impacted, a mitigation plan shall be submitted with the critical area report. The mitigation plan shall identify proposed measures to avoid, minimize and mitigate the proposed project's impacts to the important habitat areas and associated buffers. The mitigation plan shall include, as applicable:

A. Mitigation Proposal. The general mitigation scheme and justification that provides for restoration or mitigation of the projects impacts, approximate project sequencing and schedule, proposed plant selection, and maintenance program;

B. Performance Standards. Performance standards for evaluating whether or not mitigation is successful. These standards shall address all of the relevant habitat functions being mitigated including, but not limited to, water quality, habitat diversity, establishment of viable plant communities, vegetative complexity, and vegetative survival rates;

C. Monitoring and Contingency Measures. Proposed monitoring and contingency measures shall be provided per TCC 24.35.017.

6.0 PROPOSED PROJECT

6.1 Description

The proposed project is a 50 x 50 ft² shop that will allow for a car engine lift needed for the applicant to restore cars and to house an RV and trailer used to haul cars to shows. A gravel driveway 45 x 10 ft (450 ft²) will be required to access the proposed shop location (400 ft² is within the prairie buffer). The eastern portion of the property is encumbered by prairie habitat and buffer. The backyard in the western end of the property contains the septic system and no other area is available for the shop. A restoration and enhancement plan is proposed to mitigate unavoidable impacts at a 1:1 ratio.

Table 4. Impact to prairie and buffer habitat and proposed mitigation at a 1:1 ratio.

Habitat	Impacts	Impact Area		Mitigation		Location
		CAO Prairie	Prairie Buffer	Restoration	Enhancement	
CAO Prairie/Buffer	Proposed shop footprint	1,988 sq ft	512 sq ft	1,743 sq ft	1,157 sq ft	East end of gravel pad = restoration, Enhancement around building – plant native prairie species, control invasives
	Proposed Driveway		400 sq ft			
Total		2,900 sq ft		2,900 sq ft		

** only the portion of driveway in the prairie buffer is reported here*

6.2 Development Impacts

Thurston County determined that direct impacts to 3,731 ft² of prairie habitat occurred as a result of the grading and gravel placement in late 2022. These impacts were inadvertent before the applicant understood the extent of protected critical area habitat on his property.

The applicant has considered options to minimize impacts to habitat and concluded that the current position is the best solution for the shop as detailed below. The property has limited space given the configuration of existing structures.

- 1) The applicant considered the maximum distance that he could shift the shop footprint towards the existing driveway. His calculations indicate that given the on-site grade, location of buildings, well, sprinkler system and a secured propane tank that powers a generator, the building could

not be closer than 45 feet to the driveway. This distance is necessary to provide RV access through the 12 foot tall garage doors due to the slope from the driveway to site.

- 2) The shop cannot be located in the west end of the property because it contains a septic system, drain field and tanks. There is not a footprint for the shop building in the western end of the property.
- 3) The area near the sheds requires a long driveway through buffer habitat and does not offer enough space given the well location and slope onsite.

6.3 Reasonable Use Exception (RUE) Criteria

The applicant has applied for a RUE to obtain permitting for a shop on the property due to prairie impacts from the grading/fill in 2023. The RUE criteria are addressed below.

A. No other reasonable use of the property as a whole is permitted by this title; and

The property is 1.36-acres within a neighborhood of similarly sized parcels. The existing single-family residential use is the only reasonable use of the property. A shop is a typical accessory to a residence.

B. No reasonable use with less impact on the critical area or buffer is possible. At a minimum, the alternatives reviewed shall include a change in use, reduction in the size of the use, a change in the timing of the activity, a revision in the project design. This may include a variance for yard and setback standards required pursuant to Titles 20, 21, 22, and 23 TCC; and

The applicant considered revisions to the proposed location to minimize encroachment on CAO prairie habitat. He determined that unavoidable impacts to presumed prairie habitat are necessary given the configuration of the property, location of septic system in western portion of the yard, and driveway access. The original planned location was shifted west towards the existing driveway to minimize impact on prairie habitat. The impacts will be mitigated through a prairie enhancement project at a 1:1 ratio to ensure no net loss of function and value.

C. The requested use or activity will not result in any damage to other property and will not threaten the public health, safety or welfare on or off the development proposal site, or increase public safety risks on or off the subject property; and

The proposed shop will not damage the property and will enhance the life of the applicant through allowing adequate facility to pursue his passion for old car restoration. The shop is proposed off the end of a cul-de-sac and will not create any public safety risks in the area.

D. The proposed reasonable use is limited to the minimum encroachment into the critical area and/or buffer necessary to prevent the denial of all reasonable use of the property; and

The applicant determined this is the only potential shop location given the needed use of the structure to support his car restoration activities. The shop location was chosen near the existing driveway to minimize impact on the overall property. The applicant adjusted the building footprint closer to the existing driveway where cars have been parked over the years to minimize encroachment on presumed prairie habitat.

- E. The proposed reasonable use shall result in minimal alteration of the critical area including but not limited to impacts on vegetation, fish and wildlife resources, hydrological conditions, and geologic conditions; and*

The proposed shop footprint is off the existing driveway and in an area where cars have been parked. It is located on a flat spot on the subject property. Impacts will be mitigated through implementation of a mitigation plan. The applicant has shifted the shop building closer to the existing driveway to minimize impact on presumed prairie habitat.

- F. A proposal for a reasonable use exception shall ensure no net loss of critical area functions and values. The proposal shall include a mitigation plan consistent with this title and best available science. Mitigation measures shall address unavoidable impacts and shall occur on-site first, or if necessary, off-site; and*

The mitigation plan was developed to meet the requirement of no-net-loss of habitat function and value. Thurston County stated that a ratio of 1:1 was required for impacts to prairie habitat. On-site mitigation is proposed to create CAO prairie habitat in the eastern end of the property while still allowing residential use of the property.

- G. The reasonable use shall not result in the unmitigated adverse impacts to species of concern; and*

To the applicant's knowledge, no threatened or endangered species are mapped or known to be on the property. The WDFW PHS database does not show threatened or endangered species on the subject property.

- H. The location and scale of existing development on surrounding properties shall not be the sole basis for granting or determining a reasonable use exception.*

The location and scale of existing development was not considered in development of this proposed project. This RUE application is a result of the applicant's need to reasonably use his property for residential purposes and inadvertent disturbance of CAO protected prairie habitat.

7.0 PROPOSED MITIGATION PLAN

The following mitigation plan is proposed to ensure no net loss of function on the property from the proposed shop project. TCC 24.01.037 outlines mitigation sequencing steps to prevent and minimize impacts to critical area habitat and rectify impacts when they cannot be avoided. Figure 3 shows that critical area buffers encumber the subject parcel.

7.1 Mitigation Sequencing

Mitigation actions associated with development proposals impacting critical areas or buffers shall adhere to the following mitigation sequence:

Avoiding the Impact

There are no alternatives that avoid prairie or buffer habitat on the property that are acceptable to the applicant's needs given the relatively small size of the property, grade off the driveway and the location

of the septic system. A RUE is required to allow use of the property to support the activities necessary for the applicant's life.

Minimizing the Impact

The 2,500 ft² proposed shop and 400 ft² driveway location is in a previously disturbed area where cars were parked over the years (Appendix – see photos). The building footprint has been shifted west towards the driveway as much as possible. Only the area needed for the shop will be disturbed and further disturbance to CAO prairie plants around the building will be minimized. The prairie habitat east of the proposed shop will be enhanced.

Rectifying impact by repair, rehabilitation or restoration of affected environment

A total of 1,743 ft² of presumed prairie habitat that is currently under the gravel pad will be restored with native prairie plants. The gravel pad in this area will be removed and soil spread to the east will be replaced. BMPs will be used to ensure the remaining critical area buffer around the shop is protected.

Reduce or Eliminate the Impact over time by Preservation and Maintenance operations

The observed prairie vegetation in the eastern end of the property will be enhanced outside of the building footprint and preserved. The property has been in residential use since the 1990s and no anticipated changes are expected.

Compensate for the Impact by replacing or enhancing

A prairie restoration and enhancement project is proposed to benefit habitat immediately around the proposed shop site and in the western end of the property. The disturbed prairie habitat outside of the shop footprint will be restored and a patch of degraded grassland at the west end of the property will be enhanced to promote prairie plant species.

Monitoring

The prairie restoration and enhancement project will be monitored and maintained according to the agreed upon performance standards for five growing seasons following implementation.

7.2 Proposed Mitigation Measures

Prairie restoration and enhancement is proposed to mitigate unavoidable impacts from the proposed project (total 2,900 ft²).

7.2.1 Project Specific Habitat Restoration and Enhancements

- Restoration: Restore 1,743 ft² of prairie east and south of the shop footprint (currently within edges of the gravel pad) (Figure 4)
 - Remove gravel and fill the hole in western end of property.
 - Respread the topsoil that was placed immediately adjacent to the disturbed area - this soil contains native prairie seed and in fact, the prairie screening conducted in June and August 2023 identified the CAO prairie plants within this disturbed topsoil
 - Seed native prairie species around building in 1,743 ft² area and in the western end of property (site of current hole)
- Enhancement: Improve prairie conditions near the proposed shop site.
 - Enhance prairie with native prairie seed in 1,157 ft² of existing prairie habitat (Figure 4)

- Control invasive plants including Scots broom and tall oatgrass

7.2.2 Schedule

The mitigation planting effort will begin upon County approval.

7.2.3 Planting Plan

Best available science indicates that native prairie plants germinate and can be reseeded successfully (Table 5). Seed can be purchased from the Thurston County Conservation District² or the Washington Native Plant Nursery.

The Washington Native Plant Nursery recommends seeding in the fall and lightly raking the seed into the soil. If seeds are planted in the spring, they may require water to ensure successful establishment. If the desired species are not available, then those with similar ecological functions are acceptable.

Table 5. Recommended seed for prairie restoration and enhancement.

Common Name	Scientific Name	Quantity	Cost	Total
Idaho fescue	<i>Festuca idahoensis</i>	100 plugs	2.98/each	\$200.98
Idaho fescue	<i>Festuca idahoensis</i>	2 lb	\$32.50/lb	\$65.00
Long-stolen sedge	<i>Carex inops</i>	4 packet	\$14.33/g	\$57.32
Crown brodiaea	<i>Brodiaea coronaria</i>	3 packet	\$6.50/g	\$19.50
Slender cinquefoil	<i>Potentilla gracillis</i>		\$6.50/g	\$19.50
Western buttercup	<i>Ranunculus occidentalis</i>		\$6.88/g	\$20.64
Oregon sunshine	<i>Eriophyllum lanatum</i>		\$6.88/g	\$20.64
Spring gold	<i>Lomatium utriculatum</i>		\$6.50/g	\$19.50
Farewell to spring	<i>Clarkia amonena</i>		\$7.00/packet	\$21.00
Common camas	<i>Camassia quamash</i>		\$7.50/packet	\$22.50
Total cost				\$466.48

*Cost estimates for trees and shrubs are from Native Plant Sale – Olympia, WA (<https://store.thurstoncd.com/>), Washington Native Plant Nursery (<https://www.cnlm.org/native-seed-nursery/>), and Woodbrook Native Plant Nursery ([Contact Us – Woodbrook Native Plant Nursery](#)), or <https://native-roots.net/idaho-fescue/>

7.2.4 Monitoring

Monitoring of the restoration and enhancement area will be conducted for five years using established plots to evaluate germination success and vegetative cover. An assessment of conditions will be recorded at the end of the construction phase and used to compare subsequent monitoring. Field visits will comply with TCC Chapter 24.35.017.

- At completion of construction completion(as-built report);
- Spring of the first growing season after construction;
- Summer of the first growing season after construction;
- Once in years 3, 4, and 5.

7.2.5 Monitoring - Reporting

Photo points will be established to document conditions through the monitoring period. These will document the general appearance and progress of the prairie restoration and enhancement. The

² <https://store.thurstoncd.com/product-category/prairie-friendly/>

planting area will be monitored to record vigor and growth. Observations of wildlife use will be recorded (direct observations or other signs).

7.2.6 Performance Standards

Less than 10% coverage of non-native species such as Scot's broom within the restoration and enhancement area. In addition, the cover of seeded species will increase in restoration/enhancement area or further seeding will occur.

- Any Scot's broom will be removed by hand

7.2.7 Maintenance and Contingency

The landowner will be responsible for performing the required maintenance duties on the site to ensure plant survival. Maintenance duties will include competing vegetation management, and reseeding if necessary to maintain a native plant community particularly in the restoration area east of the building footprint.

Site maintenance will involve the following:

- Weeding and continuous removal of competing non-native vegetation
- Reseed as necessary

8.0 FUNCTIONAL ANALYSIS

TCC 24.45.030 (F) identifies that the RUE application shall ensure no net loss of critical area function and values. The mitigation strategy addresses unavoidable impacts and enhances the function of native prairie habitat on the property.

The no net loss analysis below shows that no loss of prairie function and value would occur following the proposed land use with mitigation strategy (Table 3). The 2,900 ft² restored and enhanced prairie on the property can provide habitat for prairie dependent species. The abundance of prairie plants is expected to increase and several additional CAO prairie species that provide nectar source for Taylor's checkerspot butterfly will be added to increase plant diversity. Keeping invasive plant presence to a minimum increases the value of prairie conditions for all dependent species. The proposed mitigation plan will improve current prairie conditions on-site and meets the no-net-loss of function and value required under RUE.

Table 6. Prairie functional analysis to assess no-net-loss in habitat.


Factors	Existing	Proposed	Change (+1, 0 or -1)
Onsite prairie	7,141 ft ²	7,141 ft ² (enhanced/restoration)	0
Number of prairie plant species	9 total: <i>Brodiaea coronaria</i> <i>Camassia quamash</i> <i>Carex inops</i> <i>Danthonia californica</i> <i>Eriophyllum lanatum</i> <i>Festuca roemerii</i> <i>Fragaria virginiana</i> <i>Potentilla gracillis</i> <i>Viola adunca</i>	11 total (add bold) <i>Brodiaea coronaria</i> <i>Camassia quamash</i> <i>Carex inops</i> <i>Danthonia californica</i> <i>Eriophyllum lanatum</i> <i>Festuca roemerii</i> <i>Fragaria virginiana</i> <i>Potentilla gracillis</i> <i>Viola adunca</i> <i>Lomatium utriculatum</i>	+1

Factors	Existing	Proposed	Change (+1, 0 or -1)
		<i>Ranunculus occidentalis</i>	
Invasive plant species management	Tall oatgrass, Scots broom	Removal/ control	+1
Potential Animal species Use	Taylor's Checkerspot	Taylor's Checkerspot	0
Change in Prairie Function			+2

9.0 CONCLUSION

The applicant is pursuing a RUE to construct a shop in the eastern portion of the property. This shop is necessary to support his car restoration activities. The applicant has considered alternative locations for the shop. The applicant has shifted the shop west from the original desired position to minimize encroachment on presumed prairie where a gravel pad has been created. The proposed mitigation associated with the RUE application will provide an opportunity to enhance a patch of prairie habitat on the subject property that is in close proximity to the Mima Mounds Natural Area. Prairie enhancement includes continued removal of non-native vegetation, no-net-loss in area of prairie, increase in species diversity, and five years of monitoring.

The critical areas evaluation detailed in this report were performed consistent with generally accepted professional consulting practices. WFE completed the determination reported in this document for use by Jim and Lois Walterscheidt. This determination is based on scientific methods and our best professional judgement. Final approval of conclusions detailed in this report are dependent on review with local, state, and federal regulatory agencies. No outcomes are warranted by this report. The content and data put forth in this report were collected and prepared by the undersigned. Please call our office at (360) 753-0485 with questions or if you require any additional information.

	
<hr/> Heidy Barnett Sr. Biologist	

10.0 REFERENCES

- Dunn, Patrick. 1998. Prairie Habitat Restoration and Maintenance on Fort Lewis and within the South Puget Sound Prairie Landscape: final report and summary of findings. Report prepared for the US. Army, Fort Lewis, Washington by The Nature Conservancy of Washington.
- Noland, Sara, and Laurel Carver. Prairie Landowner Guide for Western Washington. 2011.
- Thurston County. Critical Areas Map, Online Geodata Map. <http://www.co.thurston.wa.us>. (August 2023)
- Washington State Department of Fish and Wildlife. Priority Habitat and Species Database (PHS Online). <http://apps.wdfw.wa.gov/phsontheweb/>. (August 2023)

Figure 3. Location of designated CAO prairie and 50-foot regulatory buffer. West Fork Environmental was asked to survey late in the season after mowing and could not fully enumerate plants.

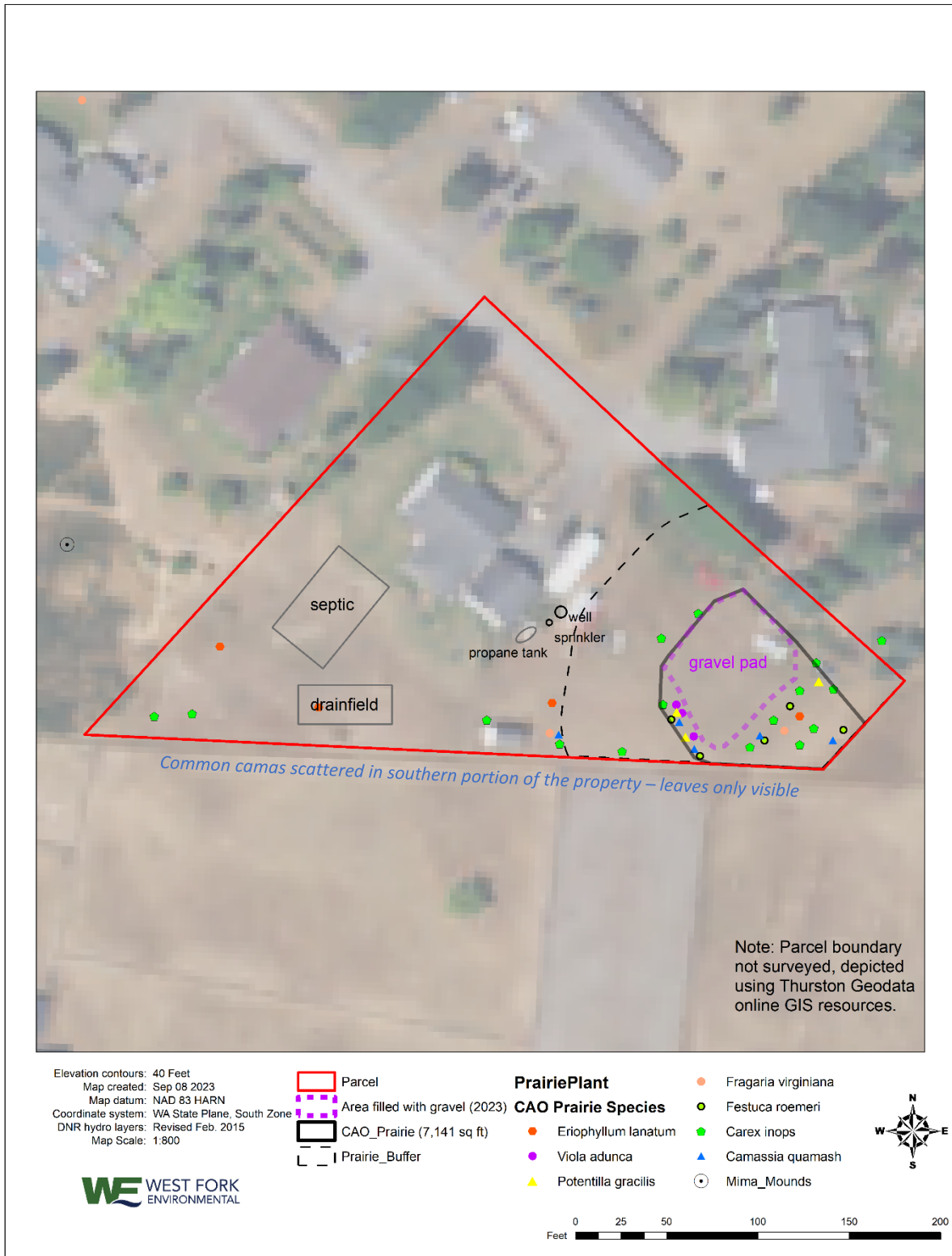


Figure 4. Proposed shop location and prairie restoration/enhancement area. The shop location has been shifted west to minimize impact on presumed prairie habitat where the gravel pad was placed in 2023.

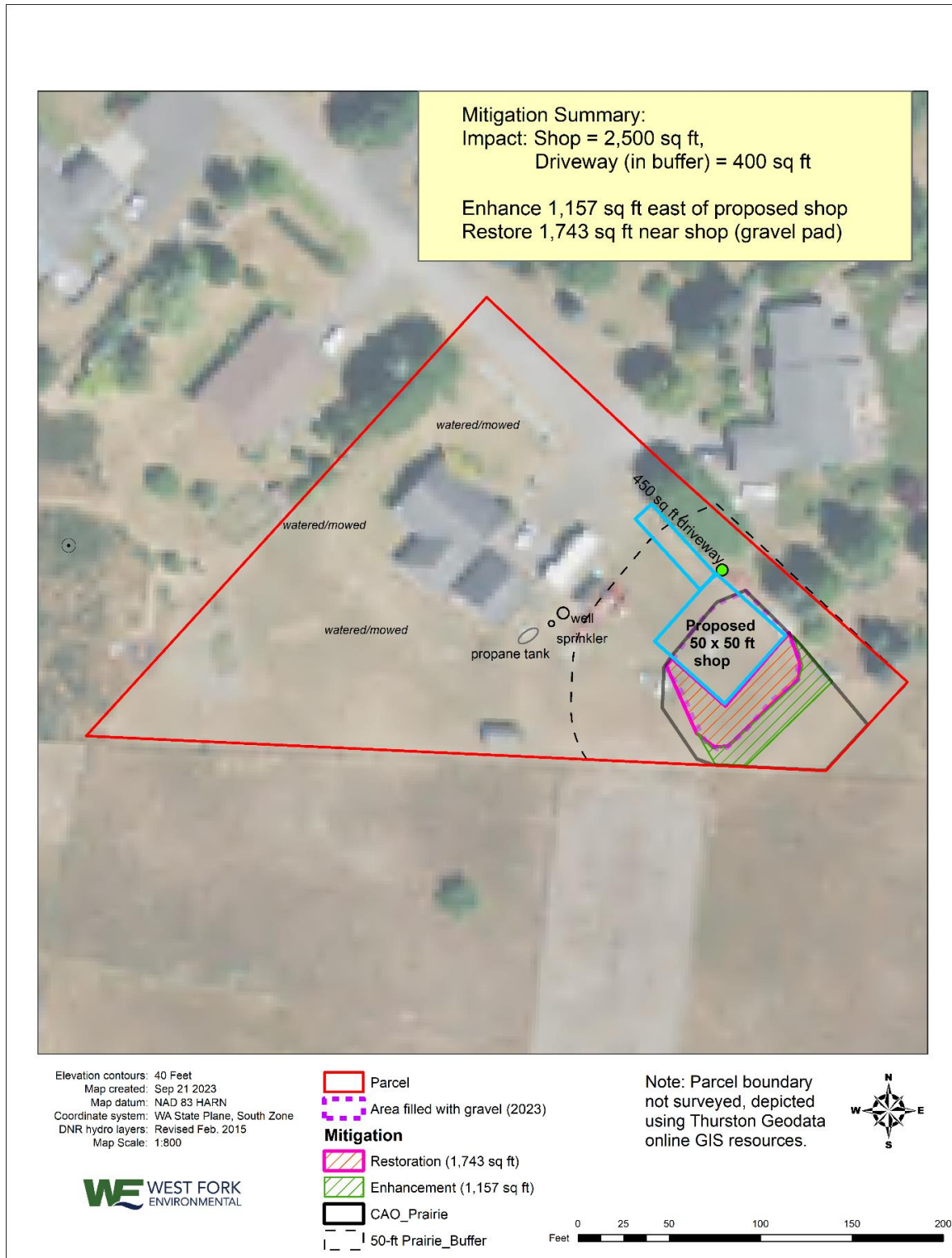


Figure 5. Washington Department of Fish and Wildlife Priority Habitat and Species Report for subject parcel.

8/31/23, 9:18 AM

PHS Report



Priority Habitats and Species on the Web



Report Date: 08/31/2023, Parcel ID: [13610130108](#)

PHS Species/Habitats Overview:

Occurrence Name	Federal Status	State Status	Sensitive Location
Townsend's Big-eared Bat	undefined	Candidate	Yes
Taylor's Checkerspot	Endangered	Endangered	Yes

Taylor's Checkerspot	
Scientific Name	<i>Euphydryas editha taylori</i>
Notes	This polygon mask represents one or more records of the above species or habitat occurrence. Contact PHS Data Release at phsproducts@dfw.wa.gov for obtaining information about masked sensitive species and habitats.
Federal Status	Endangered
State Status	Endangered
PHS Listing Status	PHS LISTED OCCURRENCE
Sensitive	Y
SGCN	Y
Display Resolution	SECTION
ManagementRecommendations	http://wdfw.wa.gov/publications/pub.php?id=00024

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.

Site Photos



Gravel pad spread in 2023 – the topsoil (yellow arrow) was moved from the area and spread west and south of the gravel pad.



Proposed driveway – has been used for car parking for decades and is compacted/disturbed (right) and new proposed footprint of shop where cards were parked for decades. Area does not have the density of CAO prairie species to meet criteria.



Front of proposed shop building (gravel pad, left) and disturbed area near driveway that has been used for parking vehicles for decades (right).



Well location, propane tank and sprinkler system that require servicing will be 40 feet from the front of the proposed shop (left). Front yard of home with routinely mowed and watered grass (right).



Grasses along the northern property line north of gravel pad did not meet CAO prairie plant criteria (left). Plant regrowth in topsoil south of the gravel pad included weedy species (right) where enhancement activities could improve habitat.



Area around the sheds contained primarily grass and weedy species with a few scattered camas and *Carex inops* (left). Scots broom growing along fence behind sheds will be controlled.



Mima mound in neighboring property to the west as viewed from subject property.



Hole that will be refilled and area of proposed prairie habitat enhancement at western end of the property.



Viola adunca (left) and *Carex inops* with *Potentilla gracilis* (right).

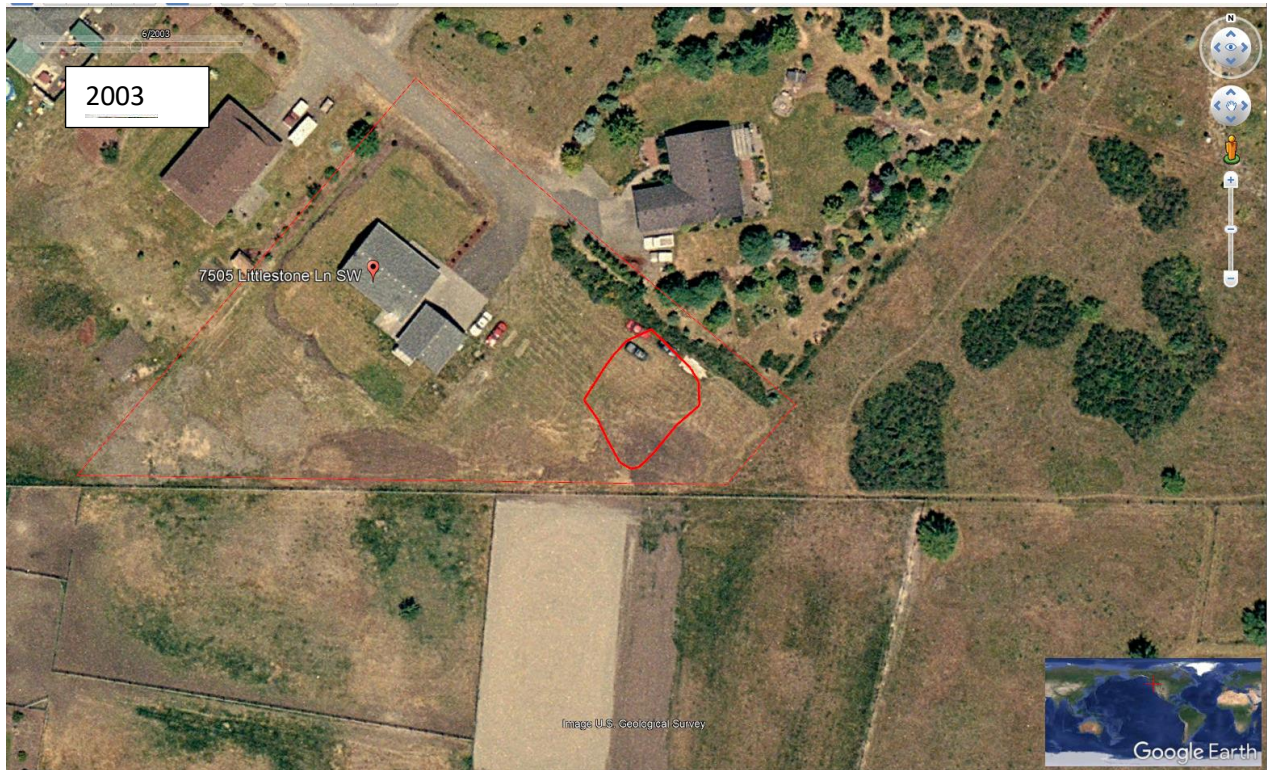


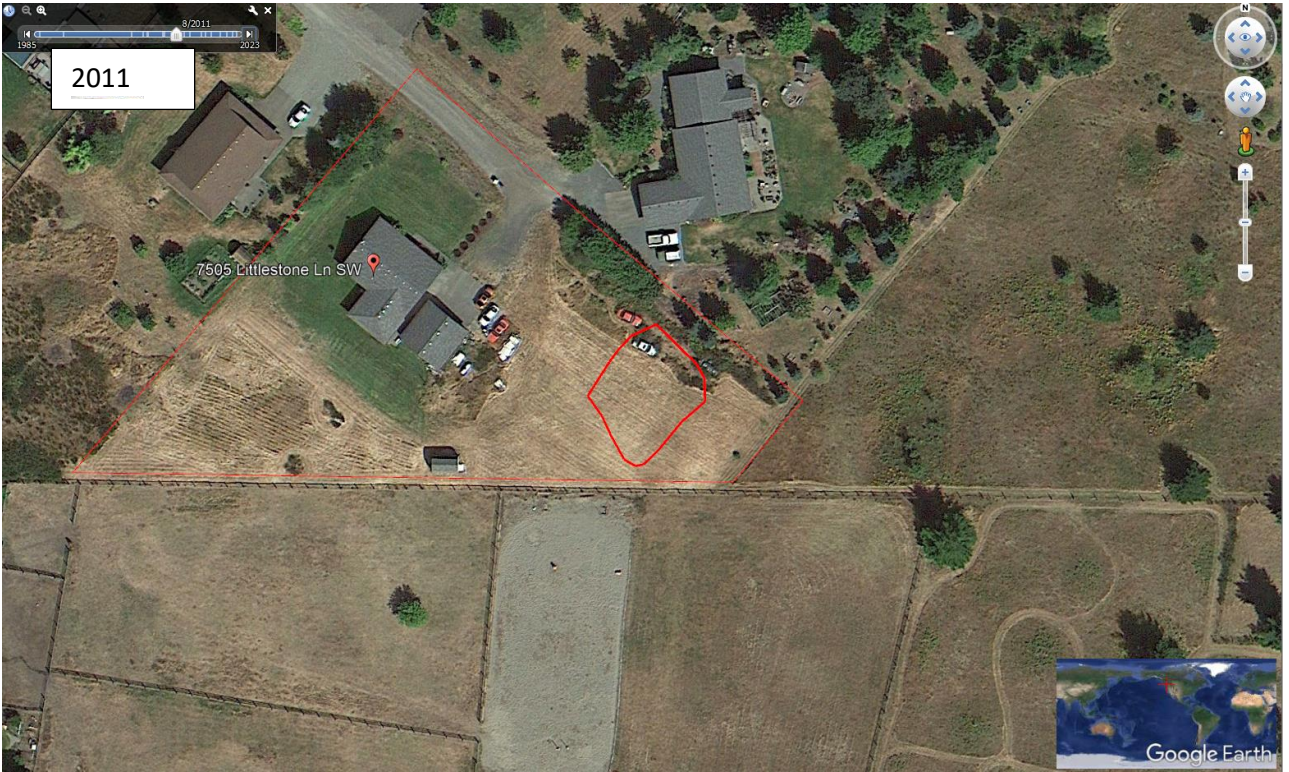
Festuca roemerii (left) and camas with wild strawberry (right).



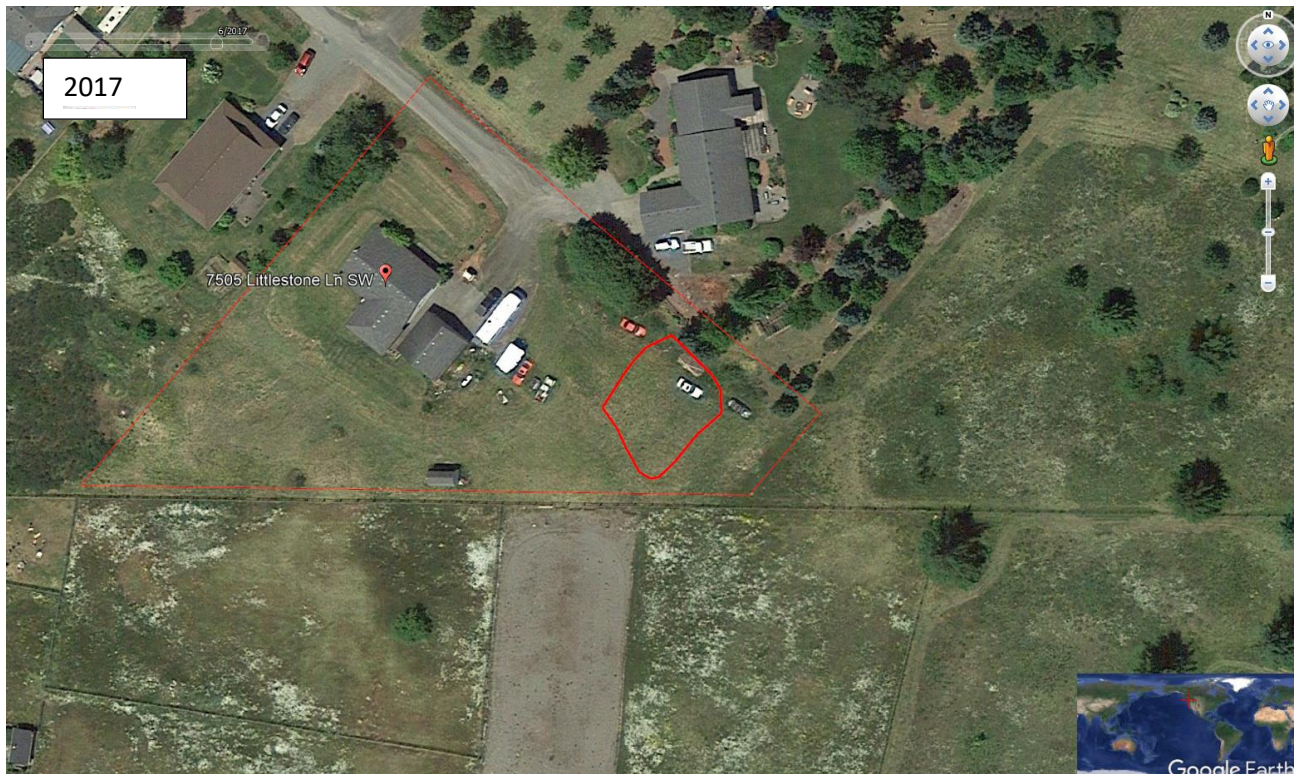
Eriophyllum lanatum – scattered in a few locations on property within the existing yard.

Aerial Photos – showing use of the property over the last 20 years (2003-2023) with the highlighted red polygon indicating where a gravel pad was placed in 2023 as the proposed shop site.













Neighbor to west

2023
2021 Thurston County Critical Areas Ordinance (CAO) Prairie Screening Data Sheet

<p>Parcel Number: <u>13610130108</u></p> <p>Property Owner: <u>Tim Walterscheidt</u></p> <p>Surveyor(s): <u>H Barrett</u></p> <p>Date: <u>8-11-23</u></p> <p>Composition of Vegetation: <u>yard, grassland prairie by TC</u></p>	<p>CAO prairie criteria met? <u>(Yes)</u> or No</p> <p>Mima mounds present? Yes or <u>No</u></p> <p>Oaks (<i>Quercus garryana</i>) present? Yes or <u>No</u></p> <p>Mature: <u>0</u></p> <p>Sapling: <u>0</u></p> <p>Seedling: <u>0</u></p>
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X Target species	Class* (circle)	1 2 3 4 5 N/A
<i>Apocynum androsaemifolium</i>	Present / Absent	
<i>Balsamorhiza hirtella</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
X <i>Camassia quamash</i>	<u>Present</u> / Absent	
<i>Carex densa</i>	Present / Absent	
<i>Carex feta</i>	1 2 3 4 5	N/A
X <i>Carex inops</i> ssp. <i>inops</i>	1 2 <u>3</u> 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 lewisii</i>	Present / Absent	
X <i>Danthonia californica</i>	1 observed <u>1</u> 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
X <i>Eriophyllum lanatum</i>	Cover: <u>3</u> m ²	N/A
<i>Eryngium petiolatum</i>	Present / Absent	
X <i>Festuca roemerii</i> (F. <i>idahoensis</i>)	<u>1</u> 2 3 4 5	N/A
X <i>Fragaria virginiana</i>	Cover: <u>1</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	
X <i>Potentilla gracilis</i>	<u>Present</u> / 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 2 3 4 5	N/A
<i>Solidago simplex</i> (S. <i>spatulata</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
X <i>Viola adunca</i>	<u>1</u> 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>

*NOTE - LATE in season, entire property routinely mowed.
Not confident in counts at this time
CAO prairie met -
* Camas, slender cigerfoil + 725 carex inops

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