

# Land Management Plan Santiam Kingston Hills

Tract ID: WILWF-WL-47



Photo of North Santiam River by Matthew Larrabee



Prepared for Bonneville Power  
Administration and Oregon  
Department of Fish and Wildlife  
by Greenbelt Land Trust

8/29/2022

# PREFACE

## WWMP Land Management Plan Template

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This management plan template may be used for most properties protected through the Willamette Wildlife Mitigation Program (WWMP). If you have a working lands aspect to your property, please contact WWMP staff for guidance. Check the WWMP website for the current land management plan template ([https://www.dfw.state.or.us/wildlife/willamette\\_wmp/info.asp](https://www.dfw.state.or.us/wildlife/willamette_wmp/info.asp)).

For properties protected through Fee Title Acquisition where Bonneville Power Administration (Bonneville) holds a conservation easement, the sponsor shall describe the uses and activities on the property that the sponsor expects to undertake or allow to be undertaken, including any maintenance, restoration, enhancement, or stewardship. Any limitations or prescriptions for uses and activities necessary to ensure the purpose of the Conservation Easement need to be described within the plan.

For properties protected through a Conservation Easement (CE) where the landowner retains ownership and Bonneville holds third party rights of enforcement, the Grantor (project sponsor) and the Grantee (landowner) of the CE shall describe the roles and responsibilities of each party and the uses and activities on the property that each expect to undertake or allow to be undertaken, including any restoration, enhancement, or stewardship.

Any associated management plan (i.e. grazing plan, forest management plan) shall be included as an appendix and integrated into this management plan and its goals.

This management plan shall be developed in consultation with Bonneville, ODFW, and relevant interested local, state, tribal, and federal resource agencies, and the sponsor shall provide an opportunity for public input. The sponsor shall make the final acknowledged Management Plan, and any approved amendments, available to the public.

Bonneville shall review this management plan and any proposed amendments for consistency with any associated Memorandum of Agreement and with the terms and conditions of the CE. Bonneville must provide its written acceptance of the management plan or any amendments prior to its implementation.

The LMP should be written for a ten-year time frame, unless major habitat changes will be undertaken in the near term, in which case a shorter, interim management plan is more applicable. Land managers should review the management plan internally after five years, or after significant changes to the land occur, to determine relevancy and consistency with land management practices and to assess the need for an update prior to the scheduled ten-year time frame. Sponsors should contact WWMP staff for management plan update guidance prior to the end of the current land management plan term duration.

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## Attachments

- A: Conservation Easement
- B: Land Use Agreements
- C: Biological Inventories

## A. PROPERTY DETAILS AND GENERAL INFORMATION

### 1. PROPERTY AND LAND MANAGEMENT PLAN INFORMATION

Project site or management area name	Santiam Kingston Hills
Bonneville Tract ID	WILWF-WL-47
Situs address (or Google Maps coordinates to primary access point if address not available)	44°46'50.6"N 122°44'15.9"W
County	Linn
Acres	404.7 acres
Tax lot(s)	09S01E18 00500, 09S01E18 00700, 09S01E19 00300, 09S01E20 00300
Taxlot Map	Figure 1: Location and Tax Lot
Acquisition date	September 24, 2018
Plan start date	
Plan duration	10 years 2022-2032
New plan or update? If update, include original dates.	New
Project Type: Fee Title or CE	Fee Title
Property owner (Fee Title) or Grantee (CE)	Greenbelt Land Trust
Project Grantor (for CE projects only)	N/A
Property manager	Greenbelt Land Trust
Preparer's name and affiliation	Carolyn Menke, Greenbelt Land Trust
Contact information for key on-the-ground staff (e.g., property manager; list all that apply).	Matt Blakeley-Smith <a href="mailto:matt@greenbeltlandtrust.org">matt@greenbeltlandtrust.org</a> Carolyn Menke <a href="mailto:carolyn@greenbeltlandtrust.org">carolyn@greenbeltlandtrust.org</a> Andy Neill <a href="mailto:andy@greenbeltlandtrust.org">andy@greenbeltlandtrust.org</a> Jeff Baker <a href="mailto:jeff@greenbeltlandtrust.org">jeff@greenbeltlandtrust.org</a>
Map of location of Property	Figure 1: Location and Tax Lot

### 2. GRANTEE AND GRANTOR ROLES AND RESPONSIBILITIES

N/A

# Location and Tax Lots Santiam Kingston Hills

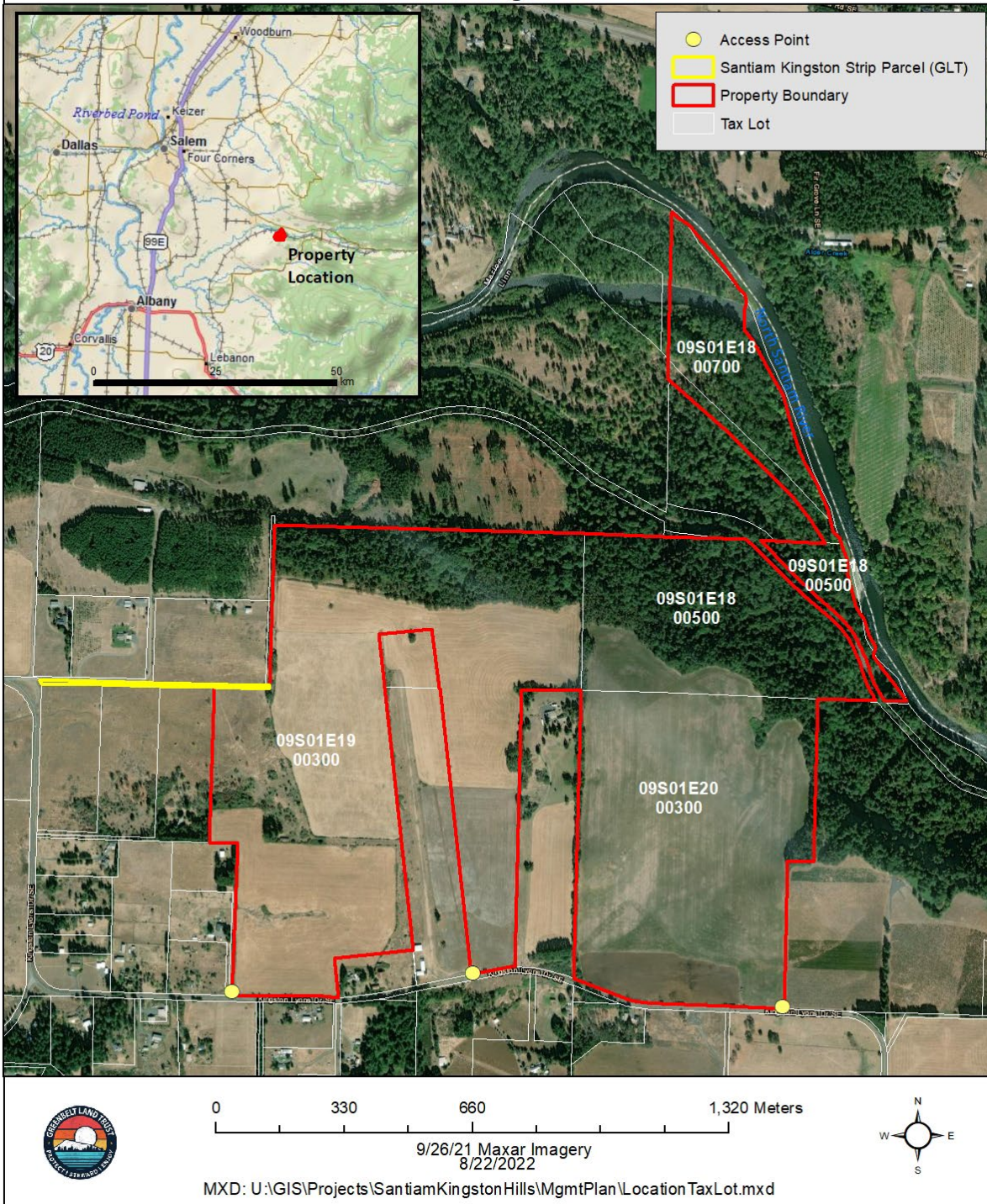


Figure 1. Location and Tax Lot Map.

### 3. ACQUISITION PURPOSE AND CONSERVATION VALUES

The Santiam Kingston Hills property represents a diverse and dynamic landscape along the North Santiam River. This property contains high quality and intact riparian forest, wetlands, grasslands, oak woodland, farmland, and a unique butte with a 360-degree view of the North Santiam River corridor. Its proximity to other conservation lands, coupled with the rich and diverse suite of sensitive species and strategy habitats, provides substantial conservation value for the Willamette Valley ecoregion.

The Conservation Values directly from the Conservation Easement (CE: Attachment A) are included below, and their condition was documented in the Baseline Inventory, which is on file with BPA.

*The Protected Property, in its present state, comprises approximately 404.69 acres including wet prairie, grasslands, woodlands, and aquatic and riparian systems that support a community of native species. The Parties agree that the Protected Property includes other important species, habitat, and ecosystem attributes. The Conservation Values of the Protected Property that currently exist specifically include the following, recognizing that such Conservation Values may periodically fluctuate or trend toward long-term change, due to natural events such as plant community dynamics, succession, wildfire, floods, interdecadal climate events, and long-term climate change, as well as human-initiated enhancement or restoration actions:*

- 1. The Protected Property supports strategy habitats defined by the Oregon Conservation Strategy, adopted by ODFW in 2016, including flowing water and riparian habitats, grasslands, oak woodlands, and wetlands that provide habitat for many species, including species of conservation concern.*
- 2. Specific priority features on the Protected Property include high quality riparian forest in the floodplain of the North Santiam River, oak woodlands, remnant wet prairies, and springs and headwater drainages that connect to a slough of the North Santiam that supports a population of Oregon chub. The Protected Property provides substantial opportunity to restore additional wet prairie and grassland habitats.*
- 3. Scenic Resource. The Protected Property's Conservation Values include its scenic resource of open space, riparian habitats and grasslands.*
- 4. Ecosystem Attributes and Benefits. Ecosystem attributes and benefits, present as of the Effective Date of this Conservation Easement, include but are not limited to the fish and wildlife habitats, biodiversity, clean air and water, storage of flood water, maintenance of soil productivity, and carbon sequestration.*
- 5. Contribution to landscape-scale conservation. The Protected Property is located within two priority conservation areas, Santiam Confluences (078) and Kingston Prairie-Scio Oak Pine Savanna (079), identified in the Oregon Conservation Strategy, adopted by the Oregon Department of Fish and Wildlife in 2016, and targeted to protect and restore native Willamette Valley upland and wetland prairie, oak savanna, oak woodland, and flowing water and riparian habitats and the species that rely on them.*

#### 4. CONNECTIVITY

The Property is located within two Oregon Conservation Strategy (OCS) Conservation Opportunity Areas (COAs), the Santiam Confluences COA (078) and the Kingston Prairie-Scio Oak Pine Savanna COA (079).

The Property is also adjacent to the 154-acre Kingston Prairie Preserve, a protected natural area that Greenbelt acquired from The Nature Conservancy in 2018. Kingston Prairie features rare native plants such as Bradshaw's lomatium (*Lomatium bradshawii*) and Willamette daisy (*Erigeron decumbens*), as well as western meadowlarks (*Sturnella neglecta*).

In addition to Kingston Prairie, the Property is adjacent to the privately-owned Bird Haven restoration site to the north, the WWMP-funded Confederated Tribes of the Grand Ronde North Santiam properties to the east, and Bureau of Land Management (BLM) lands immediately adjacent to the north. In combination, this creates a locally aggregated conservation zone of over 2,000 acres.

See Figure 2 for the Conservation Landscape Map and Figure 3 for the Conservation Opportunity Area Map.



# Conservation Landscape Santiam Kingston Hills

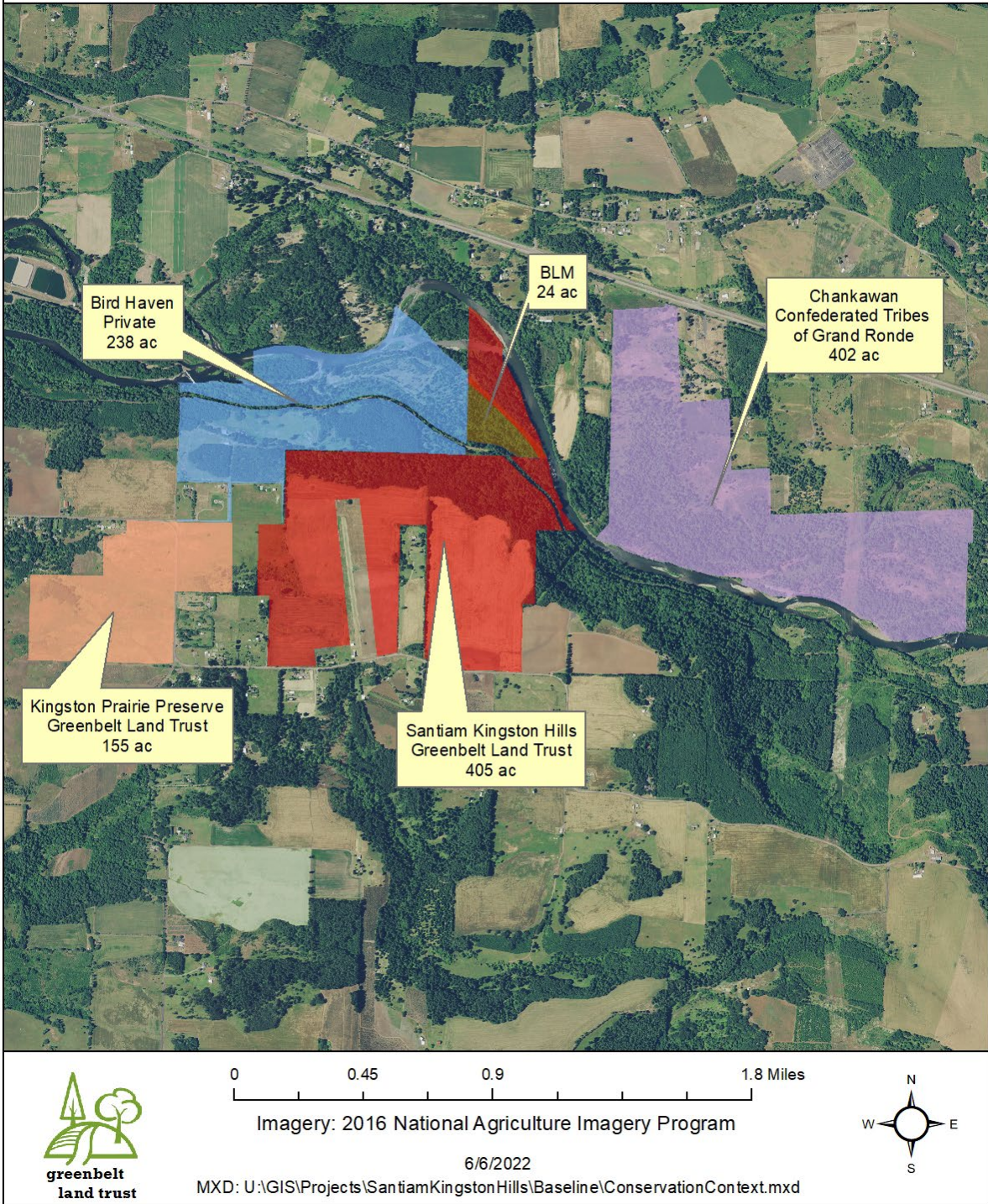


Figure 2. Conservation Landscape Map.

# ODFW Conservation Opportunity Areas (COAs) Santiam Kingston Hills

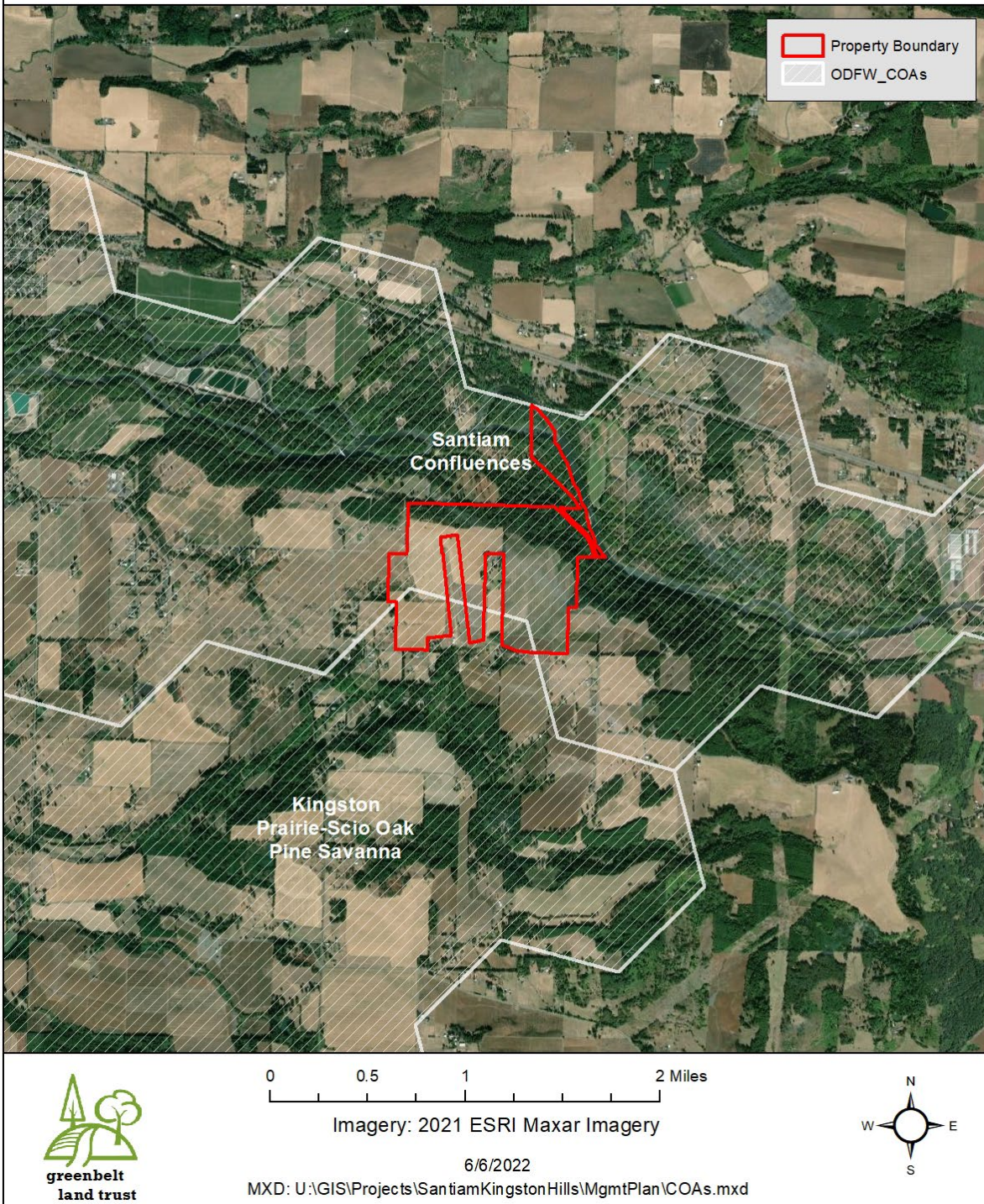


Figure 3. Conservation Opportunity Area Map.

## **5. ADJACENT LAND USE**

The Property is located approximately 2 miles southeast of Stayton in a rural area of Linn County. It is surrounded by farmland and rural residences with the North Santiam River along the north side of the Property. A railroad line bisects the Property and Kingston-Lyons Drive bounds the south boundary of the Property. The Property is topographically diverse with areas of relatively flat ground, rolling hills, steep slopes down to the North Santiam River and floodplain.

Comprising most of the northern boundary, the privately-owned Bird Haven property is actively engaged in restoration, including invasive species control and conversion of conifer plantations to promote oak habitat in the long term. These activities are similar to what occurs on the Property, generally support the conservation values on the Property, and do not pose a threat.

Also to the north and along the west of the northern arm of the Property is the parcel owned by the BLM. The BLM is not actively managing the property at this time, and it contains similar habitats to the northern arm of the Property, not posing additional threats to the conservation values.

The North Santiam River forms the northeastern boundary of the Property. While there are not established river access points, there is potential for trespass access from the river. The river also is a source of invasive species propagules, such as reed canary grass, blackberry, or others. This threat can be addressed by periodic survey of the riverfront sections of the Property, with follow up treatment as feasible and needed.

The eastern boundary includes a combination of mixed deciduous forest, oak woodland and agricultural fields currently in Christmas trees. These areas do not pose a threat to the conservation values at this time. Young Christmas trees are identified as a prime habitat for Oregon Vesper Sparrow (Altman 2021), and this land use may be a potential source of birds for newly restored prairie at Santiam Kingston Hills. As grassland restoration progresses on the Property, converting agricultural crops to upland prairie, periodic monitoring of the Property edge can track any threats from accidental overspray of agricultural chemicals or spread of agricultural weeds.

Land uses on the southern and western boundaries of the property are a mix of roadside and rural residential or small scale (5 acre or less) hobby farms, and additional Christmas trees. Other than domesticated pets, the primary threat from these land uses could be invasive species, which can be addressed with periodic monitoring and treatments as required. Also within the southern boundary area is a small-scale air strip, which is currently not thought to be in use. The airstrip property was for sale at the time of LMP development.

## **6. CURRENT AND HISTORICAL LAND USE**

Land use at the time of acquisition was as follows:

- Greenbelt leases approximately 251 acres of farmland on the Property. The farming tenant typically has non-native grass seed crops in production. The current lease agreement runs

November 1, 2019 through October 31, 2022 on the agricultural fields (see Figure 4: Leased Fields Map), and is in the process of renewal at the time of LMP development. Per the CE Greenbelt will phase out agriculture within 15 years of taking title to the Property (by the end of September 2033). A projected schedule of field retirement is included in question #24, and tentatively plans that all crop production will end in Fall 2030). Through verbal and email communication from Greenbelt, the tenant understands that the CE limits the length of time the Property can be farmed before agriculture must be phased out. The restoration process will be on a modular basis, keeping the fields in management and avoiding fallow/accumulation of weed species until immediately before restoration.

- Approximately 21 acres of recently grazed pasture (degraded wet prairie) on the west side of the Property were not in use. Lack of management in this habitat allowed invasive species (e.g., Himalayan blackberry (*Rubus armeniacus*) and Scotch broom (*Cytisus scoparius*)) to establish and expand. Fencing on the Property, used for grazing management in the past, is discussed in question #12, and internal fencing will be removed.
- The remainder of the Property is in flowing water and riparian habitat (40 acres), mixed deciduous forest (29 acres), and oak woodland (64 acres), and was not in use or management at the time of acquisition.

In addition to agricultural cultivation, the Property has a history of cattle grazing and timber harvest. Most recently the grazing was concentrated on approximately 21 acres on the west side of the Property around the existing shed (now mapped as degraded wet and upland prairie). Those 21 acres were fallowed in 2018 prior to Greenbelt's ownership. Much of the mixed deciduous forest was logged between the 1950s – early 1980s, resulting in the current species composition and age structure of the habitat.



Figure 4. Leased Fields (field names are those in use by tenant, for simplicity).

## 7. INTERIM MANAGEMENT ACTIVITIES

Interim management activities on the Property between the time of acquisition and the present are described in Table 1 below. LUAs are included in Attachment B: Land Use Agreements.

**Table 1. Interim management activities at Santiam Kingston Hills between September 2018 and April 2022.**

Activity	Date(s)	Purpose	LUA #
The USFWS cleared invasive species from underneath the oaks as part of the oak woodland habitat.	2019	Maintaining and improving conditions for oak-dependent species.	
Mowing of the access road for the mixed deciduous habitat.	2019, 2020, 2021	Maintain infrastructure and equipment access.	LUA # 20210105
Greenbelt engaged contractors to cut and stack downed woody branches and debris in multiple locations on the site after a late winter ice storm.	2021	Clean up from an extreme ice storm event occurred in the Willamette Valley in February 2021, resulting in widespread treefall and damage.	
Invasive species control, skid steer mowing and site preparation for restoration to prairie habitats suitable for Willamette daisy introduction in the future. Existing wetland (wet prairie) habitat unit.	2021	Part of project to promote recovery (down-listing) of Willamette daisy with IAE and USFWS. Work to date (occurring in 2021) for this project has focused on weed control.	LUA # 20210105
Farming of 251 acres of agricultural land.	2018-2022	Continue agricultural use until restoration completed, as part of agriculture phase-out.	LUA # 20180416

## 8. MANAGEMENT ACCESS

The Property has multiple access points (see Figure 5: Improvements Map):

- The entrance at the southeast corner of the Property includes a gravel parking area measuring 30 feet (ft) by 46 ft. From this point, parts of the interior of the Property are accessible through fields by foot, or with the use of a 4 wheel-drive truck, tractors, or an all-terrain vehicle.
- Greenbelt also owns an interest in a 1.5-acre strip that connects the western edge of the Property to Kingston-Lyons Drive SE. This strip effectively connects the Property to the Kingston Prairie Preserve. This strip is an unimproved access road that is accessible for foot traffic, a 4-wheel drive truck, tractors, or an all-terrain vehicle.

- There is access to the floodplain parcels by way of the North Santiam River. Access via river is logistically challenging, and any stewardship work in the floodplain would be limited to crews on foot.
- Road access to the floodplain parcels or to the oak woodland and western side mixed deciduous habitats is only possible through permission from Bird Haven landowners to cross their property. Additional temporary road infrastructure needs related to oak woodland management will be identified in the Forest Stewardship Plan and addressed in a LUA.

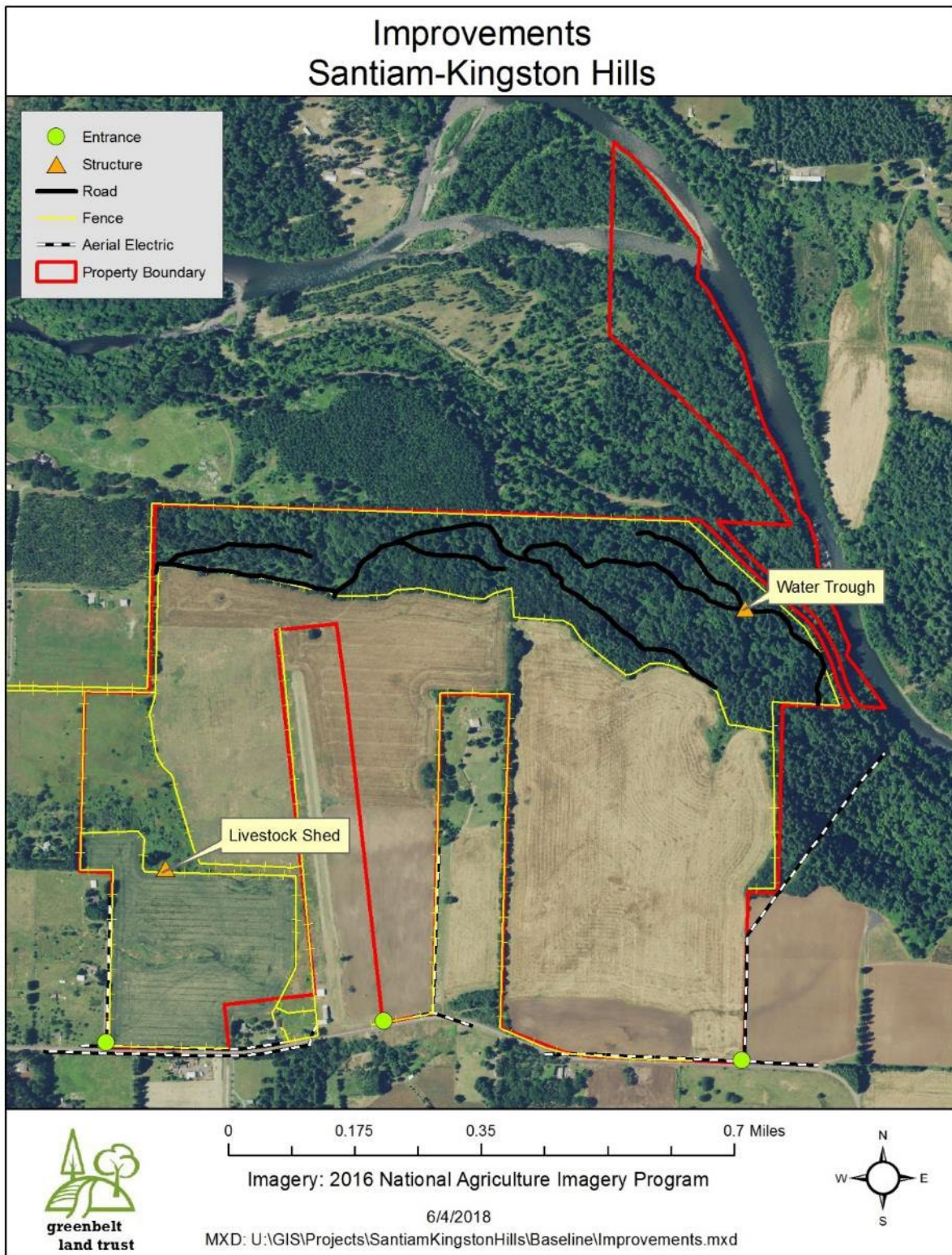


Figure 5. Improvements Map.



## 9. PUBLIC ACCESS AND USE

As applied to this Property, access to the land is consistent with Greenbelt's management of access under the Conservation Easement (see Section II.H) and this management plan, as long as the use is consistent with the purpose of the Conservation Easement to protect and preserve, and as appropriate, allow for restoration and enhancement of the Conservation Values. Details on public and tribal access are described below.

All access to the Property will be coordinated with Greenbelt in advance so that activities would not materially harm or materially interfere with any of the Conservation Values. Greenbelt would place appropriate restrictions on the use, such as time, place, manner, and intensity restrictions to remain consistent with the Conservation Easement (e.g., avoiding sensitive periods within the habitat units such as during flowering and fruiting of endangered plant species in spring, limiting the number of people or vehicles, limiting overnight usage, etc.).

Greenbelt will monitor access/use of the Property and any effects. Any potential negative effects to the Conservation Values that are not transient in nature resulting from access to and use of the Property shall be mitigated by Greenbelt (e.g., replanting) and Greenbelt would monitor the efficacy of the mitigation to ensure consistency with the Conservation Easement. If the proposed use may result in a potential conflict with the Conservation Easement, then Greenbelt will consult with BPA to determine whether the proposed use can be addressed in a Land Use Agreement or should not be allowed to occur.

### **Public Access**

There will be limited public access primarily conducted through tours and educational opportunities. At this time Greenbelt is not proposing the development of extensive trails or open public access in part because of its isolated location and lack of a full-time on-site property manager. The site will not be open to hunting so as to protect neighbor relations, and the sensitive plant and animal communities in restoration on the Property. Fishing in the North Santiam River is permitted, as long as it is accessed from the river.

While the CE includes development of single-track trail systems as a reserved use (CE Section II.F.), for the period of this first LMP, the public access will be limited and provided primarily through tours, creative planned experiences and educational opportunities. This type of limited access does not require extensive infrastructure to be added to the Property such as the addition of trails and is in-line with Greenbelt's mission and priority to protect the conservation values on the Property. However, as indicated in the grant application, Greenbelt also sees the value and long-term benefits of connecting people with land and conservation, which is also part of the WWMP program vision. In Goal 8 under Public Outreach and Education, completing a trails feasibility study is included, to better understand the potential opportunities to develop passive recreation infrastructure for the site in the future and coordinate such access with Greenbelt's adjacent Kingston Prairie Preserve. Permission to implement such options in the future, should Greenbelt determine it possible to develop trails without impacting the priority conservation values of the site, would be via a LMP amendment and/or LUA.

For the period of this LMP, Greenbelt does not anticipate allowing unrestricted public access, therefore there will be limited direct management dedicated to that issue. All GLT properties are regularly monitored for violations of trespass, carry liability and legal defense insurance (Terraforma) and maintain

dedicated funding to support persistent violations. Fencing and gates along the roads will be maintained to help manage access to the Property.

The Property does not have a history of public trespass, however relationships will be developed with neighbors to help identify and address trespass problems. Greenbelt staff will regularly visit the Property as management needs arise. Public events held on the Property will be through Greenbelt’s outreach program under the guidance and facilitation by Greenbelt staff.

**Tribal Access**

Greenbelt is committed to increasing indigenous access to land. The indigenous peoples of the Willamette Valley were forcibly removed from their homelands, and modern-day land ownership, even with conservation lands, represents a separation between native communities and their traditional lands. The organization and structure of this tribal access to Greenbelt lands is still in development and is based on deepening trusting relationships and partnerships and developing a shared vision with tribes. Greenbelt is in the process of developing these ideas with its colleagues at the Confederated Tribes of Grand Ronde, the Confederated Tribes of Siletz Indians, and the Confederated Tribes of Warm Springs.

Traditional ecological knowledge and cultural land uses provide historical and cultural insights that can be woven into restoration and stewardship for these lands. Tribal access and uses on the Property may include (but are not limited to) inviting tribes to use the Property to harvest first foods, medicines, and fibers, for educational opportunities with elders and youth, for convening together, for outdoor recreation, and for spiritual/cultural connection. These uses would be identified in advance, occur upon request by tribal members, and be coordinated by Greenbelt.

**10. CURRENT AND PRIOR LAND USE AGREEMENTS**

All current and prior Land Use Agreements are included in Table 2. Copies of the agreements are included in Attachment B: Land Use Agreements.

**Table 2. Land Use Agreements at Santiam Kingston Hills.**

LUA #	Effective Dates	Purpose
LUA # 20180418	9/24/2018-9/30/2019	Pedestrian license for neighbors at Bird Haven.
LUA # 20180417	9/24/2018-9/30/2023	Pedestrian license for previous owners – Sandners.
LUA # 20210105	7/15/2021 – 10/1/2021	Invasive species control of target weeds such as Scotch broom and blackberry ( <i>Cytisus scoparius</i> and <i>Rubus armeniacus</i> ) and mowing a 16 foot access trail totaling approximately 5 acres.
LUA # 20180416	9/24/2018 – 10/31/2022	Assign the rights and duties of landlord under the existing lease agreement between Jim Sandner and Doefler Farms, Inc. to GLT and to amend certain terms of lease agreement. Original LUA set to expire 10/31/2019 but was extended by amendment no. 1, dated May 1, 2019; amended expiration date October 31, 2022.

<i>Pending</i>	<i>Submitted to BPA March 21, 2022.</i>	Spot spray herbicide to target weeds on fence lines: <i>Cytisus scoparius</i> , <i>Rubus armeniacus</i> . Mow and boom spray 16-acre restoration area.
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## 11. INCOME-GENERATING ACTIVITIES

The current lease of 251 acres of agricultural fields to Doerfler Farms, Inc. for farming use has a rental rate of \$34,450 per year. These funds are deposited into the stewardship fund for the Property. See Question #24 for an overview of the agricultural phase-out process, and Goals 2 and 3 for information regarding conversion of agricultural fields to habitat.

## 12. EXISTING INFRASTRUCTURE

The locations of infrastructure on the Property are shown in Figure 5: Improvements.

- Fences- Some of the perimeter of the Property is fenced and there is internal cross fencing. Fences are of varying types and conditions, including wood and metal posts, barbed wire, woven wire, and smooth electric wire. The cross fences are not needed for management and impede invasive species control; these will be evaluated for utility and they will be removed over time as funding allows (See Goal 7).
- Roads- There are three dirt or gravel entrances to the Property. The entrance at the southeast corner of the Property includes a gravel parking area measuring 30 feet by 46 feet. Skid trails and logging roads are present in the forested part of the Property, which are used as internal management roads/trails. Use and maintenance of the roads are described in Goal 7.
- Structures- There is one building located on the Property: a livestock shed of post and pole construction with metal siding and roof, measuring 30 feet by 70 feet. The shed is in poor to fair condition with a substantial patch of blackberries growing on and around the west, south and east sides of the structure. It is closed on three sides and open to the north. Greenbelt anticipates dismantling and removing this structure as the surrounding habitat is restored (See Goal 7).
- Utilities- There are no utilities connected to the Property though there are electrical poles and lines running along Property boundaries.
- Ditches- Ditches are present in many places on the Property, especially along the edges of crop fields but also through fields and other habitats. There are numerous small ditches (some as small as 1 ft across). Some ditches are visible in aerial photos of the Property. Greenbelt does not anticipate modifying ditches but will consider their function after agricultural activities are retired.
- Water Troughs- There are two dilapidated water troughs that were used for watering cattle when the prior landowner grazed cattle on the Property. Greenbelt anticipates dismantling and removing these structures.

## 13. WATER RIGHTS

<i>Describe how water rights have been used to date, and specifically in the last five years.</i>	There are no water rights benefitting the Property.
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<i>Have you complied with all usage requirements? If not, explain.</i>	N/A
<i>Describe how you plan to use the water rights.</i>	N/A
<i>Describe any anticipated changes to the water rights, including time frame for changes.</i>	N/A

#### **14. HISTORICAL AND CULTURAL RESOURCES**

Based on research that included a review of historic aerial photos, the historic and current land uses appear similar since 1936 (earliest aerial photo available- see Figure 6: 1939 Aerial Photo). The Property has been primarily used for farming and grazing, the forest and floodplain was most likely historically grazed, but not for some time. While a homestead and barn were historically present on the eastern side of the Property, it was completely removed and converted to agricultural field by 1990.

Data from land surveys conducted in the 1850s indicated that the Property contained a mix of upland and wet prairies, oak savanna, and riparian floodplain forests prior to Euro-American settlement and was likely an important area for native American tribes because it is adjacent to a major fish-bearing tributary of the Willamette River and contains a diverse array of biologically rich habitats and varied topographic viewpoints. Greenbelt will engage with Tribes regarding the site and incorporate their input as potential future uses and public access to the site are planned (see Goal 8).



**Figure 6. 1939 Aerial Photo.**

## 15. STAKEHOLDER AND PUBLIC INVOLVEMENT

- Neighbors - Greenbelt invited neighbors in the general area of the Property to an informal gathering in November 2018, soon after acquiring the Property. Approximately 55 families were invited, and Greenbelt informally discussed short- and long-term plans for the Property.
- Bird Haven – Greenbelt staff have met with the owners of Bird Haven, an immediate neighbor to the Property multiple times each year since acquisition. This has provided the opportunity for both parties to discuss restoration plans, maintenance schedules, and access needs.
- Confederated Tribes of the Grand Ronde (CTGR) – Greenbelt has been in communication with CTGR regarding opportunities for ongoing partnering and collaboration, in addition to CTGR sharing information regarding restoration on their Chankawan and Chahalpam sites.
- BLM – Greenbelt staff engaged with BLM staff in a series of meetings in Fall 2021, both online and in the field, to discuss site restoration planning and objectives. BLM shared potential opportunities for funding support as restoration proceeds. This is expected to be an ongoing relationship.
- Farmers/Lessees – Greenbelt engaged with the tenant to plan the restoration phases on the site that are presented here. It is of mutual benefit to plan conversion of segments or fields such that land can be farmed until immediately before it is put into restoration, to minimize weed invasion. The farmers also are intimately familiar with the land and can share information about site characteristics that are relevant to restoration planning.
- USFWS – USFWS Partners Program staff have worked on the Property prior to Greenbelt’s acquisition. They continue to visit the site and have provided recommendations for habitat restoration for each unit on the Property. USFWS is supportive of rare species introductions to promote species recovery, in addition to habitat management to reduce threats to those populations.

## B. EASEMENT RESTRICTIONS AND PROHIBITIONS

### 16. EASEMENT PROHIBITIONS AND COMPLIANCE TABLE

Easement prohibitions on the Property are included below in Table 3.

**Table 3. Conservation Easement prohibitions at Santiam Kingston Hills.**

Summary of Easement Prohibitions	Compliance Status
<i>Residential, Commercial or Industrial Uses.</i> Any residential, commercial, or industrial uses of the Protected Property is prohibited, including timber harvesting, grazing of livestock, and agricultural production, except for Reserved Agricultural Uses during the Phase-Out Period as described in Section F. Timber removal for restoration or habitat management is not considered commercial timber harvest, even if that activity generates income.	Approximately 251 acres leased for farmland. Agricultural production allowed in Reserved Agricultural Uses during Phase Out Period ending in 2033, CE Section II.F. See Goal 2 and 3 for description of restoration phases.
<i>Construction of Buildings, Facilities, Fences or Other Structures.</i> Except for newly constructed boundary fences and fencing required for habitat purposes identified in the final Management Plan, construction of new buildings,	No new construction planned. Maintenance of existing facilities, fences will be within

Summary of Easement Prohibitions	Compliance Status
<p>facilities, fences or other structures is prohibited. Repair, maintenance, or replacement of existing buildings, facilities, fences or other structures identified in the Baseline Documentation Report are permitted at the same location and within the existing footprint of such structures. If existing fences are repaired or replaced, then the fences must be wildlife-friendly, which allow for the safe passage of wildlife, increased fence visibility, and wildlife access to food, shelter, and water.</p>	<p>existing footprint. See Goal 7 for discussion of infrastructure maintenance.</p>
<p><i>Utilities.</i> Except as provided for in Section J.2, the installation or relocation of new public or private utilities, including electric, telephone, or other communications services is prohibited unless otherwise agreed to in writing by BPA. Existing utilities on, over, or under the Protected Property may be maintained, repaired, removed or replaced at their current location as that location is documented in the Baseline Documentation Report.</p>	<p>None contemplated as part of LMP.</p>
<p><i>Signs.</i> Except for no trespassing signs, boundary signs, directional signs, condition of access to Protected Property sign, memorial plaques, trail interpretive signs, signs identifying the owner of the Protected Property, and signs that may be erected by the Grantee identifying the Purpose of the Protected Property, all other signs, advertisements, and billboards of any nature are prohibited. No permitted sign may exceed 15 square feet in size.</p>	<p>Boundary signs to be erected, see Goal 7.</p>
<p><i>Waste.</i> Dumping, accumulating, or storage of trash, refuse, waste, sewage, bio-solids, or other debris is prohibited.</p>	<p>None planned, trespass monitored as discussed in Section E.</p>
<p><i>Mining.</i> The exploration, development, mining or extraction of soil, sand, loam, gravel, mineral, oil, gas, or other substance from the surface or subsurface of the Protected Property is prohibited.</p>	<p>None contemplated as part of LMP.</p>
<p><i>Topography.</i> Altering the existing topography of the Protected Property by digging, plowing, disking, or otherwise disturbing the surface or subsurface is prohibited, except as allowed for trail development, habitat restoration/management activities described in the final Management Plan, or for Reserved Agricultural Uses during the Phase-out Period.</p>	<p>Disking and plowing allowed in Reserved Agricultural Uses during Phase Out Period that ends in 2033, CE Section II.F. See Question # 24 for approximate schedule of phase out, in addition to Goals 2 &amp; 3.</p>
<p><i>Watercourses/Wetlands.</i> Draining, dredging, channeling, filling, leveling, pumping, diking, impounding or any other alteration of any watercourses, ponds, seeps, bogs, springs, wetlands, or any seasonally wet area is prohibited, as is altering or tampering with existing water control structures or devices, except for habitat restoration, enhancement, and maintenance activities described in the final Management Plan.</p>	<p>None contemplated as part of LMP.</p>
<p><i>Vegetation.</i> The cutting, trimming, shaping, killing, or removal of any vegetation from the Protected Property, except for exotic or invasive plant species, is prohibited, except as allowed for trail development, habitat restoration, maintenance, and enhancement activities described in the final Management Plan, or harvesting of agricultural crops during the Phase-out Period. The prohibitions in this provision do not apply to maintenance of transmission easements as conveyed to the United States in Section J.2.</p>	<p>Removal of select native vegetation for restoration will occur per this LMP, as discussed for oak woodland restoration (See Goal 4). Harvest of agricultural crops as per Reserved Agricultural Uses during Phase Out Period, CE Section II. F.</p>

Summary of Easement Prohibitions	Compliance Status
	Tribal access for harvesting culturally significant plant materials, which may include native plant species, will be allowed per this LMP.
<i>Exotic or Invasive Species.</i> The introduction, cultivation, or use of exotic or invasive plant or animal species on the Protected Property is prohibited, except for agricultural use during the Phase-out Period.	Cultivation of non-native species on farmland as per Reserved Agricultural Uses during Phase Out Period, CE Section II. F.
<i>Roads and Impervious Surfaces.</i> Construction of new roads and paving of any existing road not paved or otherwise covered in an impervious material as of the Effective Date is prohibited. Temporary roads (in place for two years or less) may be allowed for habitat restoration and management activities as described in the final Management Plan. However, the temporary road areas shall be revegetated to a natural-like condition after use. Existing roads identified in the Baseline Documentation Report may be maintained and repaired in their current condition and within their existing footprint as identified in the Report.	No permanent new roads planned. Temporary roads (in place two years or less) will be developed if required during habitat management work (See Goal 4), then revegetated to a natural condition once retired.
<i>Off-road Vehicle Use.</i> Use of any motorized vehicles is prohibited, except for vehicles necessary for Reserved Agricultural Uses during the Phase-out Period and vehicles used for habitat restoration, enhancement, and maintenance activities.	Off –road vehicles such as tractors allowed as per Reserved Agricultural Uses during the Phase-out Period, CE Section II. F. Equipment for habitat restoration, enhancement and maintenance may include tree removal equipment.
<i>Subdivision.</i> The legal or “de facto” division, subdivision, partitioning of the Protected Property, or any attempt to convey the Property except as a single property in its current configuration, as described in Exhibit A and shown in Exhibit B, is prohibited.	None contemplated as part of LMP.
<i>Grant of Rights.</i> The granting of any property interest or rights in the Protected Property, including easements, permits, licenses, and leases, without the prior written consent of the Grantee, is prohibited.	Agricultural leases will be completed via LUAs, e.g., LUA # 20180416, until the phase out described in Goals 2 and 3. No additional grant of rights contemplated as part of LMP.

## C. CURRENT ECOLOGICAL SETTING

### 17. CURRENT HABITAT TYPES AND CONDITIONS

Six primary habitat types have been identified on the Property and are described below (see Figure 7: Current Vegetation). For context, the topography of the site is also included in Figure 8: USGS 7.5 Minute Quad Map.



### **Flowing Water and Riparian Habitat (40 acres)**

A primary feature of this Property is a magnificent floodplain forest, 0.82 miles of riverfront and 0.12 miles of side channel of the North Santiam River. Vegetation includes a mature overstory of primarily black cottonwood (*Populus trichocarpa*) with minor components of bigleaf maple (*Acer macrophyllum*), Douglas-fir (*Pseudotsuga menziesii*), and western redcedar (*Thuja plicata*); the overstory is nearly 100% native species. The understory is dominated by native shrubs and herbaceous plants such as Oregon grape (*Berberis* sp.), snowberry (*Symphoricarpos albus*), osoberry (*Oemleria cerasiformis*), and sword fern (*Polystichum munitum*) on higher ground and sedges in wetter areas. Reed canary grass (*Phalaris arundinacea*) is present in small patches in sloughs, while false brome (*Brachypodium sylvaticum*) and shining geranium (*Geranium lucidum*) are scattered in patches throughout the understory, particularly around animal trails. Ivy (*Hedera helix*) has been found and removed on a small number of trees. Non-native cover in the understory is estimated to be 15-20%.

Numerous historic floodplain channels are present and actively flow during high water periods. Many isolated pools have wetland vegetation dominated by slough sedge. Amphibians use the seasonal pools and channels. Hyporheic flow occurs continually through the gravel substrate with the subsurface water level tied to the North Santiam. Hyporheic flow can cool water, providing benefit to salmonids. Historic photos demonstrate the floodplain channel migration from the base of the slope north to the present location of the river's mainstem. Several secondary channels have developed, creating islands dominated by willow and black cottonwood.

### **Wetlands (Wet Prairie) (19 acres)**

Wet prairies (a sub-type of OCS wetlands) on the west side of the Property are in degraded condition with seasonally wet soils, surface water during the wet season, and a few native wet prairie plants. Non-native plant cover is estimated at approximately 95%. Likely not farmed because it was too wet much of the year, this patch was grazed with livestock for several decades prior to Greenbelt acquisition, and part of it served as travel corridor for cattle to move from the pastures on the Property to the barn located off the Property. Very small seasonal streams cross the area and drain to the west into Kingston Prairie Preserve. Native plants observed by Greenbelt staff and consultant Steve Smith (retired ODFW/USFWS Biologist) include Hall's aster (*Symphotricum hallii*), camas (*Camassia* spp.), buttercup (*Ranunculus* spp.), blue-eyed grass (*Sisyrinchium* sp.), Yampa (*Perideridia* spp.), shooting star (*Dodecatheon* sp.), bog saxifrage (*Saxifraga oregana*), monkey flower (*Mimulus guttatus*), California oatgrass (*Danthonia californica*) and Oregon white oak (*Quercus garryana*). Oregon ash (*Fraxinus latifolia*) seedlings are encroaching in some parts. In drier areas non-native shrubs such as Himalayan blackberry, English hawthorn (*Crataegus monogyna*), and Scotch broom are present.

### **Agriculture (not an OCS strategy habitat type) (250 acres)**

The agricultural fields are currently in 100% non-native grass seed crops, including perennial ryegrass (*Lolium perenne*), annual ryegrass (*Lolium multiflorum*), and bent grass (*Agrostis* sp.). The fields have infrequent agricultural weed species. Agriculture will be phased out by fall 2033 at the latest (per CE terms) (see Question #24 for more information; crop production is anticipated to end in the last remaining field in 2030). Parts of the fields are likely suitable for wet prairie restoration, and other parts are suitable for grassland restoration as soils become deeper and better drained. See Question #18 for more discussion regarding soil conditions.

### **Grasslands (2 acres)**

A small area of grasslands in degraded condition exists on the Property. The habitat includes several larger Douglas-fir trees, extensive dense Himalayan blackberry, Scotch broom, and non-native grasses. Few native species are present, and non-native plant cover is near 100%.

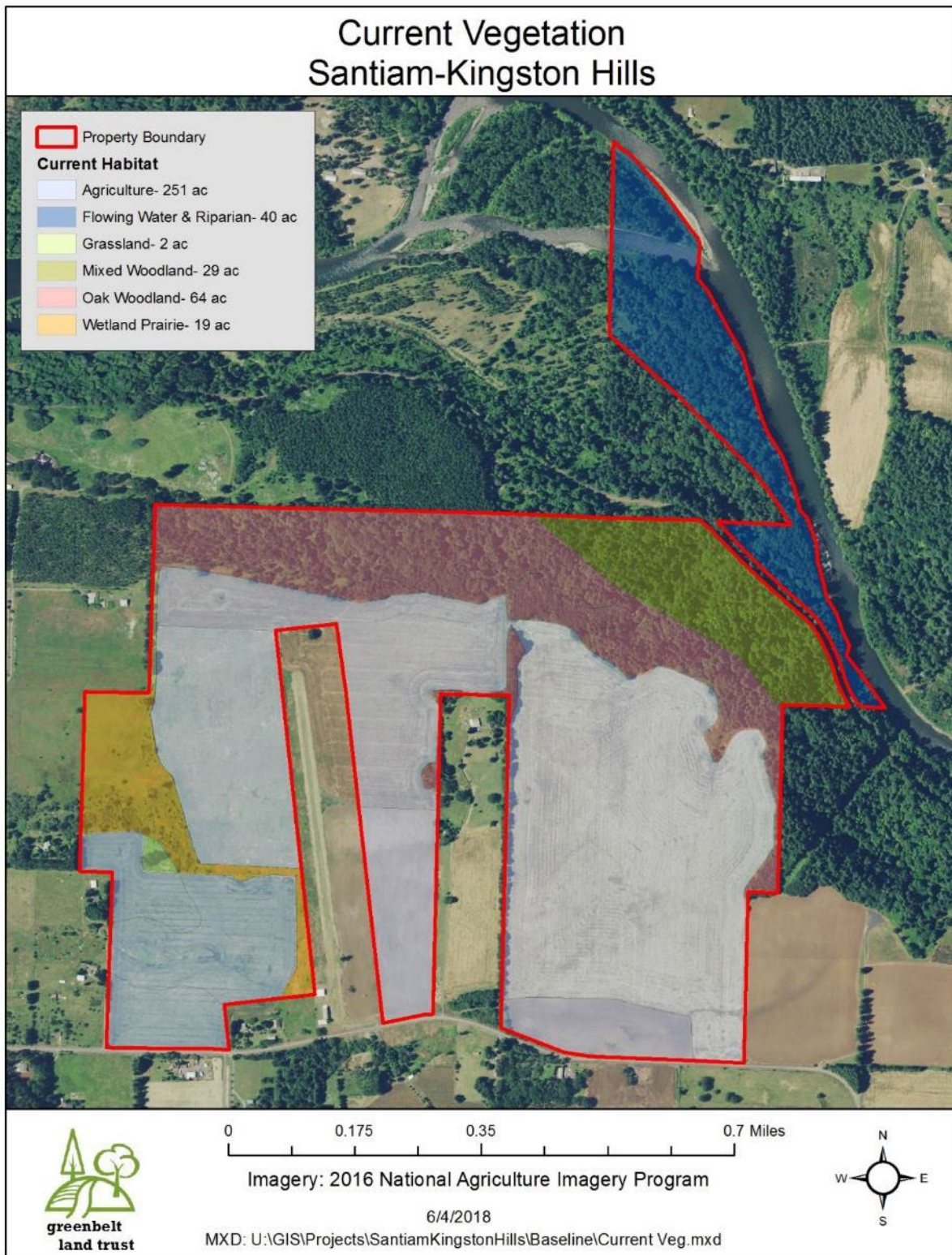
### **Oak Woodlands (64 acres)**

Oak woodlands currently form a rim with upland habitats before the steep slopes down to the North Santiam River. There are two age classes of oak present: large (24-36" DBH) trees and smaller replacement oaks (6-24" DBH). Both sites contain a shrub dominated understory including natives such as snowberry and poison oak (*Rhus diversiloba*), along with non-native Himalayan blackberry, Scotch broom, scattered false brome, and shining geranium. Non-native plant cover in the understory is estimated to be 35-40% and is variable in nature across the habitat unit. Large oaks still remain scattered throughout the stand but are threatened by forest succession and competition from Douglas-fir, grand fir (*Abies grandis*) and non-native cherry (*Prunus avium*). Non-native trees are estimated to be 10-15% of canopy cover within the habitat unit. Oak dependent species such as western gray squirrel, slender-billed nuthatch, western bluebird, and acorn woodpecker currently occupy the habitat unit (see Question #18 for scientific names). This oak woodland extends north onto the adjacent Bird Haven property where oak woodland and oak savanna restoration have been occurring since 2014.

### **Mixed Deciduous (Not an OCS strategy habitat) (29 acres)**

This habitat includes a variety of ages and species of conifers and hardwoods and encompasses the transition from the oak woodland habitat down the steep slope to the floodplain of the North Santiam River. We identified the railroad right of way as a boundary (lower slope, northeast side) between this mixed deciduous and the flowing water and riparian habitat unit. At its steepest point, the slope drops 300 ft in elevation over just 180 ft. Much of this habitat was logged between the 1950s and 1980s according to aerial photos, which apparently left the remaining species that are now dominant, including bigleaf maple and Douglas-fir, occasional Oregon white oak, grand fir, and frequent non-native cherry and native western hemlock (*Tsuga heterophylla*). Non-native tree cover is likely 15-20% of the canopy cover. The understory includes native species: sword fern, snowberry, hazel, Oregon grape, vine maple (*Acer circinatum*) and osoberry. Around the edges of adjacent crop fields, where more light penetrates, there are patches of Himalayan blackberry and Scotch broom. Shining geranium and false brome are patchily distributed throughout the forest, particularly where adjacent to the existing access road. Understory plant cover is estimated to be 10-15% non-native species.

With its location between the uplands and the North Santiam floodplain, this habitat unit provides a natural buffer between the agricultural areas and the river. While not a strategy habitat, the habitat unit has outstanding bird diversity, including neo-tropical migrant birds. The emergent conifers are of ample size to support bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*) and blue heron (*Ardea herodias*) nests. Strategy bird species of interest include acorn woodpecker, slender-billed nuthatch, and western bluebirds which utilize the mature oaks on the forest edges (see question #18).



**Figure 7. Current Vegetation Map.**

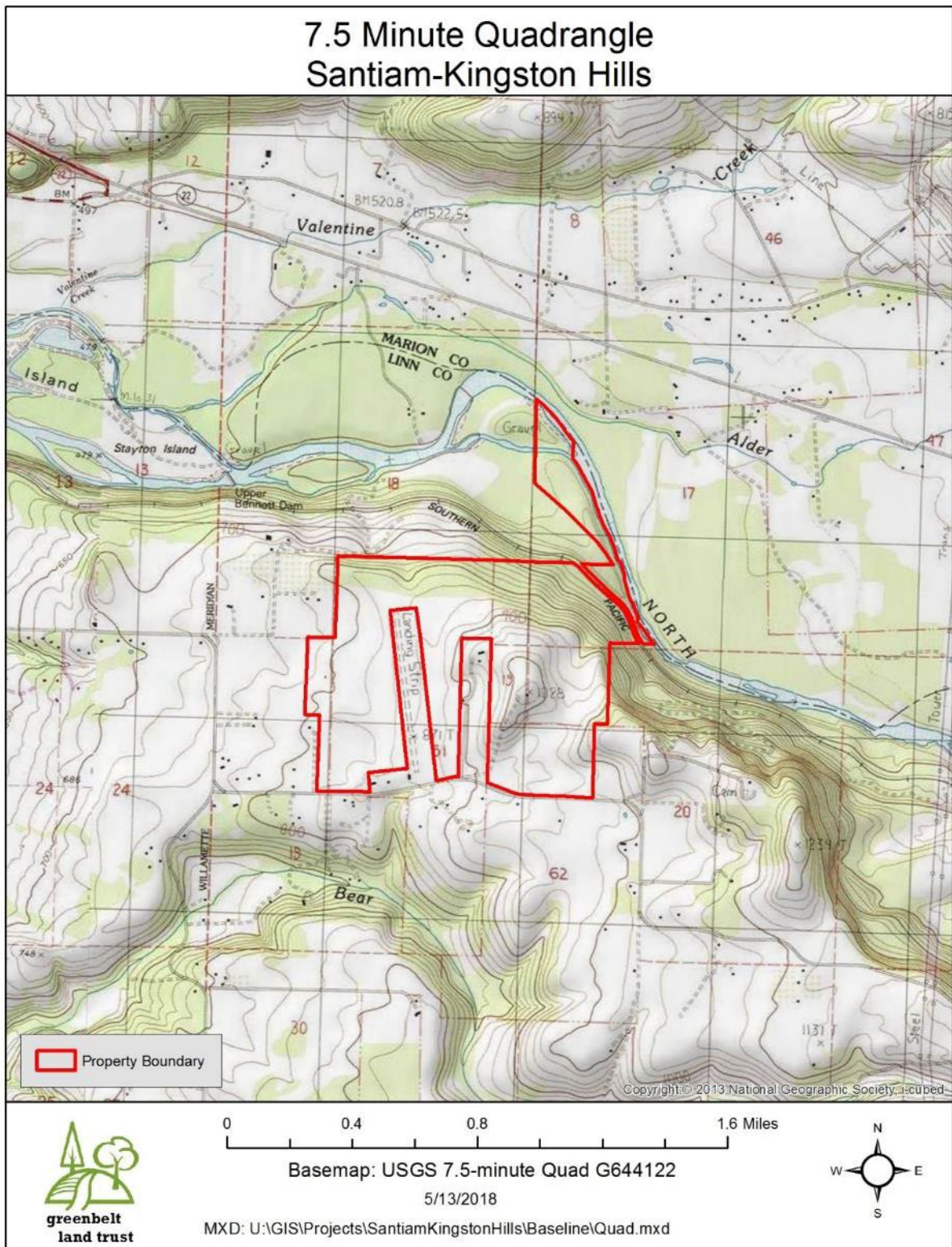


Figure 8. USGS 7.5 Minute Quad Map.

## **18.SPECIAL STATUS SPECIES**

The focal species listed in Table 4 are associated with the habitats that currently exist on the Property, are located nearby in similar habitats, or are associated with habitats that will be restored and enhanced, thus contributing to the Conservation Values in the Conservation Easement. This list has been updated per on the ground biological surveys and analysis that have occurred to date. Past biological inventory reports are included in Attachment C. Federally listed or candidate species and their federally designated critical habitat are mapped in Figure 9. While Willamette daisy and Bradshaw's lomatium are not present on the Property currently, they are located on the adjacent Kingston Prairie Preserve and planned for introduction into restored habitats (see Goals 2 and 3).

In addition to waters associated with the North Santiam, the Property contains the spring water source that feeds Bird Haven Slough, which contains the largest naturally occurring Oregon Chub population in the North Santiam basin. ODFW has also documented the presence of coastal cutthroat, spring Chinook salmon, Coho salmon, Pacific lamprey, western brook lamprey, and winter steelhead on the adjacent downstream property. Those species are likely at least intermittently present on the Property.

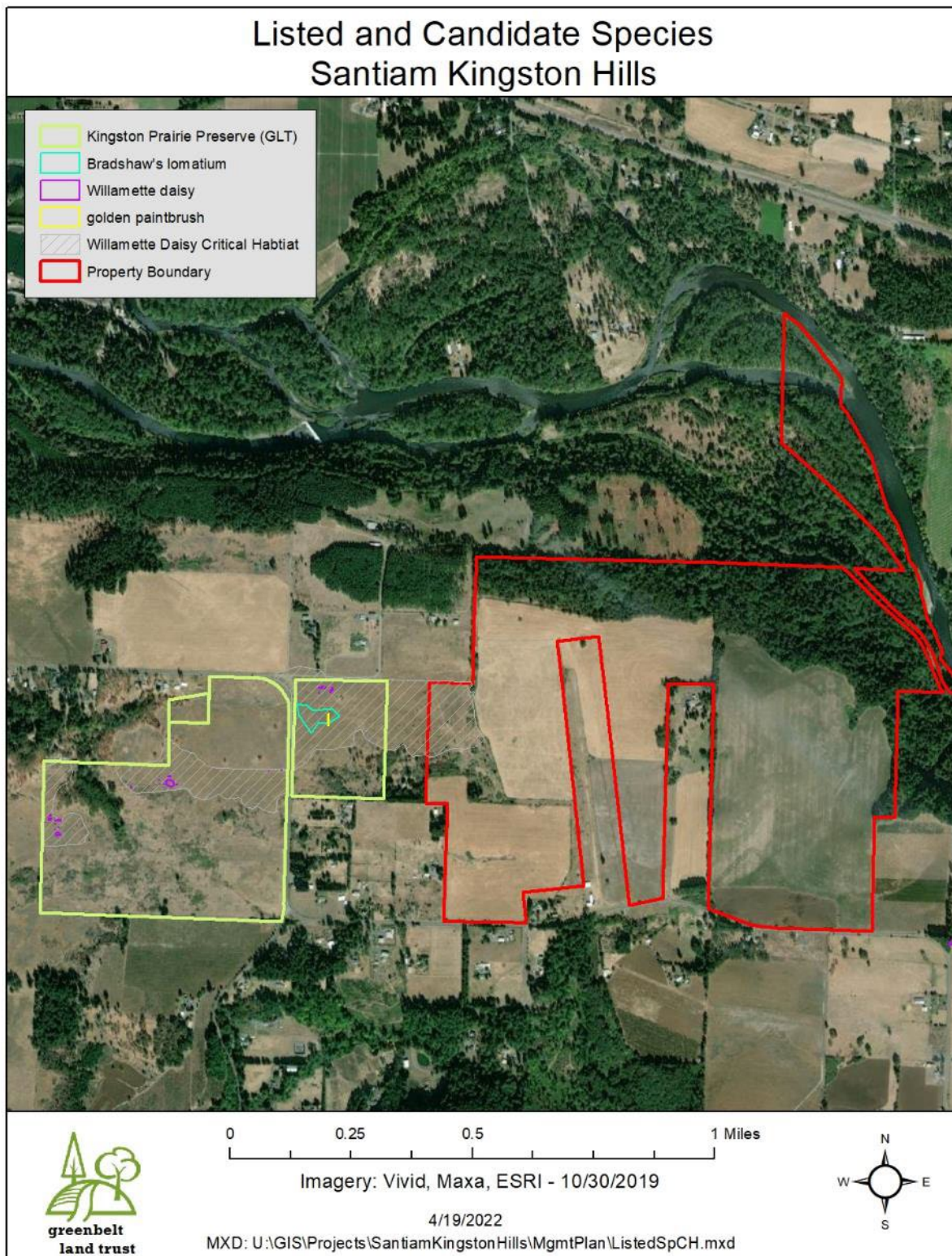
**Table 4. Special status, focal fish and wildlife, and/or Oregon Conservation Strategy species associated with the Property.**

<b>Target Species</b>	<b>Scientific Name</b>	<b>Occurrence</b>	<b>Documentation of Known/Potential Occurrence</b>	<b>Species Status<sup>2</sup></b>
Acorn woodpecker	<i>Melanerpes formicivorus</i>	Likely present	Per Altman (2017)	OCS
Bradshaw's lomatium	<i>Lomatium bradshawii</i>	Located nearby, likely with habitat restoration		OCS, State TE
Chipping sparrow	<i>Spizella passerine</i>	Likely present	Per Altman (2017)	OCS
Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	Likely present	(documented nearby by ODFW)	OCS
Coho salmon	<i>Oncorhynchus kisutch</i>	Likely present	(ODFW <sup>1</sup> )	OCS
Common nighthawk	<i>Chordeiles minor</i>	Likely present	(documented nearby by ODFW)	OCS
Grasshopper sparrow	<i>Ammodramus savannarum perpallidus</i>	Potential, located nearby	Per Altman (2017)	
Monarch butterfly	<i>Danaus plexippus</i>	Potential with restoration		OCS
Northern red-legged frog	<i>Rana aurora</i>	Likely present	(documented nearby by ODFW)	OCS
Olive sided flycatcher	<i>Contopus cooperi</i>	Present	Direct Observation (Altman 2017)	Continental special status species
Oregon chub	<i>Oregonichthys crameri</i>	Likely present	(documented on Bird Haven by ODFW)	OCS
Oregon vesper sparrow	<i>Pooecetes gramineus affinis</i>	Potential, located nearby, likely with restoration	Per Altman (2017)	OCS, Under review for listing by USFWS
Pacific lamprey	<i>Lampetra tridentata</i>	Likely present	(documented nearby by ODFW)	OCS
Purple finch	<i>Haemorhous purpureus</i>	Likely present	Per Altman (2017)	FWS BCC
Purple martin	<i>Progne subis arboricola</i>	Present	Direct Observation (Altman 2017)	OCS

Target Species	Scientific Name	Occurrence	Documentation of Known/Potential Occurrence	Species Status <sup>2</sup>
(Slender-billed) White-breasted nuthatch	<i>Sitta carolinensis aculeata</i>	Likely present	Per Altman (2017)	OCS
Spring chinook	<i>Oncorhynchus tshawytscha</i>	Likely present	(documented upstream by ODFW) <sup>1</sup>	OCS
Steelhead	<i>Oncorhynchus mykiss</i>	Likely present	(documented upstream by ODFW) <sup>1</sup>	OCS
Rufous hummingbird	<i>Selasphorus rufus</i>	Likely present	Per Altman (2017)	FWS BCC
Western bluebird	<i>Sialia mexicana</i>	Present	Direct Observation (Altman 2017)	OCS
Western brook lamprey	<i>Lampetra richardsoni</i>	Likely present	(documented nearby by ODFW)	OCS
Western gray squirrel	<i>Sciurus griseus</i>	Present	Direct Observation (Steve Smith)	OCS
Western meadowlark	<i>Sturnella neglecta</i>	Present	Direct Observation (Altman 2017)	OCS
Western pond turtle	<i>Actinemys marmorata</i>	Likely present	(documented nearby by ODFW)	OCS; Under review for Listing by USFWS
Willamette daisy	<i>Erigeron decumbens</i>	Critical habitat present, located nearby, introduction planned with restoration		OCS, USFWS TE
Willow flycatcher (little)	<i>Empidonax traillii</i>	Present	Direct Observation (Altman 2017)	FWS BCC, OCS
Yellow breasted chat	<i>Icteria virens auricollis</i>	Present	Direct Observation (Altman)	OCS

<sup>1</sup>OFHDB = Oregon Fish Habitat Distribution and Barriers web map.

<sup>2</sup>FWS BCC = USFWS Bird of Conservation Concern; OCS = Oregon Conservation Strategy Species, TE = Threatened/Endangered.



**Figure 9. Listed and Candidate Species Map.**



## 19. INVASIVE SPECIES

Invasive plants documented on the Property include shining geranium, false brome, Himalayan blackberry, reed canary grass, and Scotch broom. Descriptions of species occurrence by habitat are included below and mapped in Figure 10: Invasive Species.

Flowing Water and Riparian: In the forested floodplain, the relatively high abundance and diversity of native plants appears to be limiting the spread of invasive plants. Reed canary grass occurs in small patches in sloughs of the floodplain, and false brome and shining geranium are scattered in the understory of the riparian forest, along with occasional blackberry and Scotch broom along the forest perimeter. Ivy has been found and treated on isolated trees, but is anticipated to be an ongoing management need. Ongoing invasive species management, where areas are accessible for crews on foot, will occur as described in Goal 1.

Wetland (Wet Prairie): Invasive shrubs compose the primary threats to the wet prairie habitat, including Himalayan blackberry and Scotch broom. Patches of introduced grasses and forbs are also present including common velvetgrass (*Holcus lanatus*) and tansy ragwort (*Senecio jacobaea*). Restoration practices described in Goal 2 will include reduction of these non-natives, and ongoing management to contain them over time.

Grasslands (Upland Prairie): The small area of existing grassland area has been invaded by shrubs such as blackberry and Scotch broom. Restoration practices described in Goal 3 will include removal of these non-natives, and ongoing management to contain them over time.

Oak Woodland: Current threats to the oak woodlands include competing conifers overtopping oaks, competition with non-oak species, and invasive Himalayan blackberry and Scotch broom along the southern boundary and the boundary with the agriculture fields. Shade tolerant feral cherry trees have penetrated further into the stand than the common light sensitive invasive shrubs. Greenbelt restoration efforts will focus on releasing oaks through removing competing trees and reducing invasive shrub cover in order to open up the understory and provide increased light for native shrub and grass establishment. The USFWS has already completed some invasive species treatment underneath the oaks, improving conditions for oak dependent species, however tree removal and additional understory invasive species treatment is necessary, as described below in Goal 4.

Mixed Deciduous Forest: False brome and shining geranium are present in patches and along access roads in the mixed woodland habitat. Minimizing disturbance to the native understory layer is likely the best defense against increased dominance by either of these species, along with the ongoing invasive species management described in Goal 5.

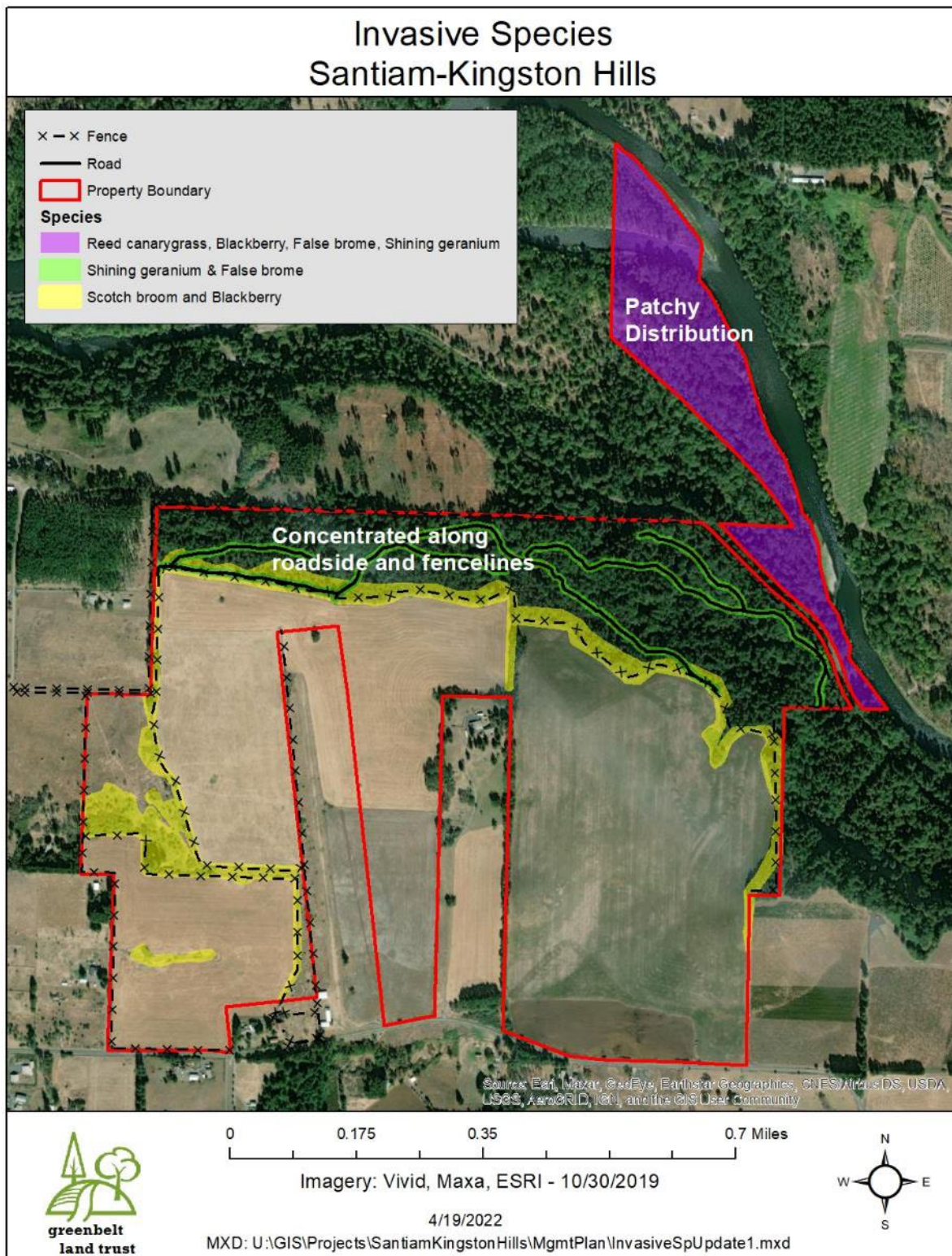


Figure 10. Invasive Species.

## **20. HYDROLOGIC CONSIDERATIONS**

The Property serves as the headwater for several streams in the area (See Figure 11: Hydrology Map). Bear Branch Creek drains from the southern slope of the property. An unnamed tributary drains off the northwest slope of the Property, and eventually drains into Boomer Slough, which supports an Oregon chub population located near Stayton. On the northeast corner of the Property, there is a flowing spring which provides year-round water to Bird Haven slough below, which also supports Oregon chub.

The riparian habitat unit is entirely within the 100-year floodplain. Within the flowing water and riparian habitat, extensive hyporheic flow occurs in the floodplain/riparian forest and functions as the interface between groundwater and surface water. This hyporheic flow cools water in the summer months, oxygenates water, and processes organic matter, all critical mechanisms that have profound impacts on fish species.

Several ephemeral springs and one year-round spring originate just below the woodland terrace and flow to the lower riparian floodplain. These springs provide an aquatic connection that extends from the upland agricultural fields/prairie restoration areas down to the North Santiam River.

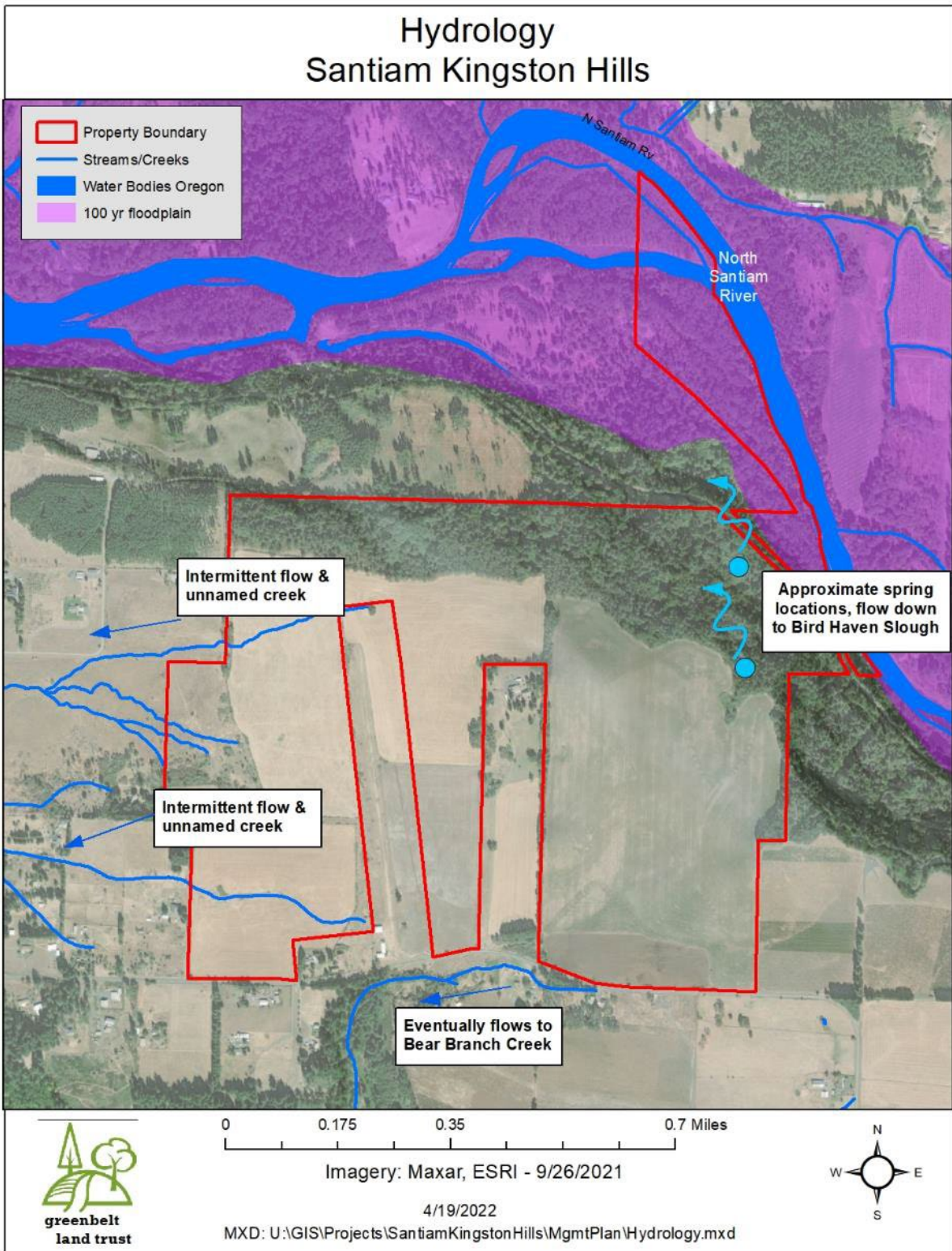


Figure 11. Hydrology Map.

## 21.SOIL TYPES

Soils on the Property are included in Table 5 and Figure 12: Soils Map. The riparian habitats along the North Santiam are on fluvents-fluvaquents complex soils and riverwash, which are hydric soils. The soils in the existing and degraded wet prairie area are not classified as hydric, but they are relatively shallow, and appear to be part of a ‘bench’ in the local topography that collects water from surrounding uplands and extends into Kingston Prairie (of interest is that this bench of shallow soils also underlies the Willamette daisy and Bradshaw’s lomatium on Kingston Prairie Preserve; those rare plant populations are less than 500 m from the wet prairie on the Property).

Parts of the agricultural fields are on shallow soils and lower slopes within the local topography, and tend to pond water during the rainy season, even though they are well drained silt loams. The majority of the agricultural field area is on soils classified as prime and important farmland, which indicates they are highly productive soils. This suggests restored prairie species will thrive, as will non-native species, highlighting the need for ongoing management after restoration. It may also indicate that managing for Oregon Vesper Sparrow suitable habitat (maintaining short stature vegetation with 10-15% bare ground) may be challenging over time.

**Table 5. Soils present on the Santiam Kingston Hills property.**

<b>Map Unit</b>	<b>Slope</b>	<b>Acres</b>
Nekia silty clay loam	2 - 12%	153.7
Nekia silty clay loam	12 - 20%	60.5
Nekia silty clay loam	20 - 30%	15.4
Nekia silty clay loam	30 - 50%	12.5
Ritner cobbly silty clay loam	2 - 30%	22.8
Stayton silt loam	0 - 7%	55.8
Witzel variant very cobbly silt loam	0 - 12%	37.8
Fluvents-Fluvaquents complex	nearly level	27.6
Witzel very cobbly loam	3 - 30%	9.3
Riverwash		6.7
(Water)		1.7
<b>Total</b>		<b>403.8</b>

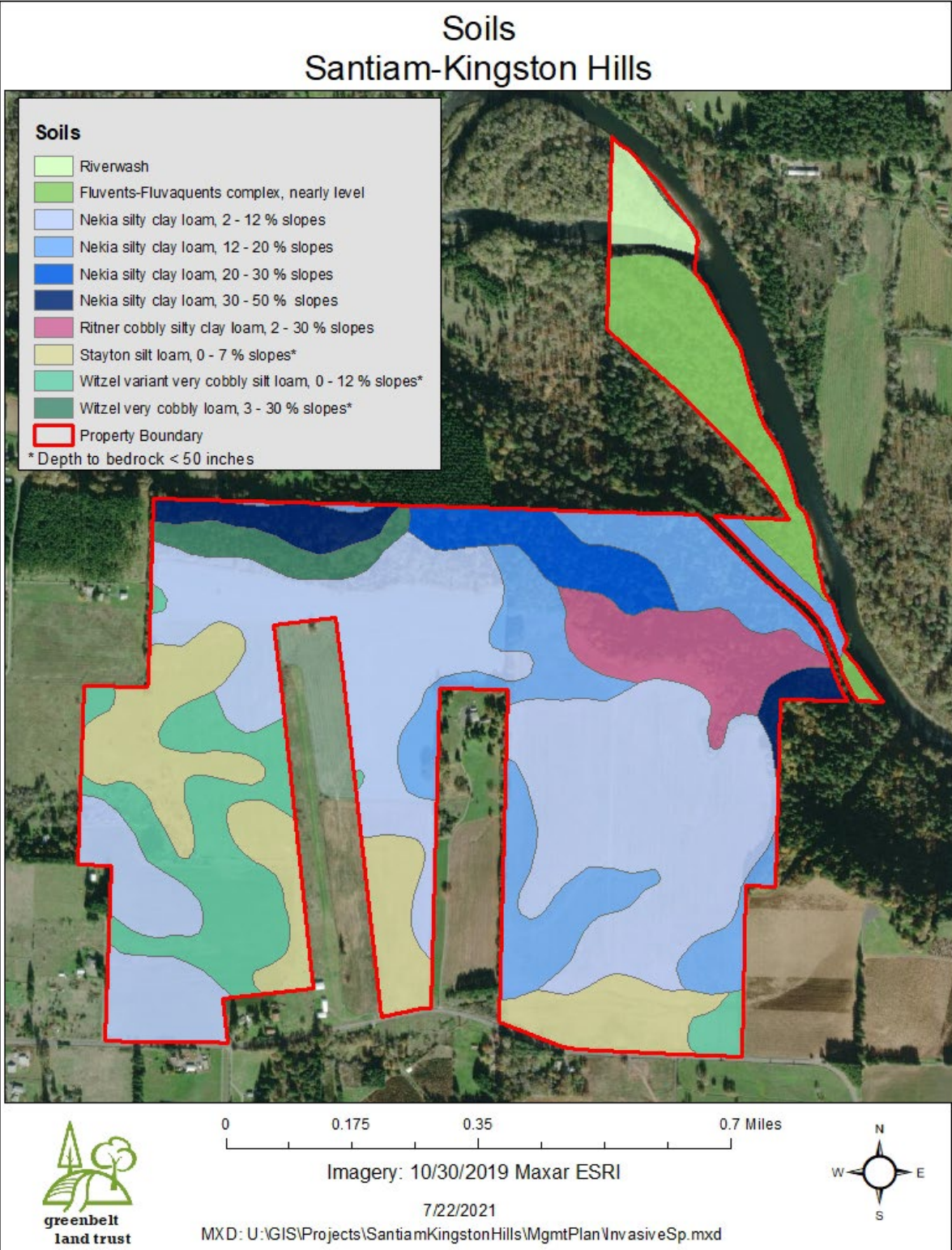


Figure 12. Soils Map.

## **22. FIRE HISTORY OR PLANNED BURNS**

Fire was a historical disturbance that maintained grasslands and wet prairies in the Willamette Valley and on the Property in an open habitat structure. The wet prairie and grassland habitats on the Property, identified as conservation values, along with species dependent on prairie habitats, like western meadowlark, Bradshaw's lomatium and Willamette daisy, will only persist when regular fire, flooding or other disturbance prevents succession to woody vegetation; the alteration of such disturbances has been identified by the USFWS as a major factor in the decline of western Oregon and southwestern Washington prairie species (USFWS 2010; p III-1).

The Property is located in the Silverton Hills exclusion zone, one of few areas where agricultural burning is still practiced in the Willamette Valley, so managing with fire will theoretically experience fewer roadblocks in comparison to other parts of the Willamette Valley. Recent agricultural management on the Property has included prescribed fire, as recently as 2020. Greenbelt plans to use fire to maintain grassland and wet prairie on the Property, as such habitats are restored (see Goals 2 and 3). Fire, as a natural and essential part of the ecosystems on the Property, is expected to have a positive impact on the conservation values of the site.

Prior to Greenbelt ownership The Nature Conservancy used prescribed burning at Kingston Prairie Preserve, with support from USFWS, BLM, Confederated Tribes of Grand Ronde, Department of Forestry, and Stayton Fire and Rescue. Likewise, Greenbelt has carried out prescribed burns at sites near Corvallis with support from USFWS, Confederated Tribes of Grand Ronde, Oregon Department of Forestry, and Philomath Fire and Rescue. Based on existing partnerships, the rural character of the site, and past burning on Kingston Prairie Preserve, the use of fire at Santiam Kingston Hill should be feasible and effective.

The timing of future prescribed fire for habitat management at the Property is unknown, and depends on factors including the progress of habitat restoration and availability of fire crews. A burn plan will be submitted to BPA/ODFW and a LUA will be developed and approved in advance of any prescribed fire on the Property.

## **23. THREATS TO CONSERVATION VALUES**

The primary threats to the conservation values are invasive species and plant community succession from early seral stage habitats (grassland, wet prairie, oak) to later seral stage habitats (conifer forest). Wet prairies and grasslands in the Willamette Valley historically occurred under management by indigenous people through active burning. Without burning or some other disturbance or management, prairies and grasslands, and oak habitats, will convert to conifer (Douglas-fir) dominated forests. This would be a devastating loss of biodiversity. Existing or new invasive species have the potential to displace native species, modify plant communities, and disrupt native habitats and ecosystems. Invasive plants documented on the Property include shining geranium, Scotch broom, false brome and Himalayan blackberry. These two threats (invasive species and succession) are linked, as many of the shrubs and other plant species that persist in the absence of disturbance are considered invasive.

Greenbelt will abate these threats with two broad and overlapping approaches as appropriate in each habitat type on the Property. For invasives, Greenbelt will address the threat by identifying and treating

target invasive species in all habitats across the Property on an ongoing basis (see individual habitat Goals 1-5 and overarching planning in Goal 6). After an initial treatment, areas will be monitored and managed on a continued basis to keep invasive species under control into the future. To address the risk from succession in the oak, wet prairie and grassland habitats, Greenbelt will release oaks in the oak woodland (see Goal 4) and introduce disturbance regimes in wet and upland prairies, including prescribed fire and mowing, which will maintain open habitat and reduce potential re-invasion (or invasion, in newly converted habitats) from non-native shrubs (see Goals 2 and 3).

## **24. TEMPORARY AGRICULTURE, GRAZING OR FORESTRY ACTIVITY AND PHASE-OUT PLAN**

Greenbelt committed to phasing out agriculture within 15 years of acquisition, or by fall 2033. Greenbelt will implement the phase out in a modular fashion, working on a field-by-field basis, from west to east, with the farming tenant. An approximate schedule of field (see Figure 4: Leased Fields) retirement and acreage is included in Table 6. Please note this schedule is subject to change, within the constraint of the 2033 deadline, pending funding and plant material availability.

**Table 6. Approximate schedule of agricultural field retirement, to be finalized as restoration funding is obtained.**

<b>Field # (Name)</b>	<b>Approximate Acres</b>	<b>Estimated Retirement Date/Site Preparation Start</b>	<b>Estimated First Native Seeding Date</b>
1 (Art’s Trailer)	40	Fall 2024	Fall 2026
2 (Art’s Center)	35	Fall 2025	Fall 2027
3 (Art’s Back)	42	Fall 2026	Fall 2028
4 (Dr. Horn)	16	Fall 2027	Fall 2029
5 (Art’s Hill)	106	Fall 2028-2029	Fall 2030-2031
6 (Art’s Hill Bottom)	12	Fall 2030	Fall 2032

## **25. LONG-TERM AGRICULTURE, GRAZING OR FORESTRY ACTIVITY**

N/A.

## **26. ENVIRONMENTAL REGULATIONS**

The Property includes approximately 8.5 acres of federally designated critical habitat for Willamette daisy, a state and federally listed endangered plant species (see Figure 9: Listed and Candidate Species Map). No additional consultation is required for listed plants on private lands, however Greenbelt is actively collaborating with the USFWS to restore and enhance this species and its habitat to contribute to recovery efforts. Greenbelt is in possession of an Oregon Department of Agriculture Research Permit for State-listed Threatened and Endangered Plant Species (Permit #601; 2022-2027), which allows staff to transport seed of rare Willamette Valley plant species.



## D. GOALS, OBJECTIVES, AND STRATEGIES

### 27. CURRENT AND DESIRED FUTURE CONDITIONS TABLE

Current and desired future condition (DFC) habitat types are included in Table 7. DFCs are mapped in Figure 13: Desired Future Condition Map. The 250 acres of agricultural fields will be restored to 165 acres of grassland and 85 acres of wetland (wet prairie). All acreages are rounded to the nearest acre. The minor difference between total acres calculated via GIS and on-the-ground survey relates to desktop mapping projection and accuracy and is not of concern.

**Table 7. Crosswalk of current and desired future habitat types and acreages.**

OCS Habitat Type or Management Type	Current Acres	Desired Acres
Agriculture <sup>1</sup>	250	0
Flowing Water & Riparian	40	40
Grassland	2	167
Mixed Deciduous Forest	29	29
Oak Woodland	64	64
Wetland (Wet Prairie)	19	104
	404	404

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<sup>1</sup> Note that some of the agricultural field area currently leased (251 acres) has an overstory of oak, hence why this acreage exceeds the 250 acres of agricultural type in this table.

# Desired Future Conditions Santiam-Kingston Hills

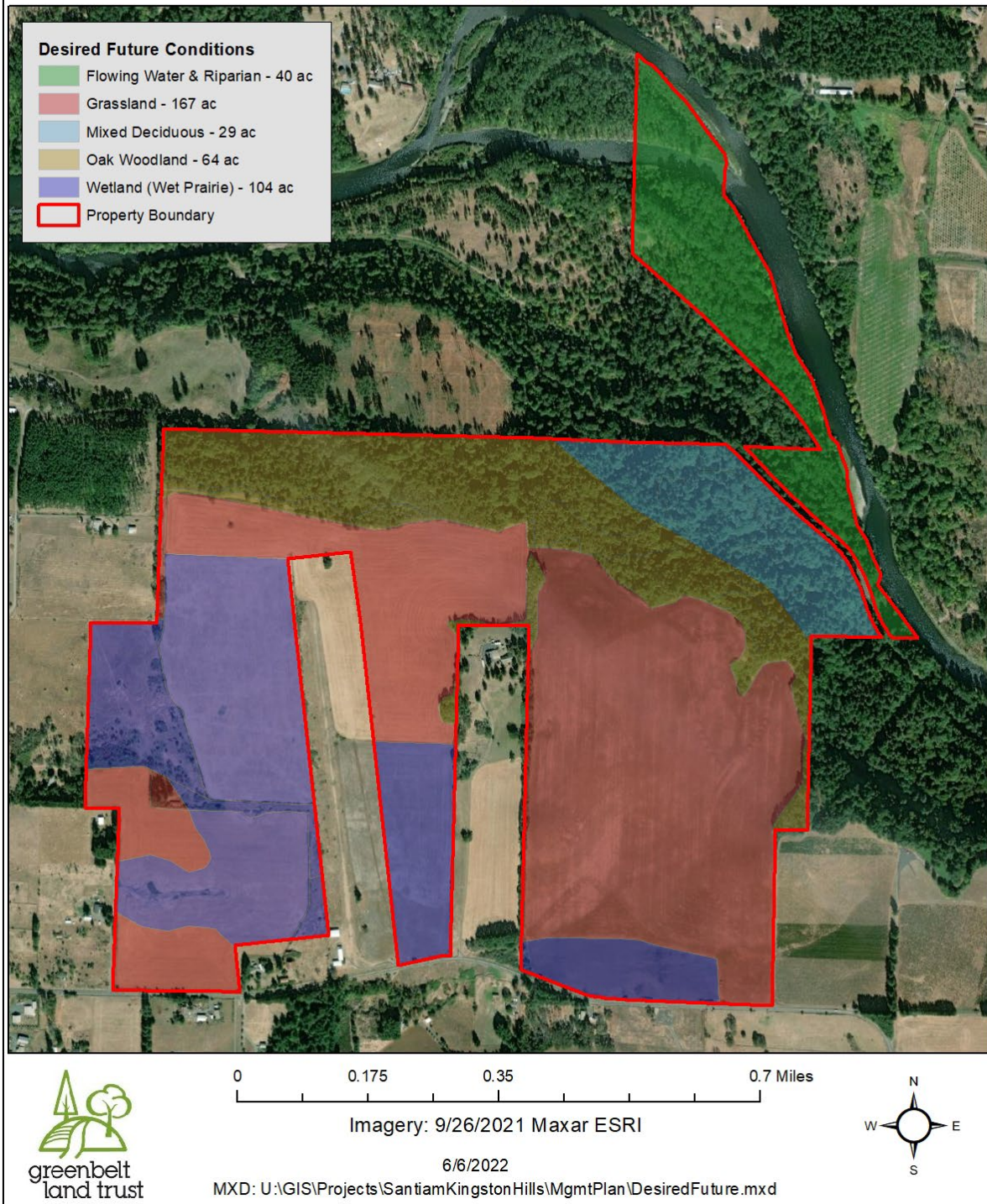


Figure 13. Desired Future Condition Map.

## 28.DFCs AND GOALS, OBJECTIVES, AND STRATEGIES

### Flowing Water and Riparian Habitat (40 acres)

Desired Future Condition: Greenbelt will manage this unit along the North Santiam River to maintain the current extent, condition and structure of the floodplain forest, seasonal pools, and associated intermittently flowing historic floodplain channels such that it continues to benefit amphibians, reptiles, salmonids and other native fish, and support the biodiversity of the backwater slough on the adjacent property. The forest will continue to be dominated by native trees including black cottonwood and maple, with some Douglas-fir and western red cedar, providing habitat for numerous Oregon Conservation Strategy bird species. Recognizing the regular periodic disturbance from the river (and spread of plant propagules from upstream to downstream), Greenbelt will prioritize management of invasive species, including false brome and ivy, such that the site will not become an invasive species source for downstream properties. Invasive plant management will also help sustain the diverse native plant-dominated understory shrub community of sword fern, Oregon grape, snowberry and osoberry and preserve habitat for birds, fish and wildlife.

Flowing Water and Riparian Habitat			
Goal 1: Manage and maintain the high-quality structure and function of the 40 acres of flowing water and riparian habitat to benefit native plants, fish, birds and other wildlife.		Timeline	Stewardship Funding
<b>Objective 1</b>	Control scotch broom, ivy, false brome and blackberry in 40 acres of riparian habitat to a target of less than 10% cover by 2027.		
Strategy 1.1	Inventory and map areas needing treatment of priority invasive species.	2022-2027	*
Strategy 1.2	Use manual, mechanical and chemical treatments (backpack spot spray) on an annual basis for 5 years, then reevaluate treatment needs for the continuing future.	2022-2027, ongoing	*

### Wetlands (Wet Prairie) (104 acres)

Desired Future Condition: Wetlands on the Property will have a net expansion in area with 85 acres of agricultural fields to be converted to high quality wet prairie, accompanying the existing 19 acres of degraded wet prairie present at baseline, for a desired future total of 104 acres. The wet prairies will be maintained in an open condition with limited woody vegetation present except for small patches of native shrubs and isolated trees and standing snags and managed for the benefit of grassland dependent birds. Native grass and forbs will be directly seeded, prioritizing the addition of culturally significant plants, and mimicking, to the degree possible, the plant community composition at the neighboring Kingston Prairie Preserve. As wet prairies are restored, prioritized areas will have introductions of rare plants suitable for the location, including Willamette daisy, Bradshaw's lomatium,

and potentially Nelson’s checkermallow. These prairies will provide resources for a wide array of pollinators and sustain suitable habitat or if too seasonally wet for nesting, still contribute to the open habitat context for grassland birds such as Oregon vesper sparrow, grasshopper sparrow, and western meadowlark.

<b>Wetlands (Wet Prairie)</b>			
<b>Goal 2: Restore and maintain a native wet prairie habitat to increase plant diversity, support rare plants, pollinators and grassland birds.</b>		<b>Timeline</b>	<b>Stewardship Funding</b>
<b>Objective 1</b>	Convert 85 acres of wet agricultural field to native wet prairie habitat by 2032.		
Strategy 1.1	Develop restoration schedule and seek grant funding.	2022-2029	*
Strategy 1.2	Obtain any necessary federal, state, and local permits for project implementation.	2023	*
Strategy 1.3	Continue agricultural crop contract on individual restoration units to prohibit the invasion of non-native plants until scheduled to restore.	2022-2029	
Strategy 1.4	Restore wet prairie within the restoration units using a diverse mix of native seeds and forbs that incorporates culturally significant plant species.	2024-2032	
Strategy 1.5	Manage woody and invasive plant establishment through herbicide treatments, prescribed fire and mowing.	2024-ongoing	*
<b>Objective 2</b>	Enhance 19 acres of existing wet prairie, reducing non-native shrub cover to less than 10% and reducing overall non-native plant cover to less than 50%, by 2025.		
Strategy 2.1	Develop restoration schedule and seek grant funding or partnerships.	2022-2024	*
Strategy 2.2	Manage existing woody and invasive plant cover through mechanical and herbicide treatments.	2022-2024	*
Strategy 2.3	Restore wet prairie within the restoration units using a diverse mix of native seeds and forbs that incorporates culturally significant plant species.	2023-2025	

Strategy 2.4	Manage new woody and invasive plant establishment through herbicide treatments, prescribed fire <sup>2</sup> , and mowing.	2025-2032	*
<b>Objective 3</b>	Establish and maintain a minimum population of 50 plants of Bradshaw’s lomatium on the Property by 2032.		
Strategy 3.1	Introduce Bradshaw’s lomatium by seed or plugs into restored habitat.	2023-2032	

**Grasslands (Upland Prairie) (167 acres)**

Desired Future Condition: Native grasslands, absent at baseline, will increase in extent on the Property as 165 acres of agricultural field are converted to upland prairie, 2 acres of degraded prairie are restored to native upland prairie, and 2 acres of oak woodland on the Property boundary are managed for a native upland prairie understory. Collectively, the restored grasslands will be maintained in an open condition with limited woody vegetation present except for small patches of native shrubs, isolated trees, and standing snags managed for the benefit of grassland dependent birds. Native grass and forb cover will be increased throughout the system over time as areas are restored. Populations of rare plants, including Willamette daisy, will be introduced in phases as areas are restored. In areas with rare species, target vegetation community condition will be high quality prairie, with at least 50% native plant cover and a diversity of native grasses and forbs. These prairies will provide resources for a wide array of pollinators and sustain suitable habitat for grassland birds such as Oregon vesper sparrow, grasshopper sparrow, and western meadowlark.

<b>Grasslands (Upland Prairie)</b>			
<b>Goal 3: Restore and maintain a native grassland habitat to increase plant diversity, support rare plants and pollinators and provide habitat for grassland birds.</b>		<b>Timeline</b>	<b>Stewardship Funding</b>
<b>Objective 1</b>	Convert approximately 165 acres of agricultural field to native upland prairie habitat by 2032.		
Strategy 1.1	Develop restoration schedule and seek grant funding.	2022 (restoration schedule) Ongoing (seeking funding)	*
Strategy 1.2	Obtain any necessary federal, state, and local permits for project implementation.	2023	*

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<sup>2</sup> Prescribed fire will be preceded by development of a fire plan and LUA with BPA.

Strategy 1.3	Continue agricultural crop contract on individual restoration units to prohibit the invasion of non-native plants until scheduled to restore.	2022-2032	
Strategy 1.4	Restore upland prairie within the restoration units per the restoration schedule using a diverse mix of native seeds and forbs that incorporates culturally significant plant species. For each habitat unit, restoration will include 2+ years (4-5 broadcast herbicide applications) of chemical fallow followed by a fall no-till drill seeding of native grass and forb species. A second seeding may occur the following year, depending on establishment success.	2024-2032	
<b>Objective 2</b>	Maintain suitable spring nesting and breeding habitat for Oregon vesper sparrows in restored prairies on an annual basis.		
Strategy 2.1	Use mowing or prescribed fire methods to manage grass heights and density and select for short stature species in restoration seedings, to provide areas with short to mid height prairie (6 -18 inches in height in May) vegetation structure with occasional shrubs and 15-20% bare ground cover.	Annually, beginning 2-3 years after each habitat unit is seeded.	*
<b>Objective 3</b>	Control woody vegetation encroachment into restored grasslands, keeping woody cover below 15% in prairie, on an ongoing basis, as habitats are restored.		
Strategy 3.1	Control woody vegetation in restored grasslands through periodic rough-mowing, haying or prescribed burning in late summer or fall, every 1-3 years (in some situations, spot mowing may occur earlier in the season, but care will be taken to avoid nest sites).	Every 1-3 years, beginning 2-3 years after each habitat unit is seeded.	*
<b>Objective 4</b>	Establish and maintain a minimum population of 50 plants of Willamette daisy on the Property by 2032 (in conjunction with wetlands habitat objective).		
Strategy 4.1	Introduce Willamette daisy by seed and plugs into restored habitat.	2023-2032	

## Oak Woodlands (64 acres)

Desired Future Condition: A Forest Stewardship Plan will be developed to guide restoration to improve the structure and reduce threats from conifer, hardwood, and invasive species encroachment within the 62 acres of oak woodland on the Property. A LUA will be developed with BPA as needed when the Forest Stewardship Plan is complete. Growth, vigor and health of oak trees within the oak woodland habitat will be maintained by an oak release project that removes competing species of trees and thins existing oaks if needed to achieve healthier tree densities and preserve legacy oaks. Non-native invasive shrubs and trees including blackberry, hawthorn, and Scotch broom will be removed, and native shrubs will be promoted in the understory, through control of non-native species and addition of native plant materials. This restoration will improve habitat function for Strategy Species such as acorn woodpecker, Western gray squirrel and slender billed white breasted nuthatch, in addition to species such as Western bluebird who are likely to use the oak-prairie ecotone.

Oak Woodlands			
Goal 4: Restore and maintain oak woodland habitats to ensure long-term survival of oak, promote a native shrub understory, and sustain oak-dependent bird and wildlife species.		Timeline	Stewardship Funding
<b>Objective 1</b>	Develop a forest stewardship plan for oak release treatments by 2024.		
Strategy 1.1	Seek funding for a forest stewardship plan.	2022	*
Strategy 1.2	Engage contractor and coordinate development of stewardship plan, including evaluation of any temporary infrastructure improvements required to implement stewardship plan.	2022	*
<b>Objective 2</b>	Restore oak woodland to a target non-oak tree cover of less than 10% of the total area by 2026.		
Strategy 2.1	Seek funding and an LUA for oak woodland restoration.	2022-2024	
Strategy 2.2	Implement any temporary infrastructure improvements required for oak release.	2023-2024	
Strategy 2.3	Implement woody species control with mechanical and herbicide treatments.	2023-2024	
Strategy 2.4	Implement removal of competing trees, per forest stewardship plan prescriptions.	2024-2025	
<b>Objective 3</b>	Manage habitat to maintain less than 10% cover of target invasive species (Scotch broom, blackberry, false brome) by 2032.		

Strategy 3.1	Use mechanical and chemical treatments (spot spray, stump treatments) to target invasive species.	2022-ongoing	*
<b>Objective 4</b>	Establish native shrubs and grasses in the oak woodland understory, with target native cover of 25-50%, by 2026.		
Strategy 4.1	Plant native shrubs in understory.	2024-2026	
Strategy 4.2	Seed hardy native grass species.	2024-2026	

**Mixed Deciduous Forest (29 acres)**

Desired Future Condition: This habitat is maintained in its current condition and extent to provide a haven for migratory and resident birds and wildlife, and function as a natural buffer between the canyon of the North Santiam River and the uplands of the Property. The multilayered tree canopy will continue to include bigleaf maple, alder and ash. These trees are critical for the stability of the steep slopes down to the floodplain, and also provide habitat for bald eagle, great blue heron and ospreys. Ongoing invasive species management for priority species such as false brome and Scotch broom will help preserve the dense native understory of sword fern, snowberry, Oregon grape and vine maple.

<b>Mixed Deciduous Forest</b>			
<b>Goal 5: Maintain current condition of mixed deciduous forest habitat to buffer the North Santiam River canyon and support birds and wildlife.</b>		<b>Timeline</b>	<b>Stewardship Funding</b>
<b>Objective 1</b>	Control priority invasive species, such as false brome and Scotch broom, to less than 10% cover of the habitat unit by 2032.		
Strategy 1.1	Use mechanical and chemical treatments (spot spray) to target invasive species.	2022-ongoing	*

**Invasive Species**

Desired Future Condition: Invasive species management will be an ongoing activity on the Property. Invasive plant species will be contained and managed through use of Integrated Pest Management (IPM) techniques and ongoing implementation of Early Detection Rapid Response (EDRR) procedures. Greenbelt will continue to participate in local weed management groups, which will support maintenance of a continually updated target species list that includes emerging invasive species threats. Staff will monitor habitats for invasive species on a continual basis and prioritize control of isolated populations of highly invasive species that are present at low levels, where eradication is still possible. In addition, Greenbelt will implement operational systems used across the organization’s lands to prevent spread of weed seed to new locations by equipment during restoration or maintenance activities.



Invasive Species			
Goal 6: Limit the occurrence and reduce the spread of target invasive species throughout the Property.		Timeline	Stewardship Funding
<b>Objective 1</b>	On an ongoing basis, prevent the establishment of new invasive species not on the Property at baseline.		
Strategy 1.1	Participate in local/regional invasive species management groups to stay abreast of novel/emerging invasive that may affect the property.	Ongoing	*
Strategy 1.2	Implement annual invasive species surveys and eradicate new occurrences on the Property.	Annual	*
<b>Objective 2</b>	Contain and reduce target invasive plants to less than 10% cover of any one species across the entire Property by 2032.		
Strategy 2.1	Survey and implement manual, mechanical or chemical methods to control the target invasive species.	Annual	*
<b>Objective 3</b>	On an ongoing basis, revegetate areas disturbed by invasive species removal and establish native cover of at least 50%.	Annual	*

**Infrastructure**

Desired Future Condition: Infrastructure on the Property will be managed as described for each category below:

- Fences: The partial boundary fencing and existing cross fencing will be evaluated for its value to Property management. Where fencing is considered necessary to protect the Conservation Values (e.g., boundary fencing preventing trespass or illegal vehicle access) or otherwise supporting habitat management (e.g., protecting plantings), it will be retained in its current location. If existing fences are repaired or replaced, then the fences will be wildlife-friendly, which allow for the safe passage of wildlife, increased fence visibility, and wildlife access to food, shelter, and water (per CE Section II.K.2.). Derelict fences and old wire will be removed.
- Roads: GLT will implement maintenance of existing roads and access points, ensuring functionality for management access over time. This will include activities such as clearing brush and trees, and potential improvement through addition of gravel or rock and maintenance of associated road drainage. Pending development of the Forest Stewardship plan (see Goal 4), temporary roads may be utilized to support oak woodland restoration objectives.
- Structures: Greenbelt will dismantle and remove the derelict shed as the surrounding habitat is restored.

- Ditches: Within the uplands, Greenbelt will not intentionally maintain the man-made ditches, and as agricultural fields are restored, will evaluate opportunities to restore the natural water flow over the Property.
- Signs: Boundary signs will be placed by Greenbelt on the Property perimeter.
- Water Troughs: Greenbelt will remove the derelict water troughs from the property.

Infrastructure			
Goal 7: Establish and maintain functional Property access and essential infrastructure to support restoration and management.		Timeline	Stewardship Funding
<b>Objective 1</b>	Maintain external fencing along roadsides and near access points to reduce motorized trespass.	Ongoing	*
<b>Objective 2</b>	Remove all internal fencing by 2032. (approximately 10,000 linear feet).	2032	*
<b>Objective 3</b>	Maintain functional access on the skid roads oak woodland and mixed deciduous forest as measured by consistent length that is unobstructed by brush and large woody debris.		
Strategy 3.1	Evaluate road annually, remove obstructions, and mow as needed.	Annual	*
<b>Objective 4</b>	Dismantle and remove livestock shed and troughs by 2025	2025	*
<b>Objective 5</b>	Place boundary signs on all major segments of Property perimeter by 2023.		
Strategy 5.1	Identify locations for signs, install, and map.	2022-2023	*

### Partnerships, Public Outreach and Engagement

Desired Future Condition: Neighboring landowners/managers (public and private), stakeholders (including the Tribes) and the public are aware of the Property’s conservation values and restoration work in progress. Where possible, Greenbelt will engage these groups to work collaboratively with Greenbelt to build the greater conservation context of the eastern side of the Willamette Valley ecoregion. Greenbelt also envisions continued collaboration with federal and state agencies to leverage and maximize the conservation benefit of this Property, including targeted restoration work for focal species and habitats. For the period of this Management Plan, Greenbelt does not anticipate any outreach infrastructure development (e.g., trails or interpretive structures), however by 2032, GLT will

have evaluated the feasibility of formalized public access at the site and have determined how to proceed in the next LMP period.

<b>Partnerships, Public Outreach and Engagement</b>			
<b>Goal 8: Build a larger conservation and outreach context for habitats and species on the Property through engaging neighbors, stakeholders and the public.</b>		<b>Timeline</b>	<b>Stewardship Funding</b>
<b>Objective 1</b>	In addition to staff from ODFW, BPA and the WWMP program, convene with staff from North Santiam Watershed Council, BLM, Bird Haven and/or CTGR at least once per year to plan conservation actions in the area of the Property.	Annual	*
<b>Objective 2</b>	Provide at least one guided opportunity for neighbors and the public to access the Property each year.		
Strategy 2.1	Advertise and hold tours or other educational events each year.	Annual	*
<b>Objective 3</b>	Include one electronic outreach item per year about the Property’s conservation values and restoration/enhancement work underway in Greenbelt outreach materials which are distributed in electronically to Greenbelt members in addition to being posted on social media and the Greenbelt website.	Annual	*
<b>Objective 4</b>	Complete a trail feasibility study that identifies options for passive recreation on the Property by 2032.		
Strategy 4.1	Seek funding for feasibility study.	2026-2028	*
Strategy 4.2	Engage contractor and complete feasibility study that includes engagement with Tribes, neighbors (e.g., Bird Haven, BLM), and local conservation groups (e.g., watershed councils, Native Plant Society, Audubon).	2028-2032	*

## E. MONITORING AND ADAPTIVE MANAGEMENT

### 29. MONITORING

Monitoring for each habitat type and goal during the period of the LMP are described in the tables below.

#### Flowing Water and Riparian Habitat

<b>Goal 1:</b> Manage and maintain the high-quality structure and function of the 40 acres of flowing water and riparian habitat to benefit native plants, fish, birds and other wildlife.		<b>Timeline</b>
<b>Objective 1</b>	Control Scotch broom, ivy, false brome and blackberry in 40 acres of riparian habitat by 2027 with a target of less than 10% cover.	
Monitoring	Map areas needing treatment of priority invasive species.	Annually
Monitoring	Record areas treated for invasive species.	Annually
Monitoring	Visually assess and record percent cover of target species in flowing water and riparian habitats. Compare to baseline footprint and percent cover.	Annually

#### Wetlands (Wet Prairie)

<b>Goal 2:</b> Restore and maintain a native wet prairie habitat to increase plant diversity, support rare plants, pollinators and grassland birds.		<b>Timeline</b>
<b>Objective 1</b>	Convert 85 acres of wet agricultural field to native wet prairie habitat by 2032.	
Monitoring	Record acres converted from agriculture to native wet prairie.	Annually, as restoration proceeds
Monitoring	Record areas treated for invasive species.	Annually
Monitoring	Visually assess and record diversity of native species in restored wet prairie year 1, and year 5 after each unit is restored.	As habitat units are restored.
Monitoring	Conduct point count surveys to document habitat utilization by birds.	Every 5 yrs

<b>Objective 2</b>	Enhance 19 acres of existing wet prairie, reducing non-native shrub cover to less than 10% and reducing overall non-native plant cover to less than 50%, by 2025.	
Monitoring	Record acres prepared and seeded to native wet prairie.	Annually, as restoration proceeds
Monitoring	Record areas treated for invasive species.	Annually
Monitoring	Visually assess and record percent cover of target species restored wet prairie habitats. Compare to baseline footprint and percent cover.	Annually
<b>Objective 3</b>	Establish and maintain a minimum population of 50 plants of Bradshaw's lomatium on the Property by 2032.	
Monitoring	Record quantity and location of Bradshaw's lomatium planted by seed and plugs, report to USFWS OFWO Online Data Portal.	Within calendar year of planting.
Monitoring	Monitor Bradshaw's lomatium population to generate population size estimate.	3-5 year intervals after plant establishment

### Grasslands (Upland Prairie)

<b>Goal 3: Restore and maintain a native grassland habitat to increase plant diversity, support rare plants and pollinators and provide habitat for grassland birds.</b>		<b>Timeline</b>
<b>Objective 1</b>	Convert approximately 165 acres of agricultural field to native upland prairie habitat by 2032.	
Monitoring	Record acres restored to native upland prairie	Annually, as restoration proceeds
Monitoring	Visually assess and record diversity of native species in restored upland prairie year 1, and year 5 after each unit is restored.	As habitat units are restored
<b>Objective 2</b>	Maintain suitable spring nesting and breeding habitat for Oregon vesper sparrows in restored prairies on an annual basis.	
Monitoring	Visually assess and record vegetation structure relative to desired Oregon Vesper Sparrow conditions.	Annually, as habitat units are restored.

Monitoring	Conduct presence / absence surveys for Oregon Vesper Sparrow.	5-year intervals as habitat units are restored
<b>Objective 3</b>	Control woody vegetation encroachment into restored grasslands, keeping woody cover below 15% in prairie, on an ongoing basis, as habitats are restored.	
Monitoring	Record areas treated for woody encroachment.	Annually
Monitoring	Visually assess and record percent cover of woody species of concern in restored grasslands and compare to baseline conditions.	Every 3 years as habitat units are restored.
<b>Objective 4</b>	Establish and maintain a minimum population of 50 plants of Willamette daisy on the Property by 2032 (in Grasslands and Wetlands).	
Monitoring	Record and map Willamette daisy propagules (seeds, plugs) introduced.	2023-2032
Monitoring	Monitor Willamette daisy population to generate population size estimate.	3-5 year intervals after plant establishment

### Oak Woodlands

<b>Goal 4: Restore and maintain oak woodland habitats to ensure long-term survival of oak, promote a native shrub understory, and sustain oak-dependent bird and wildlife species.</b>		<b>Timeline</b>
<b>Objective 1</b>	Develop a Forest Stewardship Plan for oak release treatments by 2024.	
Monitoring	Provide copy of completed Forest Stewardship Plan to BPA/ODFW.	2024
<b>Objective 2</b>	Restore oak woodland to a target non-oak tree cover of less than 20% of the total area by 2026.	
Monitoring	Record area where oak woodland area restoration treatments are applied.	By 2026
Monitoring	Visually assess and record percent cover of target non-oak tree cover and compare to baseline conditions.	Upon completion, by 2026

<b>Objective 3</b>	Manage habitat to maintain less than 10% cover of target invasive species (Scotch broom, blackberry, false brome) by 2032.	
Monitoring	Record areas where invasive species treatments are applied	Annually
Monitoring	Visually assess and record percent cover of target invasive species and compare to baseline conditions.	3-year intervals
<b>Objective 4</b>	Establish native shrubs and grasses in the oak woodland understory, with target native cover of 25-50%, by 2026.	
Monitoring	Record area with native species planted.	Upon completion, by 2026
Monitoring	Visually assess and record percent cover of native species and compare to baseline conditions.	2026 and 2032

### Mixed Deciduous Forest

<b>Goal 5: Maintain current condition of mixed deciduous forest habitat to buffer the North Santiam River canyon and support birds and wildlife.</b>		<b>Timeline</b>
<b>Objective 1</b>	Control priority invasive species in this habitat, such as false brome and Scotch broom, to less than 10% cover of the habitat unit by 2032.	
Monitoring	Record areas treated for invasive species.	2022-ongoing
Monitoring	Visually assess and record percent cover of target invasive species and compare to baseline conditions.	3-year intervals

### Invasive Species

<b>Goal 6: Limit the occurrence and reduce the spread of target invasive species throughout the Property.</b>		<b>Timeline</b>
<b>Objective 1</b>	On an ongoing basis, prevent the establishment of new invasive species not on the Property at baseline.	
Monitoring	Record results of annual invasive species surveys.	Annually
<b>Objective 2</b>	Contain and reduce target invasive plants to less than 10% cover of any one species across the entire Property by 2032.	
Monitoring	Record areas treated for target invasive species.	Annually

Monitoring	Visually assess and record percent cover of target invasive species and compare to baseline conditions.	3-year intervals
<b>Objective 3</b>	On an ongoing basis, revegetate areas disturbed by invasive species removal and establish native cover of at least 50%.	
Monitoring	Visually evaluate success of seeding and cover of native species, compare to baseline condition.	Ongoing

### Infrastructure

<b>Goal 7: Establish and maintain functional Property access and essential infrastructure to support restoration and management.</b>		<b>Timeline</b>
<b>Objective 1</b>	Maintain external fencing along roadsides and near access points to reduce motorized trespass.	
Monitoring	Evaluate fencing annually, and record maintenance or repair needs.	Annually
<b>Objective 2</b>	Remove internal fencing by 2032.	
Monitoring	Document areas of fence removed.	2032
<b>Objective 3</b>	Maintain functional access on the skid roads oak woodland and mixed deciduous forest as measured by consistent length that is unobstructed by brush and large woody debris.	
Monitoring	Evaluate road annually, remove obstructions, and mow as needed.	Annual
<b>Objective 4</b>	Dismantle and remove livestock shed by 2025.	
Monitoring	Document removal of shed.	2025
<b>Objective 5</b>	Place boundary signs on all major segments of Property perimeter by 2023.	
Monitoring	Document locations of perimeter signs.	2023

### Partnerships, Public Outreach and Engagement

<b>Goal 8: Build a larger conservation and outreach context for habitats and species on the Property through engaging neighbors, stakeholders and the public.</b>		<b>Timeline</b>
<b>Objective 1</b>	Convene with staff from the WWMP, BPA, ODFW, North Santiam Watershed Council, BLM, Bird Haven and/or CTGR at least once per year to plan conservation actions in the area of the Property.	
Monitoring	File meeting agendas, notes, and any action items.	Annual



<b>Objective 2</b>	Provide at least one guided opportunity for neighbors and the public to access the Property each year.	
Monitoring	Record number of events conducted, organization, and number of participants.	Annual
<b>Objective 3</b>	Include one electronic outreach item per year about the Property's conservation values and restoration/enhancement work underway in Greenbelt outreach materials.	Annual
Monitoring	Record number of items sent per year.	
<b>Objective 4</b>	Complete a trail feasibility study that identifies options for passive recreation on the Property by 2032.	
Monitoring	Provide a copy of the Feasibility study to BPA/ODFW.	2032

### **30. ADAPTIVE MANAGEMENT**

We will use an adaptive management approach on the Property. Under this approach, major management actions will be evaluated as implementation occurs, knowledge of the site is accrued, and habitat restoration and management and species research advances. Changing conditions from a changing climate (e.g., drought, fire), new invasive species, or changing regulatory environment (e.g., species listing status) may also require adaptive management. Future actions and priorities may be adjusted accordingly to improve future success and keep pace with change. To successfully use the adaptive management approach, pre- and post- project conditions will be recorded, and techniques and geographic extent of major enhancement and restoration activities will be carefully documented. The management objectives and actions described on the following pages will be evaluated as implementation occurs and may be adjusted accordingly. BPA will be consulted if adaptive management indicates that significant changes to this LMP are required.

## **F. CLIMATE CHANGE**

### **31. POTENTIAL CLIMATE CHANGE IMPACTS**

Potential climate change impacts on the Property are described in Table 8.

**Table 8. Potential climate change impacts and effects on conservation values at Santiam Kingston Hills.**

Potential Climate Change Impact	Potential Effect on Conservation Values by Timeframe		
	10 year	20 year	50-60 year
Changes to precipitation patterns and increased drought frequency	Episodic higher flows, lower summer and fall flows on the N Santiam, shorter flowering season in wet prairie.	Similar to 10 year, with cumulative drought stress and mortality.	Similar to 20 year, with cumulative drought stress and mortality.
Warmer temperatures	Lower flows on N Santiam, compressed phenology (shorter flowering season for plants), reduced success for grassland birds in later nesting attempts.	Similar to 10 year, cumulative effects. May see species off-sets (e.g., pollinator timing not aligning with plant resources timing).	Similar to 20 year, cumulative effects.
Changes to hydrology	Lower flows on the N. Santiam, less spring flow in mixed deciduous forest. Increased water temperatures threatening aquatic habitat quality for fish. May see increased overland flow on slopes as soils become more hydrophobic with drought.	Similar to 10 year, cumulative effects. May see decreased flow of spring to Bird Haven.	Similar to 20 year, cumulative effects.
Increased risk of wildfire	Prairie and oak are fire-dependent/adapted ecosystems. Unlikely to affect CVs, due to location of forest, buffered from roads by low-fuel grasslands/wetlands and the river to the north. However, increased risk of fire and length of fire season may limit/delay management actions (e.g., mowing with heavy equipment, oak release forestry work).		
Species range shifts	May see spread of new invasive species suited to the modified climate.	Property is on northern end of the WV prairie species range, may be situated to offer refugia if northern sites are favored over southern in the WV.	Similar to 20 year.

Potential Climate Change Impact	Potential Effect on Conservation Values by Timeframe		
	10 year	20 year	50-60 year
Changes to plant communities	Measurable change in herbaceous perennials unlikely, but may see shift to favor species with earlier phenology. May see drought mortality in riparian, mixed deciduous forest or oak woodland; shifts in tree abundance, dominance may occur as a result.	Shifts in wet prairies to more closely resemble upland prairies, earlier plant phenology overall. Risk to CVs is offset between birds/wildlife/pollinators and their resource plants. Cumulative drought effects may reduce productivity of restored upland prairie, resulting in improved habitat (greater bare ground cover, shorter vegetation) for Oregon vesper sparrow.	Similar to 20 year, more cumulative change.

### 32. MONITORING AND ADAPTING TO CLIMATE CHANGE IMPACTS

Periodic monitoring will track condition of conservation values and adjust property management to ameliorate climate change effects, where possible. Examples of such adjusted management may include:

- Tracking habitat conditions and species present over time as they shift with climate change and modifying seed mixes as different species become more appropriate or needed for pollinators, birds and other wildlife;
- Monitoring for new invasive species or pathogen effects that become more prevalent in new climate conditions;
- Monitoring changes in hydrology of site;
- Implementing extra safeguards for management practices (e.g., equipment operation, prescribed fire) that pose fire-starting risks, to protect neighboring properties as fire seasons become longer and more intense; and
- Considering alternatives to carbon releasing management activities, such as prescribed fire or tractor mowing, and reviewing with BPA/ODFW.

## G. SUPPLEMENTAL RESTORATION AND MANAGEMENT INFORMATION

### 33. CURRENT AND POTENTIAL PARTNERS

Partners or potential partners for management activities and their roles are listed in Table 9.

**Table 9. Potential partners for management activities at Santiam Kingston Hills.**

<b>Partner</b>	<b>Management Activity</b>	<b>Role</b>
Bird Haven	Habitat restoration, invasive species management	Collaborate on work across property boundaries.
BLM	Habitat restoration, invasive species management	Collaborate on work across property boundaries.
Confederated Tribes of the Grand Ronde	Habitat restoration	Partner for funding opportunities for habitat restoration on nearby properties, shared efforts for prescribed fire.
USFWS Partners for Fish and Wildlife Program	Habitat Restoration	Support for prescribed fire, habitat restoration, support for plant materials acquisition

North Santiam Watershed Council	Habitat restoration, Outreach	Partner for outreach and funding opportunities for habitat restoration on nearby properties.
Institute for Applied Ecology	Rare species introduction, associated habitat restoration	Support in plant materials acquisition, rare plant reintroduction, pollinator assessments.

### 34. CONSISTENCY WITH PRE-ACQUISITION DISCUSSIONS

Approach is consistent with pre-acquisition discussions.

### 35. PAST AND PLANNED RESTORATION FUNDING REQUESTS

Details regarding past and planned restoration funding requests and associated permit needs are included in Table 10.

**Table 10. Past and planned restoration funding requests.**

Funding Source	Date Applied/To Apply	For What Purpose	Permits Required	Funding Status
Natural Resources Conservation Service	11/2021	Development of a forest plan for oak woodland habitats.	No	Funded through 2022.
Natural Resources Conservation Service	To apply - 2023	Restoration of oak woodland habitats.	No	
Bureau of Land Management Secure Rural Schools funds	To apply, fall 2023	Habitat Restoration – Oak woodland, Wet prairie, Upland prairie	No	
Oregon Watershed Enhancement Board	To apply, fall 2023	Habitat Restoration – Oak, Wet prairie, Upland prairie	No	
Oregon Conservation and Recreation Fund	To apply, 2025-2026	Habitat restoration and public engagement, trail feasibility study	No	
USFWS Recovery Funding	To apply, 2025-2031	Habitat management and restoration, plant materials, monitoring (habitats with rare species)	ODA Rare Plant permit, secured	

### **36. OTHER PAST, CURRENT OR PLANNED CONSERVATION PROGRAM ENROLLMENT**

Conservation programs in which portions or all of the property has been, is currently, or is planned to be enrolled are included below.

- EQUIP Conservation Program Contract, NRCS Farm Services (oak woodland, mixed deciduous, floodplain forest – Enrolled 2022-2024)
- USFWS Partners for Fish and Wildlife (Entire Property – Current agreement 2016-2026)

# **ATTACHMENT A: CONSERVATION EASEMENT**

Grantor:  
Greenbelt Land Trust, Inc.  
PO Box 1721  
Corvallis, OR 97339

Grantee:  
United States of America  
Bonneville Power Administration  
PO Box 3621  
Portland, OR 97208-3621

**AFTER RECORDING, RETURN TO:**  
Bonneville Power Administration  
Real Property Services, TERR  
Re: WILWF-WL-47  
P.O. Box 3621  
Portland, OR 97208-3621

LINN COUNTY, OREGON **2018-16953**  
E-EAS  
Stn=48 S. WILSON **09/24/2018 03:56:00 PM**  
\$110.00 \$11.00 \$10.00 \$60.00 \$19.00 **\$210.00**

I, Steve Druckenmiller, County Clerk for Linn County, Oregon, certify that the instrument identified herein was recorded in the Clerk records.  
Steve Druckenmiller - County Clerk

E-RECORDING  
ORIGINAL

## DEED OF CONSERVATION EASEMENT

THIS DEED OF CONSERVATION EASEMENT is executed by Greenbelt Land Trust, Inc., an Oregon non-profit corporation with a mailing address of P.O. Box 1721, Corvallis, OR 97339 ("**Grantor**"), in favor of the United States of America ("**United States**" or "**Grantee**"), acting by and through the Department of Energy, Bonneville Power Administration ("**BPA**"), headquartered in Portland, Oregon, at P.O. Box 3621, Portland, OR 97208-3621. The Grantor and Grantee together are referred to as the "Parties."

### I. RECITALS

- A. BPA is a power-marketing agency having legal obligations under the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. §§ 839-839h ("**Northwest Power Act**") to protect, mitigate, and enhance fish and wildlife, including related spawning grounds and habitat, affected by the development and operation of Federal hydroelectric projects of the Columbia River and its tributaries, in a manner consistent with the purposes of the Northwest Power Act, the Fish and Wildlife Program adopted by the Pacific Northwest Electric Power and Conservation Planning Council under subsection 4(h) of the Northwest Power Act (16 U.S.C. § 839b(h)), and other environmental laws, including the Endangered Species Act, 16 U.S.C. §§ 1531-1544 ("**ESA**"). BPA has the authority pursuant to the Northwest Power Act, 16 U.S.C. §§ 839b(h) and 839f(a), the Federal Columbia River Transmission System Act, 16 U.S.C. § 838i(b), or the Bonneville Project Act, 16 U.S.C. §§ 832a(c) through (f), to acquire real estate or to assist in the acquisition and

FIRST AMERICAN 2787390



Grantor:  
Greenbelt Land Trust, Inc.  
PO Box 1721  
Corvallis, OR 97339

**RECORDED**  
ID: 2018-16953  
County: LINN  
Date: 9/24/18 Time: 3:56 PM

Grantee:  
United States of America  
Bonneville Power Administration  
PO Box 3621  
Portland, OR 97208-3621

**AFTER RECORDING, RETURN TO:**

Bonneville Power Administration  
Real Property Services, TERR  
Re: WILWF-WL-47  
P.O. Box 3621  
Portland, OR 97208-3621

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FIRST AMERICAN 2787390

transfer of real property interests.

- B. Grantor is an Oregon non-profit corporation created to conserve and restore natural areas and working lands for aesthetic, scientific, charitable and educational purposes and is an organization qualified under Section 170(h) of the Internal Revenue Code, as that section may be amended from time to time, and in the regulations promulgated thereunder, to receive qualified conservation contributions. Grantor is an accredited land trust by the Land Trust Alliance Accreditation Commission.
- C. BPA and the State of Oregon, acting through the Oregon Department of Fish and Wildlife (“**ODFW**”), entered into a programmatic Memorandum of Agreement, dated October 22, 2010 (“**MOA**”), in which BPA agreed to fund the acquisition of real property interests through the State of Oregon to permanently protect and enhance important fish and wildlife habitat in the Willamette Basin, where it either currently exists or at one time existed, in exchange for supporting BPA’s partial fulfillment of Northwest Power Act and ESA obligations, and in exchange for rights of enforcement, entry, and inspection to the United States and its assigns.
- D. BPA in accordance with the mutual commitments of the **MOA**, a copy of which is available from the BPA Manager, Real Property Services, P.O. Box 3621, Portland, OR 97208-3621, provided funding to the Grantor to acquire fee title ownership of certain real property, the Santiam Kingston Hills property (“**Protected Property**”) located in Linn County, Oregon. The Protected Property has important features that help BPA meet its statutory obligations to the public under the Northwest Power Act and other environmental laws.

## II. AGREEMENT

- A. **Conveyance and Consideration.** The Grantor, for and in consideration of the funding in the amount of TWO MILLION FIVE HUNDRED AND FIFTY FOUR THOUSAND DOLLARS (\$2,554,000.00) which BPA provided to the Grantor to acquire fee title ownership of the Protected Property, hereby voluntarily conveys and warrants to the United States of America and its assigns a perpetual easement for conservation purposes (“**Conservation Easement**”) in, over, under, upon and across the Protected Property, legally described in Exhibit A (**Legal Description**) and shown in Exhibit B (**Map**), together with the right of access and entry, created and implemented under applicable state and federal law, and creating an interest in property intended to be a conservation easement under ORS §§ 271.715-795. The Parties intend this Conservation Easement to be a perpetual and irrevocable easement in gross, and further intend that its terms and conditions, set forth below, create equitable servitudes and covenants running with the land, binding the Grantor and the Grantor’s successors and assigns for the benefit of the United States.
- B. **Purpose.** The purpose (“**Purpose**”) of this Conservation Easement is to protect and

conserve, and as appropriate, to allow for the restoration or enhancement of the **Conservation Values** (Section C, below) of the Protected Property. As such, the Purpose of this Conservation Easement includes the prevention of any use of the Protected Property that will materially harm or materially interfere with any of the Conservation Values of the Protected Property. The Grantor intends that this Conservation Easement will confine the use of the Protected Property to activities that comply with the Conservation Easement, including the final Management Plan. BPA shall have the right, but not the obligation, to enforce any and all terms of this Conservation Easement. The Grantor shall only conduct activities on the Protected Property which are consistent with the Purpose of this Conservation Easement. In the event that there is a conflict between the Grantor's uses or activities and the Purpose of Conservation Easement, the Purpose of the Conservation Easement shall be construed broadly and shall prevail over any conflicting uses or activities of the Grantor.

**C. Conservation Values.** The Protected Property, in its present state, comprises approximately 404.69 acres including wet prairie, grasslands, woodlands, and aquatic and riparian systems that support a community of native species. The Parties agree that the Protected Property includes other important species, habitat, and ecosystem attributes. The Conservation Values of the Protected Property that currently exist specifically include the following, recognizing that such Conservation Values may periodically fluctuate or trend toward long-term change, due to natural events such as plant community dynamics, succession, wildfire, floods, interdecadal climate events, and long-term climate change, as well as human-initiated enhancement or restoration actions:

1. The Protected Property supports strategy habitats defined by the Oregon Conservation Strategy, adopted by ODFW in 2016, including flowing water and riparian habitats, grasslands, oak woodlands, and wetlands that provide habitat for many species, including species of conservation concern.
2. Specific priority features on the Protected Property include high quality riparian forest in the floodplain of the North Santiam River, oak woodlands, remnant wet prairies, and springs and headwater drainages that connect to a slough of the North Santiam that supports a population of Oregon chub. The Protected Property provides substantial opportunity to restore additional wet prairie and grassland habitats.
3. Scenic Resource. The Protected Property's Conservation Values include its scenic resource of open space, riparian habitats and grasslands.
4. Ecosystem Attributes and Benefits. Ecosystem attributes and benefits, present as of the Effective Date of this Conservation Easement, include but are not limited to the fish and wildlife habitats, biodiversity, clean air and water, storage of flood water, maintenance of soil productivity, and carbon sequestration.
5. Contribution to landscape-scale conservation. The Protected Property is located

within two priority conservation areas, Santiam Confluences (078) and Kingston Prairie-Scio Oak Pine Savanna (079), identified in the Oregon Conservation Strategy, adopted by the Oregon Department of Fish and Wildlife in 2016, and targeted to protect and restore native Willamette Valley upland and wetland prairie, oak savanna, oak woodland, and flowing water and riparian habitats and the species that rely on them.

- D. Water Rights.** To the extent Grantor has or after-acquires water rights, Grantee shall ensure that the Grantor shall not abandon any of the water rights appurtenant to the Protected Property by virtue of non-use and that the Grantor may not transfer, change the point of diversion, change the purpose of use, or otherwise significantly change any Protected Property water right without receiving prior written approval from BPA.
- E. Baseline Documentation.** The Grantor and BPA agree that the characteristics and conditions of the Protected Property at the Effective Date (Section X) are documented in a **Baseline Documentation Report**, signed and acknowledged by the Parties; the acknowledgment is Exhibit C.
- F. Reserved Uses.** The Grantor reserves, for itself and its successors and assigns, the right to use the Protected Property in any and all ways which are consistent with the Purpose of this Conservation Easement and which are not otherwise prohibited by this Conservation Easement, including but not limited to: the right to record title, the right to convey, transfer, and otherwise alienate title to these reserved rights in accordance with Sections K(14) and Q; the right to manage and develop single-track trail systems as described in the Management Plan; the right to manage and restore the Protected Property for the benefit of fish and wildlife; the right of quiet enjoyment of the rights reserved in Protected Property; and the right to prevent trespass and control access. Without limiting the foregoing, Grantor shall have the following Reserved Use which will expire 15 years after the Effective Date:
1. *Agricultural Uses.* Grantor may conduct agricultural activities, in the same location as identified in the **Baseline Documentation Report**, on an ever decreasing portion of the Protected Property during the 15 years after the Effective Date of this Conservation Easement (the "**Phase-out Period**") to control invasive species and maintain the open space characteristics of the Protected Property, herein called "**Reserved Agricultural Uses**". The goal of the Phase-out period is to conclude the Agricultural Uses by the end of the Phase-out Period. Grantor shall diminish the Reserved Agricultural Uses as Grantor restores and enhances portions of the Protected Property. Although Grantor may continue the Reserved Agricultural Uses on the Protected Property during the Phase-out Period, the goal of the Conservation Easement is to return increasing portions of the Protected Property to site appropriate, native Willamette Valley habitats as soon as practicable and as funding for that work is available. Reserved Agricultural Uses must not have a materially adverse impact on any of the Conservation Values of the Protected Property and shall be described in the final Management Plan. Any income-producing

activities or leases associated with Reserved Agricultural Uses shall require written consent by Grantee, usually by Land Use Agreements, consistent with Sections K.14 and R.

**G. Management Plan.** Within 18 months of the Effective Date, the Grantor shall develop a Management Plan for the Protected Property to describe the uses and activities that the Grantor expects to undertake or allow to be undertaken on the Protected Property, including any restoration, enhancement, operation and maintenance, or any other activities or uses. The Grantor shall include in the Management Plan any limitations or prescriptions for these uses and activities necessary to ensure the Purpose of this Conservation Easement. The Grantor shall also identify in the Management Plan the allowable use and access by the public of the Protected Property if public access is appropriate.

In developing the draft Management Plan, Grantor will solicit and incorporate as Grantor deems appropriate the views of ODFW, as well as other interested natural resource management agencies, local governments, and parties. Grantor will submit documentation showing the nature and extent of such coordination with any draft plan to BPA and ODFW. BPA shall review that Plan and any proposed amendments for conformance with the MOA, this Conservation Easement, and applicable laws. BPA must review the Management Plan or any amendments prior to its implementation for consistency with the Purpose of the acquisition and this Conservation Easement. BPA will review and either agree to or provide specific written comments within 180 days of submission of the Management Plan. If Grantor must submit a revised Management Plan, BPA will review and agree to or provide specific comments within 60 days of submission of the revised management plan. The Grantor shall make the final Management Plan, and any final amendments, available to the public.

**H. Public Access.** This Conservation Easement shall not be construed to create a right in the general public of use of or access to the Protected Property. Grantor retains the right to manage public access to the Protected Property. The Grantor will address access to the Protected Property in the Management Plan.

**I. Annual Report.** The Grantor shall annually submit a report to BPA that describes, at a minimum any: changes in real property interests (including water rights) in the Protected Property; uses or activities undertaken, in progress, or planned; accountings of income and expenditures associated with property (including how income from the Protected Property is expended); stewardship accounting; and threats to Conservation Values. The Grantor shall provide the initial annual report on the first April 15th after the Effective Date, and then annually on that initial report date anniversary thereafter, unless otherwise agreed by BPA.

**J. Rights Conveyed to Grantee**

**1. General Rights.** The Grantor has conveyed this Conservation Easement to the United States. BPA is the acquiring federal agency having jurisdiction and

control over this Conservation Easement. Subject to valid existing rights of record and those rights specifically reserved to the Grantor, all development rights associated with the Protected Property are vested in Grantee. In addition to any other rights granted to the Grantee pursuant to this Conservation Easement, Grantee has the right to:

- a. Access and inspect the Protected Property at all reasonable times upon reasonable notice (which may be by phone or electronic mail) to assure compliance with this Conservation Easement;
- b. To access the Protected Property upon reasonable notice (which may be by phone or electronic mail) to survey the fish and wildlife habitat and evaluate the status of the Conservation Values;
- c. Prevent any activity on the Protected Property inconsistent with this Conservation Easement, and to require the restoration of areas or features of the Protected Property that are damaged by any inconsistent activity; and
- d. Should the Grantor fail to do so, to retain and maintain the right to use any and all of the water rights associated with the Protected Property, and to protect those rights from threat of abandonment or forfeiture under relevant law; Grantee may, after providing 90 days advance written notice to the Grantor enter upon the Protected Property and take actions reasonably necessary to maintain the validity of the water rights.

2. *Future Negotiations for Transmission Right-of-Way Easement.* The Grantor conveys the following rights to the United States: to construct, locate, operate, maintain, repair, reconstruct, upgrade, keep clear, access and patrol future transmission facilities including ancillary transmission communications facilities within the Conservation Easement at no additional cost for securing the transmission easement for these purposes. Transmission easements shall be for the purpose of transmission of electrical power and ancillary communications. Should such a perpetual transmission easement be needed, the Parties shall negotiate the final terms and conditions of the transmission easement in a form substantially similar to Exhibit D (**Form Transmission Easement**). Such a transmission easement shall not be presumptively precluded by the terms of this Conservation Easement.

In the negotiations and the final transmission right-of-way easement, BPA shall, at a minimum:

- a. Recognize the purposes for which the Protected Property and the Conservation Easement were acquired.
- b. Use reasonable efforts to accommodate Grantor's preferences for siting any transmission facilities.
- c. Use reasonable efforts to accommodate Grantor's preferences for siting, designing, using, and maintaining any necessary access road(s).
- d. Fund appropriate mitigation measures identified as part of the environmental analysis for the transmission right-of-way under National

Environmental Policy Act, the ESA, the Clean Water Act, the National Historic Preservation Act, or any other applicable state or federal laws.

**K. Prohibited Uses.** The Grantor shall manage the Protected Property to protect its fish and wildlife habitat on behalf of BPA, preventing any and all uses of the Protected Property that are inconsistent with the Purpose of this Conservation Easement. Prohibited uses of the Protected Property include those specifically listed below. However, the Parties intend that any activity that may materially harm or materially interfere with one or more of the Conservation Values is prohibited, and therefore the list identified below is not exhaustive.

Uses or activities otherwise prohibited under this Section K may be allowed but only if the use or activity is consistent with the Purpose of this Conservation Easement and any necessary limits or prescriptions are agreed to by BPA in advance, either in a final Management Plan or by written agreement. If Grantor is uncertain whether an activity is consistent with the Purpose of the Conservation Easement, Grantor shall consult with Grantee and the Grantee will document the results of the consultation.

1. *Residential, Commercial or Industrial Uses.* Any residential, commercial, or industrial uses of the Protected Property is prohibited, including timber harvesting, grazing of livestock, and agricultural production, except for Reserved Agricultural Uses during the Phase-Out Period as described in Section F. Timber removal for restoration or habitat management is not considered commercial timber harvest, even if that activity generates income.
2. *Construction of Buildings, Facilities, Fences or Other Structures.* Except for newly constructed boundary fences and fencing required for habitat purposes identified in the final Management Plan, construction of new buildings, facilities, fences or other structures is prohibited. Repair, maintenance, or replacement of existing buildings, facilities, fences or other structures identified in the Baseline Documentation Report are permitted at the same location and within the existing footprint of such structures. If existing fences are repaired or replaced, then the fences must be wildlife-friendly, which allow for the safe passage of wildlife, increased fence visibility, and wildlife access to food, shelter, and water.
3. *Utilities.* Except as provided for in Section J.2, the installation or relocation of new public or private utilities, including electric, telephone, or other communications services is prohibited unless otherwise agreed to in writing by BPA. Existing utilities on, over, or under the Protected Property may be maintained, repaired, removed or replaced at their current location as that location is documented in the Baseline Documentation Report.
4. *Signs.* Except for no trespassing signs, boundary signs, directional signs, condition of access to Protected Property sign, memorial plaques, trail interpretive signs, signs identifying the owner of the Protected Property, and signs that may be erected by the Grantee identifying the Purpose of the Protected Property, all other

signs, advertisements, and billboards of any nature are prohibited. No permitted sign may exceed 15 square feet in size.

5. *Waste.* Dumping, accumulating, or storage of trash, refuse, waste, sewage, bio-solids, or other debris is prohibited.
6. *Mining.* The exploration, development, mining or extraction of soil, sand, loam, gravel, mineral, oil, gas, or other substance from the surface or subsurface of the Protected Property is prohibited.
7. *Topography.* Altering the existing topography of the Protected Property by digging, plowing, disking, or otherwise disturbing the surface or subsurface is prohibited, except as allowed for trail development, habitat restoration/management activities described in the final Management Plan, or for Reserved Agricultural Uses during the Phase-out Period.
8. *Watercourses/Wetlands.* Draining, dredging, channeling, filling, leveling, pumping, diking, impounding or any other alteration of any watercourses, ponds, seeps, bogs, springs, wetlands, or any seasonally wet area is prohibited, as is altering or tampering with existing water control structures or devices, except for habitat restoration, enhancement, and maintenance activities described in the final Management Plan.
9. *Vegetation.* The cutting, trimming, shaping, killing, or removal of any vegetation from the Protected Property, except for exotic or invasive plant species, is prohibited, except as allowed for trail development, habitat restoration, maintenance, and enhancement activities described in the final Management Plan, or harvesting of agricultural crops during the Phase-out Period. The prohibitions in this provision do not apply to maintenance of transmission easements as conveyed to the United States in Section J.2.
10. *Exotic or Invasive Species.* The introduction, cultivation, or use of exotic or invasive plant or animal species on the Protected Property is prohibited, except for agricultural use during the Phase-out Period.
11. *Roads and Impervious Surfaces.* Construction of new roads and paving of any existing road not paved or otherwise covered in an impervious material as of the Effective Date is prohibited. Temporary roads (in place for two years or less) may be allowed for habitat restoration and management activities as described in the final Management Plan. However, the temporary road areas shall be revegetated to a natural-like condition after use. Existing roads identified in the Baseline Documentation Report may be maintained and repaired in their current condition and within their existing footprint as identified in the Report.
12. *Off-road Vehicle Use.* Use of any motorized vehicles is prohibited, except for vehicles necessary for Reserved Agricultural Uses during the Phase-out Period



and vehicles used for habitat restoration, enhancement, and maintenance activities.

13. *Subdivision.* The legal or “de facto” division, subdivision, partitioning of the Protected Property, or any attempt to convey the Property except as a single property in its current configuration, as described in Exhibit A and shown in Exhibit B, is prohibited.
14. *Grant of Rights.* The granting of any property interest or rights in the Protected Property, including easements, permits, licenses, and leases, without the prior written consent of the Grantee, is prohibited.

#### **L. Enforcement**

1. *Notice of Violation, Corrective Action.* If Grantee determines that the Grantor or its representatives, contractors, successors, or assigns violates or threatens to violate this Conservation Easement, and if such determination or dispute is not resolved by negotiation as set forth in Section N, Grantee will give written notice to the Grantor and demand corrective action sufficient to cure the violation and, where the violation involves injury to the Protected Property resulting from any use or activity inconsistent with the Purpose, sufficient to restore the portion of the Protected Property so injured to its prior condition in accordance with a plan approved by Grantee.
2. *Grantor’s Failure to Respond.* The Grantee may bring an action as provided in Section L.3 if the Grantor fails to cure the violation within thirty (30) calendar days after receipt of a notice of violation, or under circumstances where the violation cannot reasonably be cured within such thirty (30) day period, fails to begin curing the violation within the thirty (30) day period and fails to continue diligently to cure such violation until finally cured.
3. *Grantee’s Action.* Grantee may pursue an action in a court having jurisdiction to enforce the terms of this Conservation Easement: (1) to enjoin the violation, ex parte as necessary, by temporary or permanent injunction; (2) to require the restoration of the Protected Property to the condition that existed prior to any such injury; and (3) to recover any damages to which it may be entitled for violation of the terms of this Conservation Easement. The remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing.
4. *Grantor’s Action.* In the event that the Grantor seeks a determination as to the legal meaning or effect of this Conservation Easement, or as to any alleged violation hereof by Grantee, and if such determination or dispute is not resolved by negotiation set forth in Section N below, then the Grantor shall be entitled to bring judicial action in a court of competent jurisdiction.

5. *Emergency Enforcement.* Notwithstanding the provisions of L.1 and L.2, if Grantee determines on the basis of substantial evidence that circumstances require immediate action to prevent or mitigate significant damage to one or more of the Conservation Values, Grantee may undertake reasonable actions to remove, eliminate or mitigate damages to the Protected Property. Grantee shall provide prior notice to the Grantor of such actions to the extent reasonably practicable and may seek Grantor participation in such actions, but may proceed with such actions without permission from the Grantor or without waiting for the Grantor to take any action.

**M. Role of Oregon Department of Fish and Wildlife.** Pursuant to the MOA and other agreements with BPA, the ODFW has the right, but not the obligation, to monitor habitat and compliance with this Conservation Easement.

**N. Dispute Resolution.** The Parties shall attempt in good faith to resolve any dispute arising out of or relating to this Conservation Easement by negotiation between executives or officials who have authority to settle the controversy.

**O. Acts of God/Force Majeure.** Nothing contained in this Conservation Easement entitles the Grantee to bring any action against the Grantor for any injury to or change in the Protected Property resulting from causes beyond the Grantor's control, including, without limitation, naturally caused fire, flood, storm, and earth movement, or from any prudent action taken by the Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Protected Property resulting from such causes. Such excuse from performance will be allowed only if such catastrophic event or other event beyond the Grantor's control has caused a substantial degradation of the Conservation Values. The Parties shall make all reasonable efforts to resume performance promptly once the force majeure is eliminated.

**P. Waiver.** The failure of any Party to require strict performance of any term of this Conservation Easement or a Party's waiver of performance shall not be a waiver of any future performance or of a Party's right to require strict performance in the future.

**Q. Conveyance and Assignment.** If Grantor chooses to convey the Protected Property, Grantor will first offer it at no cost as follows: first to the State of Oregon; if Oregon declines, then to BPA. If Oregon and BPA decline the Protected Property, then Grantor may assign or transfer its rights to another qualified entity, subject to BPA approval, which shall not be unreasonably withheld. This restriction is not intended to prevent Grantor from conveying the Protected Property to a wholly owned subsidiary of Grantor.

Upon conveyance of the Protected Property, the new owner must acknowledge the Conservation Easement and the existing Management Plan would apply if and until the new owner develops a new plan that is reviewed and acknowledged by BPA.

**R. Proceeds from Activities on the Protected Property.** The Grantor shall use any

proceeds generated from activities on the Protected Property (e.g., phase-out agriculture leases) towards the operations, maintenance and restoration of the Protected Property. If proceeds exceed the operations, maintenance and restoration needs of the Protected Property, the Grantor may use the proceeds on other BPA-funded properties in the Willamette River Basin owned or protected by Grantor, or the Grantor will place the proceeds in the Protected Property's stewardship account for the Protected Property until operations, maintenance, or restoration needs arise. Proceeds shall be placed in its stewardship account and expenditures from it will be tracked and reported to BPA in the annual report (Section I).

## **S. Termination or Amendment**

1. *Termination Standard.* This Conservation Easement may be voluntarily terminated by agreement of the Parties only if:
  - a) a subsequent, unexpected change in the conditions of the Protected Property or the surrounding area makes impossible the continued use of the Protected Property for the Purpose of this Conservation Easement (except that changed environmental conditions related to climate change, or other natural events, for example, wildfire, river channel migration, erosion or avulsion, shall not be grounds for termination); or
  - b) BPA agrees to exchange this Protected Property for another property proposed by the Grantor; factors that BPA will consider in determining whether to agree to an exchange include whether the new property is at the time of the proposed exchange determined by BPA to supply equal or better Conservation Values to meet BPA's mitigation needs as compared with the Protected Property; whether the property will be permanently protected pursuant to a conservation easement granted to BPA on terms substantially similar to this Conservation Easement; and the costs to BPA of undertaking the acquisition of the new property, if any.
2. *Termination Process.* If the Parties agree to voluntarily terminate this Conservation Easement and have met the above termination standard, the Parties shall terminate this Conservation Easement by executing and recording an instrument appropriate for the purpose. In the event of termination through an exchange for another property, the Parties must agree on the new property and its conservation easement before this Conservation Easement will be terminated.
3. *Proceeds after any Termination.* If this Conservation Easement is terminated in whole or in part either voluntarily by the Parties, or by involuntary extinguishment by a court of competent jurisdiction and the termination results in proceeds, in whole or in part, BPA is entitled to either (1) a share of such proceeds in proportion to the amount BPA contributed to the fee title acquisition, which is 100% or (2) at BPA's election, to review and approve use of the proceeds by the Grantor to acquire new fish and wildlife habitat for BPA

mitigation.

4. *Amendment.* This Conservation Easement may only be amended by agreement of the Parties, and any such amendment shall be properly documented, executed, and recorded. Amendments based on changed conditions may be made only when the effect of the amendment is to benefit the Conservation Values (for example, amending the Conservation Easement to place further restrictions on the use of or activities on the Protected Property). The Parties may not use amendments to impliedly terminate the Conservation Easement or remove any portion of the Protected Property from its terms.

**T. Control.** The Grantor has ownership and control of the Protected Property and is responsible for all incidents of ownership. Such incidents of ownership include, but are not limited to, maintenance and repair of existing structures, hazardous waste response, endangered species protection, noxious weed and invasive species response, tort liability, compliance with applicable laws, and payment of applicable taxes and assessments.

**U. Cultural Resources.** The Grantor is responsible for cultural or historic resource mitigation or preservation on the Protected Property in accordance with applicable cultural resource laws.

**V. Hazardous Substances.** To the best of the Grantor's knowledge, there are no hazardous substances present in, on, or under the Protected Property, including without limitation, in the soil, air, or groundwater, and there is no pending or threatened investigation or remedial action by any governmental agency regarding the release of hazardous substances or the violation of any environmental law on the Protected Property, and that there are no underground storage tanks located on the Protected Property. If, at any time, there occurs, or has occurred a release in, on, or about the Protected Property of any hazardous substances, the Grantor agrees to take all steps necessary to assure its containment and remediation without cost to Grantee, including any cleanup that may be required, unless the release was caused by Grantee, in which case Grantee will be responsible for remediation in accordance with applicable law. Nothing in this Easement shall be construed as giving rise, in the absence of a judicial decree, to any right or ability in Grantee to exercise physical or managerial control over the day-to-day operations of the Protected Property, or any of the Grantor's activities on the Protected Property, or otherwise become an operator with respect to the Protected Property within the meaning of the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended ("CERCLA"). The Grantor specifically agrees to release and hold harmless Grantee from and against all liabilities for violations or alleged violations of, or other failure to comply with, any federal state or local environmental law or regulation relating to hazardous substances, including, without limitation, CERCLA, by the Grantor in any way affecting, involving, or relating to the Protected Property, except to the extent such violations or alleged violations are caused by the acts or omissions of Grantee.

**W. Notice.** Any notice permitted or required by this Conservation Easement, unless otherwise specified, must be in writing, delivered personally to the persons listed below, or will be deemed given on the date deposited in the United States mail, certified and postage prepaid, return receipt requested and addressed as follows, or at such other address as any Party may from time to time specify to the other Party in writing. Notices may be delivered by facsimile or other electronic means, provided that they are also delivered personally or by certified mail. The addresses listed below can be modified at any time through written notification to the other Party.

**Notices to BPA should be sent to:**

Director, Fish & Wildlife Program  
Bonneville Power Administration  
P.O. Box 3621  
Portland, OR 97208-3621

**Notices to the Grantor should be sent to:**

Greenbelt Land Trust, Inc.  
P.O. Box 1721  
Corvallis, OR 97339

**And to BPA's Real Property Services:**

Manager, Real Property Services  
RE: WILWF-WL-47  
Bonneville Power Administration  
P.O. Box 3621  
Portland, OR 97208-3621

**X. Effective Date.** This Conservation Easement vests when signed by the Grantor, and accepted by the Grantee.

**Y. Schedule of Exhibits.** All exhibits are incorporated and made part of this Conservation Easement.

- Exhibit A – Legal Description
- Exhibit B – Map
- Exhibit C – Acknowledgement of Baseline Documentation Report
- Exhibit D – Form Transmission Easement
- Exhibit E – Acceptable Encumbrances

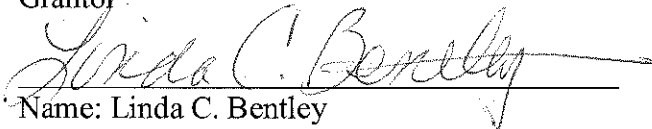
**Z. GRANT, COVENANTS AND WARRANTIES, SIGNATURE AND ACKNOWLEDGMENTS**

To have and to hold the Conservation Easement herein granted unto the United States and its assigns.

The Grantor warrants and covenants to and with the United States that the Grantor is lawfully seized and possessed of the Protected Property in fee simple, with a good and lawful right to grant the same, including a good and lawful right to grant this Conservation Easement; that the Protected Property is free and clear of all encumbrances and restrictions except the encumbrances and restrictions specifically set forth in Exhibit E (**Acceptable Encumbrances**); that the United States and its assigns shall have the use of and enjoy all the benefits derived from and arising out of this Conservation Easement; that the Grantor shall at the request of the United States execute or obtain any reasonable further assurances of the title to the Property; and that the Grantor will forever warrant the title to the Property and defend the United States against all persons who claim a lawful interest in the Property, except for persons who claim interests under the exceptions described in Exhibit E.

IN WITNESS WHEREOF, the undersigned Grantor has executed this instrument this 24 day of September, 2018.

Grantor



Name: Linda C. Bentley  
Title: Board Secretary  
Greenbelt Land Trust, Inc.

**ACCEPTANCE BY THE UNITED STATES, GRANTEE**



Luke Arant  
Supervisory Realty Specialist  
Bonneville Power Administration

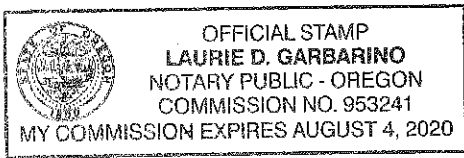
9/17/18  
Date

ACKNOWLEDGMENT

STATE OF Oregon )  
 ) ss.  
County of Benton )

On this 24th day of September, 2018, before me personally appeared Linda C. Bentley, known to me or proved to me on the basis of satisfactory evidence to be the person who executed the within instrument as the Greenbelt Land Trust's Board Secretary acknowledged to me that she executed the same freely and voluntarily in such capacity; and on oath stated that she was authorized to execute said instrument in such official or representative capacity.

Notary Public in and for the



State of Oregon

(SEAL) Signed Laurie D Garbarino

My commission expires 8-4-20

ACKNOWLEDGMENT

STATE OF Oregon )  
 ) ss.  
County of Multnomah )

On this 17th day of September, 2018, before me personally appeared Luke Arant, known to me or proved to me on the basis of satisfactory evidence to be the person who executed the within instrument as the Supervisory Realty Specialist, acknowledged to me that he executed the same freely and voluntarily in such capacity; and on oath stated that he was authorized to execute said instrument in such official or representative capacity.

Notary Public in and for the



State of Oregon

(SEAL) Signed Kara Martha Campbell

My commission expires December 15, 2018

## EXHIBIT A

### LEGAL DESCRIPTION

Real property in the County of Linn, State of Oregon, described as follows:

TRACT I: (Formerly known as Tracts II, III, IV & V)  
PARCEL 2, PARTITION PLAT 2018-32, LINN COUNTY PARTITION PLATS, LINN COUNTY,  
OREGON.

TRACT II: (Formerly known as Tract VI)  
ALL THAT PORTION OF GOVERNMENT LOT NO. 3 LYING WITH LINN COUNTY, AND BEING  
LOCATED IN SECTION 17, TOWNSHIP 9 SOUTH, RANGE 1 EAST OF THE WILLAMETTE  
MERIDIAN, LINN COUNTY, OREGON.

TRACT III: (Formerly known as Tract VII)  
ALL OF LOT 5 IN SECTION 17; LOT 12 IN SECTION 18; LOT 1 IN SECTION 19, AND LOT 5 IN  
SECTION 20, ALL IN TOWNSHIP 9 SOUTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN,  
LINN COUNTY, OREGON.

ALSO: BEGINNING AT THE NORTHWEST CORNER OF THE ASA H. HOLLENBECK DONATION  
LAND CLAIM IN SECTION 19, TOWNSHIP 9 SOUTH, RANGE 1 EAST OF THE WILLAMETTE  
MERIDIAN; THENCE SOUTH 76 RODS; THENCE EAST 42.5 RODS; THENCE NORTH 76 RODS;  
THENCE WEST 42.5 RODS TO THE PLACE OF BEGINNING.

AND ALSO: BEGINNING 13.00 CHAINS WEST OF THE NORTHEAST CORNER OF THE ASA H.  
HOLLENBECK AND MARY D. HOLLENBECK, HIS WIFE, DONATION LAND CLAIM IN TOWNSHIP 9  
SOUTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN; THENCE WEST 16.465 CHAINS;  
THENCE SOUTH 19.00 CHAINS; THENCE EAST 16.445 CHAINS; THENCE NORTH 19.00 CHAINS  
TO THE PLACE OF BEGINNING.

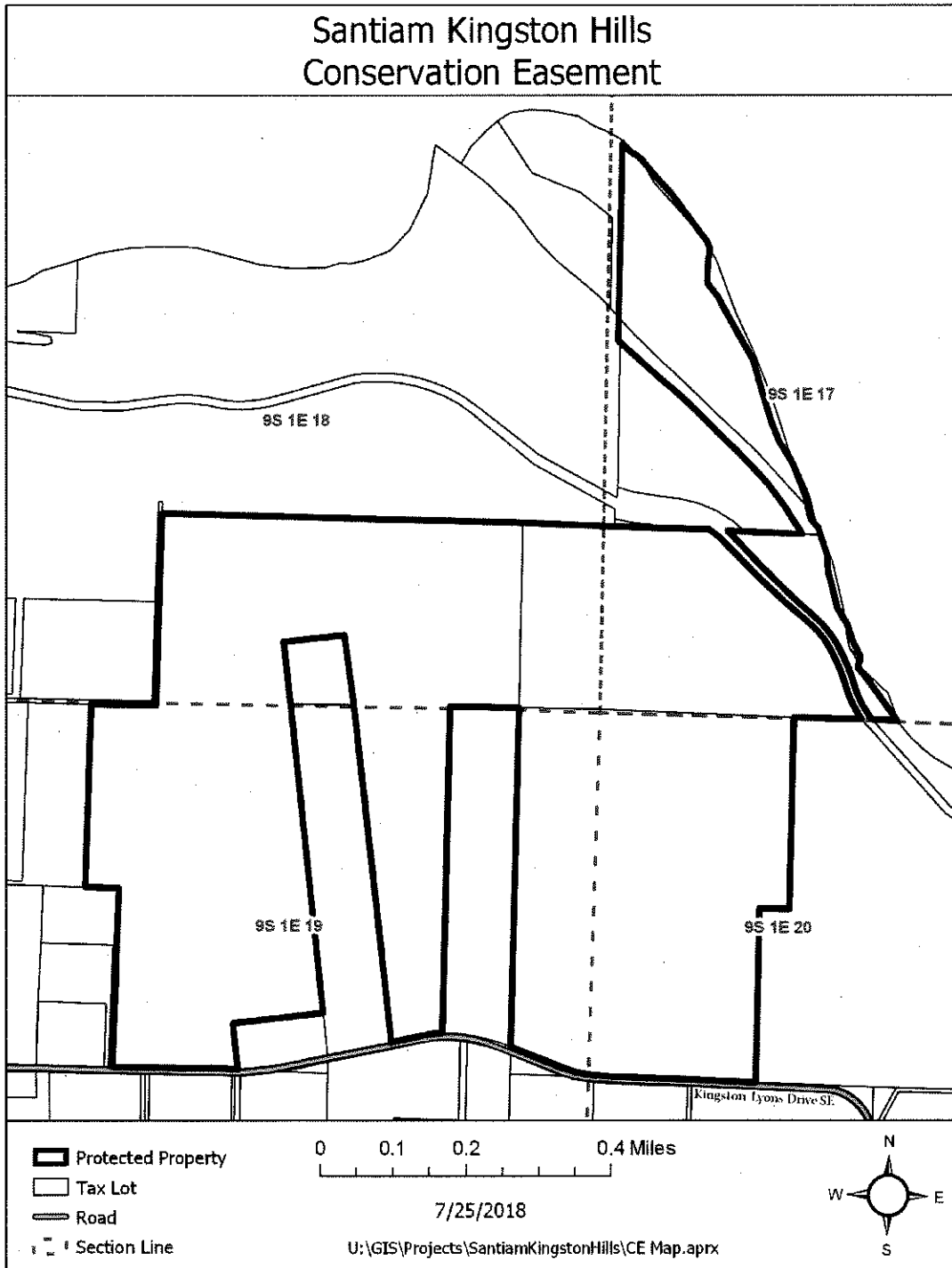
EXCEPTING FROM SAID TRACT VII THAT PORTION DESCRIBED AS FOLLOWS: BEGINNING AT A  
POINT 19.00 CHAINS SOUTH OF THE NORTHERLY NORTHEAST CORNER OF THE ASA  
HOLLENBECK DONATION LAND CLAIM NO. 62 IN TOWNSHIP 9 SOUTH, RANGE 1 EAST OF THE  
WILLAMETTE MERIDIAN IN LINN COUNTY; THENCE NORTH 144 FEET TO THE SOUTHERLY  
RIGHT OF WAY LINE OF COUNTY ROAD NO. 801; THENCE SOUTH 69°54' EAST 419.32 FEET  
ALONG SAID RIGHT OF WAY LINE TO THE EAST-WEST CENTER LINE OF SECTION 19 IN SAID  
TOWNSHIP AND RANGE; THENCE WEST 394 FEET TO THE PLACE OF BEGINNING.

ALSO EXCEPTING THEREFROM THAT PORTION WHICH LIES WITHIN THE RAILROAD RIGHT OF  
WAY.



EXHIBIT B

MAP

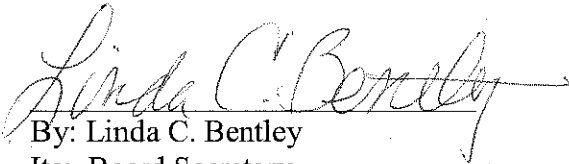


**EXHIBIT C**

**ACCEPTANCE AND ACKNOWLEDGEMENT  
OF  
BASELINE DOCUMENTATION REPORT**

The undersigned hereby acknowledge and agree that the Baseline Documentation Report for the Santiam Kingston Hills Property in Linn County, Oregon, prepared by Jeff Baker of Greenbelt Land Trust, Inc. and dated August 30, 2018, is an accurate representation of the biological, physical and historical conditions of the subject property as of the Effective Date of the Conservation Easement. All of the undersigned parties have received copies of the Baseline Documentation and is on file with the Bonneville Power Administration.


**Grantor: Greenbelt Land Trust, Inc.**

  
By: Linda C. Bentley

Its: Board Secretary  
Greenbelt Land Trust, Inc.

9-24-18  
Date

**Bonneville Power Administration:**

  
Luke Arant  
Supervisory Realty Specialist  
Bonneville Power Administration

9/17/18  
Date

**EXHIBIT D**

**FORM TRANSMISSION EASEMENT**

**AFTER RECORDING, RETURN TO  
Bonneville Power Administration  
TERS-3  
P.O. BOX 3621  
PORTLAND, OR 97208-3621**

Legal description: A portion of the \_\_\_\_\_ of  
Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_,  
\_\_\_\_\_.M., County \_\_\_\_\_, as described in  
Exhibit(s) \_\_\_\_\_ (Affects Tax Account No.  
\_\_\_\_\_.)

BPA Tract  
No(s):

**U.S. DEPARTMENT OF ENERGY-BONNEVILLE POWER ADMINISTRATION**

**EXCLUSIVE EASEMENT  
Transmission Line and Danger Trees**

THIS AGREEMENT, made between \_\_\_\_\_, the Grantor, and the UNITED STATES OF AMERICA, Department of Energy, Bonneville Power Administration (Grantee), pursuant to the Bonneville Project Act, of August 20, 1937, as amended, 16 U.S.C. §§ 832 et seq.; the Federal Columbia River Transmission System Act of October 18, 1974, as amended, 16 U.S.C. §§ 838 et seq; the Department of Energy Organization Act, of August 4, 1977, as amended, 42 U.S.C. § 7152; and the Pacific Northwest Electric Power Planning and Conservation Act, of December 5, 1980, as amended 16 U.S.C. §§ 839 et seq,

**WITNESSETH:**

That the parties hereto covenant and agree as follows:

The Grantor, for and in consideration of the sum of the funding Grantee provided to the Grantor to acquire fee title and the provisions contained in this agreement, hereby grants and conveys to the United States of America and its assigns a perpetual easement and right-of-way for electric power transmission purposes in, upon, over and under the following described land (Easement Area), to-wit:

As described in Exhibit(s) \_\_\_\_\_, attached hereto and by this reference made a part hereof.

The grant shall include the right to enter and to locate, construct, operate, maintain, repair, reconstruct, upgrade, remove and patrol one or more lines of poles or structures and appurtenances thereto, supporting conductors of one or more electric circuits of any voltage (collectively "Transmission Facilities") and any communication lines or equipment and appurtenances thereto (collectively "Communication Facilities"), together with the present and future right to clear the Easement Area and to keep it clear of all trees, shrubs, brush and other vegetation (collectively "Vegetation"), structures, above and below ground improvements or infrastructures, and fire and electrical hazards. All Vegetation, structures, and fire and electrical hazards presently within the Easement Area shall become the property of the United States on the date of acceptance hereof and may be disposed of by the United States in any manner it deems suitable.

The Grantor also hereby grants and conveys to the United States the present and future right to top, limb, or fell, and to remove, sell, burn, or otherwise dispose of "Danger Trees" located on Grantor's land adjacent to said Easement Area. A Danger Tree is any growing or dead tree, or snag, whether stable or unstable, which the United States at any time determines (1) could within a five-year period fall, bend or swing (a) within 25 feet of the Transmission Facilities or Communication Facilities or (b) within electrical arcing distance of said Facilities; or (2) could interfere with the construction, operation and maintenance of said lines and equipment.

The Grantor covenants to and with the United States and its assigns that the title to (1) Vegetation cut or hereinafter growing within said Easement Area and (2) to all Danger Trees identified, now or in the future, or cut from Grantor's land adjacent to said Easement Area is and shall be vested in the United States and its assigns; and that the consideration paid for conveying said easement and rights herein described is accepted as full compensation for all damages incidental to the exercise of any said rights. At the United States' election title to Danger Trees may revert to the Grantor.

The Grantor also agrees that prior to undertaking any activity (including, but not limited to, building a structure, placing any manmade item, planting, digging, earth-moving, burning, piling or storing materials) within the Easement Area, the Grantor agrees to contact the Grantee to seek a determination from Grantee as to whether the proposed activity is safe and compatible with Grantee's use, and does not interfere with Grantee's current or future needs. The Grantor will not proceed with any proposed activity within the Easement Area without written consent from Grantee.

In addition to the consideration paid hereunder, the United States shall repair or make compensation only for damage caused by the United States that is not incidental to the exercise of any of the above said rights and which results from and during construction, reconstruction, removal, or maintenance activities associated with the purposes of this agreement on and adjacent to the Easement Area. Payment for such damage shall be made on the basis of a damage estimate approved by the United States.

The rights granted herein are subject to easements of record and mineral rights of third parties.

The Grantor agrees to satisfy of record such encumbrances, including taxes and assessments, as may be required by the United States and to obtain such curative documents as may be requested by the United States.

The United States shall pay all costs incidental to the preparation and recordation of this instrument and for the procurement of any title report and title insurance that it may require.

The Grantor covenants to and with the United States that the Grantor is lawfully seized and possessed of the land aforesaid, with a good and lawful right and power to sell and convey the same; that the land is free and clear of encumbrances, except as herein provided; and that the Grantor will forever warrant and defend the title to the rights granted herein and the quiet possession thereof against the lawful claims and demands of all persons whomsoever.

The provisions hereof shall inure to the benefit of and be binding upon the heirs, executors, administrators, successors, and assigns of the Grantor and upon the assigns of the United States.

**FORM ONLY – SIGNATURES NOT REQUIRED**

## EXHIBIT E

### ACCEPTABLE ENCUMBRANCES

1. Easement, including terms and provisions contained therein:  
Recording Information: October 28, 1947 in Book 196, Page 715, Deed Records  
In Favor of: Mountain States Power Company  
For: Electric power line, telephone or aerial cable line
2. Easement, including terms and provisions contained therein:  
Recording Information: January 25, 1963 in Book 292, Page 14, Deed Records  
In Favor of: Benton-Lincoln Electric Cooperative, Inc., a corporation  
For: Electric power line, telephone or aerial cable line
3. The effect, if any, of a Measure 37 Claim Approval as disclosed by The Board of County Commissioners Order No. 2007-311, including the terms and provisions thereof, as set forth in and disclosed by instrument recorded September 27, 2007 as 2007-23046, Microfilm Records.

First American Title makes no representation as to the effect of said instrument.  
(pertains to Tax Parcels 9-1E-19-300)

4. The effect, if any, of a Measure 37 Claim Approval as disclosed by The Board of County Commissioners Order No. 2007-308, including the terms and provisions thereof, as set forth in and disclosed by instrument recorded August 29, 2007 as 2007-20948, Microfilm Records.

First American Title makes no representation as to the effect of said instrument.  
(pertains to Tax Parcels 18-#500 & 20-#300)

## **ATTACHMENT B: LAND USE AGREEMENTS**

## **ATTACHMENT C: BIOLOGICAL INVENTORIES**



# **Breeding Bird Surveys on Bald Hill Farm, Mulkey Ridge, Courtney Creek, and Santiam-Kingston Hills, 2017**



**Prepared for Greenbelt Land Trust**

**Prepared by Bob Altman**

**Avifauna Northwest**

**December, 2017**

## Introduction

Breeding bird surveys were conducted during May and June, 2017 to document the occurrence and abundance of special status species, and provide a baseline of bird populations for ongoing and future habitat restoration and management on several Greenbelt Land Trust (GLT) properties. This included multiple-visit point count surveys on the 587-acre Bald Hill Farm (BHF) and 170-acre Mulkey Ridge (MR) properties, and one morning reconnaissance area searches on the 203-acre Courtney Creek (CC) and 406-acre Santiam-Kingston Hills (SKH) properties. The latter is a pending acquisition.

## Methods

**Point Counts:** Point counts are the most efficient and widely used monitoring technique to determine breeding season landbird species relative abundance (Ralph et al. 1995). They are especially effective for forested or shrub habitats or any habitat where walking easily and quietly is problematic and maximum bird detectability requires stationary counts.

Point counts were centered as much as possible within a habitat type, and at least 150 meters from each other to minimize the likelihood of double-counting loud or highly visible birds at different stations. All birds detected during a five minute survey period (Ralph et al. 1995) were recorded, and the distance to each detection was visually estimated to the nearest meter for detections under 100 meters, and to the nearest five meters for detections over 100 meters. Detections were also separated as those within the habitat type of the point count station and those outside the habitat type.

Bird surveys were conducted at each point count station during three visits at least eight days apart from May 24 to June 30, 2017. Surveys occurred between shortly after dawn and 9:30 am under favorable weather conditions. Where possible, the time of the survey at each point count station was variable during the three visits to reduce time-of-morning bias at each station.

At BHF, birds were surveyed at 12 previously established point count stations (Figure 1) and at MR birds were surveyed at six previously established point count stations (Figure 2). The 12 stations at BHF were selected from the 28 stations that have been established there to reflect areas where habitat restoration has occurred or will be occurring in the near future.

At BHF, birds were surveyed at three point count stations in oak woodland open (points 9, 10, and 15), two in wet prairie (points 16 and 17), two in upland prairie (points 5 and 7), two in oak savannah (points 6 and 12), two in oak woodland closed (points 11 and 27), and one in hardwood-conifer forest (point 28) (Figure 1). All six stations at MR were in hardwood-conifer forest (Figure 2). GPS coordinates, elevation, and habitat type for each point count station are presented in Appendices A and B.

**Area Searches:** One morning (approximately 3-4 hours) area search reconnaissance surveys were conducted at CC (May 25) and SKH (June 24). In the area search technique, the observer moves freely through a defined area emphasizing time spent in locations where birds are occurring (Ralph et al. 1995). Area searches allow for complete coverage of a site, and facilitate the detection of uncommon/rare species due to additional survey time and freedom of movement.

**Data Analyses:** Point count data are presented as indices of relative abundance (birds/point) for each habitat type/site by dividing the total number of detections during all three visits by the number of point counts conducted (i.e., mean birds/point count). Only detections within the habitat type were used. Some data from previous years are also presented for comparison and discussion.

Analyses were done for data within both 50 meters and 100 meters to account for several factors. Within 50 meters is considered the standard because beyond 50 meters there are significant differences in detectability between species (Ralph et al. 1995). However, in open habitats, analyses of data within 100 meters is recommended because of the reduced density of birds, the greater ability for visual detections, and the greater impact of the observer on bird presence and movement (Cyr et al. 1995, Savard and Hooper 1995). Further confounding the use of a single distance in the analyses, at most point count stations the width of the habitat out from a point count station was variable, sometimes even less than 50 meters, and often less than 100 meters. Thus, for presentation of order of abundance for a species or habitat, the two distances were combined.

**Habitat Assessment:** Quantitative vegetation surveys were not conducted. Each point count station at BHF and MR was subjectively categorized by the predominant habitat type to assess species relative abundance by habitat type. The only changes in habitat type at BHF from last year were points 15, 16, and 17 where habitat restoration was occurring. Point 15 is now open oak woodland, and points 16 and 17 are wet prairie. There were no changes in habitat type to any point count stations at MR.

## Results

### *Bird Surveys*

Species recorded during breeding season surveys in 2017 include 58 at BHF, 31 at MR, 51 at CC, and 51 at SKH (Appendix C). With detections in previous years, breeding season species totals at these four and two other GLT sites are 94 species at BHF, 82 species at Lupine Meadows, 58 species at Carnegie, 52 species at MR, 51 species at CC, and 51 species at SKH.

There were three new species detected on BHF: Olive-sided Flycatcher, Purple Martin, and Yellow-breasted Chat. There was one new species detected at MR: Rufous Hummingbird. All of these are considered regional special status species, except Olive-sided Flycatcher which is a continental special status Watch List species ([www.partnersinflight.org/species](http://www.partnersinflight.org/species)).

At BHF in 2017, relative abundance was highest in upland prairie (4.17 birds/count <50 meters and 12.00 birds/count <100 meters) and oak woodland closed (3.00 and 11.67, respectively) (Table 1). Relative abundance was lowest in oak savannah (2.17 and 7.00, respectively) and wet prairie (2.50 and 7.17, respectively).

Among species at BHF in 2017, relative abundance was highest for Wild Turkey in upland prairie (0.00 birds/count <50 meters and 4.67 birds/count <100 meters), House Wren in oak woodland closed (0.83 and 2.00, respectively), and Swainson's Thrush in hardwood-conifer forest (0.67 and 1.33, respectively) (Table 2). In the mixed hardwood-conifer forest at MR,

relative abundance was highest for Pacific Wren (0.44 and 0.67, respectively) and Chestnut-backed Chickadee (0.33 and 0.78, respectively) (Table 3).

There were no state or federal Threatened or Endangered species detected on the four properties during the 2017 surveys. Among the 16 species that have been recognized with “special status” as being of regional conservation concern by the U.S. Fish and Wildlife Service and/or the Oregon Department of Fish and Wildlife that could occur on GLT properties, 12 have been detected at BHF, seven at CC, five at SKH, and three at MR (Table 4). On other GLT properties visited in previous years, there have been detections of nine regional special status species at Lupine Meadows, and five at Carnegie.

There were two new regional special status species detected at BHF in 2017, Purple Martin and Yellow-breasted Chat, bringing the total to 12 special status species on that property. Ten of the 12 special status species that have now been detected at BHF are ODFW Strategy Species for the Willamette Valley in the Oregon Conservation Strategy (ODFW 2016). The one new regional special status species detected at MR in 2017 was Rufous Hummingbird.

The single-morning area search surveys at CC and SKH were conducted to provide an initial species list, and did not provide data for indices of relative abundance. However, general comments on the abundance of regional special status species include good populations (i.e., >5 pairs) of Willow Flycatcher and Yellow-breasted Chat at SKH, and Purple Finch and Willow Flycatcher at CC.

#### ***Wild Turkey Population at Bald Hill Farm***

There were 36 detections of Wild Turkeys on point count surveys at BHF in 2017. This is fewer than in 2016 (73 detections), but the relative abundance is higher based on reduced survey effort in 2017 (Figure 3). Further, this continues an annual increasing trend since 2015. A flock of approximately 130 birds was observed incidentally in March, 2017 near the office.

#### ***Oregon Vesper Sparrow Population at Bald Hill Farm***

There were 13 detections of Oregon Vesper Sparrow on point count surveys at BHF in 2017. This was a substantial drop in relative abundance from the previous two years (Figure 3).

The results of Oregon Vesper Sparrow research at BHF and other sites in the Corvallis area in 2017 are provided in a separate report (Altman 2017). The most noteworthy result for BHF is the significant drop in the number of pairs to 14-15 from 20-25 in previous years. For the regional project, which includes BHF, the most noteworthy results included:

- average apparent nest success and fledge rates
- low egg hatchability, Mayfield estimates of nest success, and egg/nestling daily survival rates
- moderate to high annual survivorship, both of birds banded as adults and as hatch-year birds
- high between season site fidelity of both adults and natal dispersers
- one example each of between and within season dispersal out to approximately 12 miles

## **Discussion**

The results are generally consistent with our knowledge of bird populations in Willamette Valley grassland, oak, riparian forest, conifer-hardwood forest, and shrubland habitats. The results also strongly support the significance of the properties for special status species, especially BHF.

### ***Special Status Species at Bald Hill Farm***

Prior to 2017, Western Meadowlark was not considered to be breeding on BHF. The southern and western parts of BHF are large enough to support 1-2 pairs of meadowlarks, and the habitat conditions appear to be suitable for nesting. However, there is limited habitat suitability in the immediate landscape to support a larger population, and BHF appeared to get only occasional prospecting or displaced pairs or non-breeding birds. For example, a pair was seen in 2014 on two occasions, a single individual once in 2015, and a pair once in 2016. In 2017, a pair was first seen in late June, likely displaced from elsewhere. They were seen subsequently on a couple other visits in the same area and exhibiting vocal and flight behaviors that typically indicate nesting (i.e., repeated alarm calls and narrow circling flights as I walked through the same area on multiple visits).

Acorn Woodpecker did not have a breeding population on BHF until 2016. There were four detections in the easternmost part of the property in 2015 (point 22) in snags adjacent to riparian forest, but they were not believed to be nesting (they may have had granaries in the snags). In 2016 there was a significant breeding population (19 detections at 11 different point count stations), likely as a direct result of oak habitat restoration that changed mostly mixed hardwood-conifer forest and oak forest to oak woodland and oak savannah. A couple pairs were noted in several locations and it is estimated that there were 6-8 breeding pairs. These are likely birds originating from a breeding population at the Benton County Fairgrounds less than one mile away. In 2017, although there was reduced survey effort, the relative abundance of Acorn Woodpecker continued to slightly increase (Figure 3), and now they are a regular feature of the avifauna in multiple areas on BHF.

The absence of Grasshopper Sparrow at BHF in 2016 and 2017 is noteworthy. In 2014, there were 2-3 singing males throughout the breeding season in the grassland pastures between Newgate Road and the large, lone oak tree to the north. However, in 2015 there was only a single singing male in the beginning of the breeding season that did not persist throughout the breeding season. This species was first detected in the Willamette Valley in 1970, and the current population estimate for the Willamette Valley is 200-250 birds. They are known to be somewhat irruptive, and may have not been successful enough in 2014 to maintain a population since the habitat did not appear to change.

Five other special status species, Chipping Sparrow, Purple Finch, Western Bluebird, Slender-billed White-breasted Nuthatch, and Willow Flycatcher have small populations (i.e., 2-5 pairs) that are within the expectations of habitat available at BHF. The first four are strong oak associates, but Willow Flycatcher is associated with shrubland habitat and shrubby riparian forest edges. It is likely that the Willow Flycatcher population will be reduced in future years with the conversion of shrubland habitat to wet prairie.

One other special status species, Rufous Hummingbird, has had few and irregular detections at BHF, but has likely been a breeding species. It is often associated with shrubland habitats, and

like Willow Flycatcher is experiencing a reduction in the amount of suitable habitat with restoration from shrubland to wet prairie. However, Rufous Hummingbird also finds suitable habitat in the forest and riparian habitats with a shrubby understory.

There has only been one detection of both Purple Martin and Yellow-breasted Chat at BHF, both in 2017. The former was a flyover, and the latter was in shrubland and riparian habitat in the southern part of the property. Both were likely not nesting on the property due to a singular detection despite numerous visits to BHF. Purple Martin has the potential to be a breeding species in the future in cavities of older oak trees and conifer snags in a savannah setting.

The only regional special status species yet to be documented to occur on BHF are Common Nighthawk, Dusky Canada Goose, Short-eared Owl, and Streaked Horned Lark. Of these, the one with the greatest potential to occur is Common Nighthawk. It is a breeding species in the Coast Range and foothills of the Willamette Valley that is a ground-nester associated with sparsely vegetated ground in forest openings, balds/ridges, and roadsides for nesting. However, it is an aerial insectivore covering large areas and would be most likely to be seen at dusk or dawn when it forages. A volunteer-based evening survey is recommended to try to detect this species (see Recommendations).

Streaked Horned Lark, a Federally Threatened subspecies, is unlikely to occur on BHF due to both site and landscape habitat conditions. The open landscape of the southern part of the property is potentially large enough, but it is embedded in a foothills landscape of mostly forest and other unsuitable habitat that is distant from the nearest population (approximately five miles away). Further, the vegetation is too tall and dense, and in particular deficient in the amounts of bare/sparsely-vegetated ground cover (at least 20%).

A singing male Olive-sided Flycatcher, a new species and a continental special status species, was detected on several visits in restored open oak woodland habitat near the office at BHF. It is unknown if it was mated or if nesting occurred, but the frequency of the singing from a mostly singular location suggests soliciting for a mate rather than a mated bird. This species is more typical of higher elevation forests, but has been occurring more in lower elevation foothill forests in recent years.

### ***Courtney Creek and Santiam-Kingston Hills***

The diversity of habitat types at the two newest GLT properties provide opportunities for a diverse avifauna, including special status species. In addition to the seven special status species detected at CC and the five at SKH, there are several others that have a high likelihood of occurring and were just missed during a one-morning visit, or have the potential of occurring based on suitable habitat and populations nearby. Special status species likely missed at SKH include Chipping Sparrow, Purple Finch, Rufous Hummingbird, and White-breasted Nuthatch. Special status species possible at CC include Chipping Sparrow and White-breasted Nuthatch, and at SKH Acorn Woodpecker, Grasshopper Sparrow, and Oregon Vesper Sparrow. The latter two have had populations in the past at nearby Kingston Prairie. Further, the upland grassland in the southeastern part of SKH could provide habitat for both Grasshopper Sparrow and Oregon Vesper Sparrow if taken out of agriculture and managed for prairie values targeting conditions for these two species (see Recommendations).

In addition to the regional special status species, Olive-sided Flycatcher, a continental special status species, was documented as nesting at SKH. This represents an atypical lower elevation nesting as described above.

### ***Wild Turkey Population at Bald Hill Farm***

The drop in detections of Wild Turkeys at BHF in 2017 from 2016 is likely not reflective of the population but of survey effort. In 2016, surveys were conducted at 26 stations: whereas only 12 stations were surveyed in 2017. Thus, there was a >50 percent drop in survey effort in 2017, which would prorate to a similar number of detections with 2017 if there had been a similar survey effort.

Of greater note in terms of the Wild Turkey population is the flock of approximately 130 birds in March, 2017. It is likely that some birds were missed or present elsewhere on BHF indicating that a population of approximately 150 birds are regularly using BHF.

There has been no indication yet of negative effects of the Wild Turkey flock on depredation of Oregon Vesper Sparrow nests that have been monitored over the last few years (i.e., approximately 15 nests). Wild Turkeys are opportunistic omnivores that don't use a search image and seek out specific food resources, but take advantage of what is available in front of them as they traverse the landscape. As the Wild Turkey population increases there likely has been or will be some depredation of Oregon Vesper Sparrow nests which will only be known through increased nest monitoring efforts.

### ***Oregon Vesper Sparrow Population at Bald Hill Farm***

The Oregon Vesper Sparrow population at BHF in 2017 dropped approximately 30% from the past few years from 20-25 pairs to 14-15 pairs. The potential reason(s) for this is unknown, but seems most likely associated with recruitment of new birds or reduction in suitable habitat from absence of grazing.

Survivorship did not appear to be a factor in the population decline based on return rates of birds banded as adults or juveniles which was considered average or even above average (Altman 2017). With annual mortality, the filling in of a breeding population must come from locally-bred first-year birds or recruitment from outside the site. Since all adults were banded in 2106, but only a few of the nestlings, it could be that the reproduction at BHF in 2016 did not provide enough young to fill those territories in 2017. Of the young that returned, those rates were similar to other studies, so new recruitment from within could have been a deficiency in maintaining the population.

The extent to which the BHF population typically receives recruitment from outside to maintain its stability is unknown at this time. However, the dispersal events of two birds banded at BHF in 2016 and breeding in 2017 at other sites suggests that some level of dispersal occurs among populations and this could have been a deficiency in 2017.

The potential for reduction of suitable habitat being an issue in the population decline is based on the spatial changes in the location of breeding pairs, and the habitat conditions associated with

those areas. The primary changes in habitat were 1) the lack of grazing and the subsequent increase in the height and density of the vegetation in Fields 5-8, 2) the absence of fall mowing in the southeast part of Field 3, and 3) the reduction in vegetation height and density in the prairie restoration in Field 3. There were fewer pairs of Oregon Vesper Sparrow in the first two situations and more pairs in the last one.

In the Fields 5-8 example, there was a drop from 6-8 pairs to 2-3 pairs. There was a wet spring in 2017 and the vegetation was tall and dense through the early nesting season. The initial grazing in these fields did not occur till June 7, although this late date appeared to be more about grazing rotation timing than the degree of wetness and saturation of the fields. In most of April the fields were still very soggy but by the first of May they appeared to be dry enough for grazing. However, at that time the cows were in their rotation in other fields that had dried out quicker (e.g., Field 4). They were not moved to Fields 5-8 until early June. Among the 2-3 pairs that did manage to occupy Fields 5-8, two pairs were mostly associated with the drier, upland areas, and one pair occurred mostly on the neighboring property to the south, nesting on BHF but within 20 feet of the fenceline.

In the Field 3 example, there was a drop from 2-3 pairs to no pairs. This area was dense with standing thatch from the previous year. There was one pair of adults both banded in the previous year as nesting birds on BHF, that were only observed in the neighboring grazed property to the west. They were observed up to the fenceline, but never within the BHF property.

In the prairie restoration part of Field 3, there was an increase from 3 pairs to 5 pairs. The increase occurred mostly in the southern half of the restoration where there appeared to be shorter, less dense, and more patchily vegetated conditions, and where all the brush piles remaining from the restoration occurred. The structural diversity provided by the latter is often associated with Oregon Vesper Sparrow occurrence and nesting sites (Altman 2017).

In contrast to the above, there were also declines in the number of pairs in areas where there was no obvious change in vegetative conditions associated with Oregon Vesper Sparrow habitat. This included the northern part of Field 4 along the farm road dropping from 2-4 pairs to 1 pair, Field 8 along the main road from Mulkey Creek up to the office from 2-3 pairs to 1 pair, and in Field 10 at the easternmost edge of the property from 1-2 pairs to no pairs.

### ***Habitat Restoration and Bird Populations at Bald Hill Farm***

Significant habitat restoration is ongoing or completed for BHF to achieve a variety of species and habitat goals (e.g., native prairies, oak savannah, endangered butterfly habitat). The most significant changes relative to bird populations are the opening up of some forested habitats to oak savannah and open woodland conditions, conversion of some shrubland habitats to wet prairie, and the vegetative diversification of some grassland habitats that are being restored to native prairies (Altman 2016).

In 2017, there were three point count stations with a change in habitat type based on habitat restoration. Two of the three stations (i.e., stations 16 and 17) were changed from shrubland to wet prairie, and station 15 was changed from shrubland to oak woodland open. The short-term and small sample size of data resulting from these changes precludes any statistical analyses,



however, there were some noteworthy changes in species relative abundance. Among the six most abundant species from 2015-2016, four remained (Bewick's Wren, Song Sparrow, Spotted Towhee, and Western Wood-pewee) and two dropped out (Black-capped Chickadee and Common Yellowthroat). The two new species in 2017 were California Quail and House Wren. In particular California Quail were the most abundant species at these three stations in 2017. They were most often associated with the cover provided by numerous brush piles remaining from the restoration.

### ***Caveats***

Three morning visits during the breeding season at BHF and MR, and a single one-morning visit at CC and SKH is a limited seasonal sampling of the bird community, and it is likely that some breeding species were missed, particularly at CC and SKH. This is especially true for species active at other times of the day such as owls, Band-tailed Pigeon, or Common Nighthawk (see Recommendations). There are likely few breeding species missed at BHF because of three years of surveys, numerous point count stations, and incidental observations during Oregon Vesper Sparrow research. However, some examples of breeding species potentially missed at other sites with less effort include Common Raven, Hammonds Flycatcher, Mountain Quail, and Red Crossbill at MR; American Crow, Bushtit, Dark-eyed Junco, Great-blue Heron, Orange-crowned Warbler, and Red-shouldered Hawk at CC; and Brewer's Blackbird, Bullock's Oriole, Cassin's Vireo, Downy Woodpecker, and Yellow Warbler at SKH. Additionally, many other species likely occur on all the properties during migration and wintering periods such as Fox Sparrow, Lincoln's Sparrow, Northern Shrike, and Varied Thrush.

Bird species abundance in habitat types with only one or two point count stations and three visits is subject to high variability from such a small sample size and may not be reflective of the actual breeding population. In 2017 with reduced survey effort at BHF, this was the case for all the habitat types.

Although only detections within the habitat type were used in the analyses, there was high variability of the amount of the habitat type available at each point count station. Many stations do not have the habitat type out to 100 meters, and some not even to 50 meters. Thus, comparative relative abundance results should be viewed with some caution given that there was often less than 100 percent coverage of the habitat type within the distances of 50 or 100 meters. Further, this could have affected occurrence for those species with area requirements larger than the amount of habitat at the point count station.

### **Recommendations**

*Repeat bird surveys for 2 years in 3-5 year intervals in areas where habitat management or restoration has been initiated.* Changes in bird populations will occur as restoration progresses through various stages. In many instances, one of the desired outcomes of the habitat management is enhanced bird populations of special status or priority species, which will need to be assessed through bird surveys. Two years of bird surveys are desirable to reduce annual variability biases that can occur with one year of data (e.g., weather). Repeating the bird surveys every 3-5 years post-restoration will allow for some "settling" of the vegetation and bird community.

*Conduct volunteer-based evening and nocturnal surveys to determine the presence of breeding owl species and Common Nighthawk and wintering Short-eared Owl.* These efforts could be part of community outreach events with a focus on owling and night wildlife, or be done regularly with a volunteer or volunteer group for more complete coverage. Additionally, daytime winter birding with a volunteer or group event could be done to complement the breeding season surveys and further describe avian use of the sites. Common Nighthawk and Short-eared Owl are ODFW Strategy Species for the Willamette Valley (ODFW 2016).

*Avoid/minimize land use and management actions during the landbird nesting season (i.e., April 15 – July 15).* This is one of the basic tenets of landbird conservation - that reproduction can be negatively affected by land use or management during the breeding season. In many cases, these guidelines can be followed (i.e., the actions are not time-sensitive). However, these dates often conflict with field management (e.g., mowing, haying) or restoration (e.g., spraying, forest management). There are some instances where conflict may not be avoidable for desired results (e.g., spraying invasive species before going to seed), but it is important to discuss how essential the conflicting management actions are, and if there are reasonable alternatives. One alternative when conflicting management actions are deemed necessary is to conduct bird monitoring prior to the actions to determine if priority species are nesting. If so, sometimes spatial modifications to the management can be implemented.

*Conduct habitat management at Bald Hill Farm to potentially expand the Oregon Vesper Sparrow population.* Ongoing habitat restoration on the northern part of the property to create oak savannah and open oak woodland from closed woodland and forest is providing some opportunities for expansion of the Oregon Vesper Sparrow population (Altman 2016). There are additional opportunities in the upland prairie from Newgate Road to Rosecrest Drive (Field 4), an area where they have been mostly absent as a breeding bird. This area has been designated as pastureland in the management plan, and could become more suitable habitat with relatively minor habitat management. Suitable conditions could be achieved with targeted light to moderate late winter or early spring grazing (e.g., Feb-April) that reduces the height of the vegetation to approximately 6-12 inches by May 1. Additional management to enhance suitability would be to create some sparsely vegetated/bare patches throughout the area via spraying or mechanically with light disking or scraping during early April, and the planting of a few scattered native shrubs (e.g., *Rosa*) or oak trees in draws or wetter microclimates to add a little structural diversity.

*Coordinate cattle grazing to ensure cows are moved on a schedule of creating and maintaining desired conditions for Oregon Vesper Sparrow habitat at Bald Hill Farm.* The situation in 2017 as described above with a wet spring and a rigid rotation of grazing exemplifies the need to be more adaptive in grazing management. The primary example where habitat conditions for Oregon Vesper Sparrow deteriorated (vegetation too tall and dense) due to the absence of grazing was in fields 5-8 with a drop from 6-8 pairs in 2016 to 2-3 pairs in 2017. Addressing this issue would require greater flexibility in grazing rotations targeting habitat conditions for Oregon Vesper Sparrow.

*Manage upland grassland at Santiam-Kingston Hills for Oregon Vesper Sparrow.* The southeastern part of the property is currently in agriculture, but could provide habitat for a small

population of Oregon Vesper Sparrow (4-5 pairs) with prairie management and targeted conditions. The latter includes a relatively low-statured and structurally diverse herbaceous community, patchy areas of sparse vegetation (i.e., 5-15% bare ground), and scattered shrubs and/or trees (i.e., <15% cover). Although recent surveys have not been conducted, there were scattered detections of Oregon Vesper Sparrow in the past near SKH, including Kingston Prairie, which could facilitate potential recruitment of birds to SKH.

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Table 1. Relative abundance of breeding birds in several habitat types at Bald Hill Farm, May-June, 2017. <sup>1</sup>

Habitat Type	Point Count Stations	Relative Abundance <sup>2</sup>	
		< 50 meters	< 100 meters
Wet Prairie	16,17	2.50	7.17
Upland Prairie	5,7	4.17	12.00
Oak Savannah	6,12	2.17	7.00
Oak Woodland Open	9,10,15	3.44	8.89
Oak Woodland Closed	11,27	3.00	11.67
Hardwood-Conifer Forest	28	2.00	9.33

<sup>1</sup> Detections had to be within the habitat or foraging immediately above the habitat if in flight. Flyovers that were direct flights above the habitat were not considered as associated with the habitat and were not included in these results.

<sup>2</sup> Relative abundance is the mean number of birds detected per 5-minute point count within a 50 or 100 meter radius of each point count station.

Table 2. Relative abundance of regularly occurring breeding bird species in several habitat types at Bald Hill Farm, May-June, 2017. <sup>1</sup>

Species	Relative Abundance <sup>2</sup>	
	< 50 meters	< 100 meters
Wet Prairie (n=2)		
Song Sparrow	0.50	0.83
California Quail	0.50	0.83
Spotted Towhee	0.50	0.83
Common Yellowthroat	0.33	0.50
Bewick's Wren	0.17	0.67
Upland Prairie (n=2)		
Wild Turkey	0.00	4.67
Savannah Sparrow	0.83	1.17
Spotted Towhee	0.50	0.67
Violet-Green Swallow	0.50	0.67
White-breasted Nuthatch	0.50	0.50
Western Scrub-jay	0.17	0.50
Oak Savannah (n=2)		
Mourning Dove	0.67	0.67
Spotted Towhee	0.17	1.00
White-crowned Sparrow	0.33	0.67
Western Wood-pewee	0.00	0.67
Lazuli Bunting	0.17	0.33
Lesser Goldfinch	0.17	0.33
White-breasted Nuthatch	0.17	0.33
Oak Woodland Open (n=3)		
House Wren	0.33	1.11

California Quail	0.56	0.67
Western Wood-pewee	0.22	0.89
Spotted Towhee	0.33	0.56
Black-capped Chickadee	0.33	0.33
Dark-eyed Junco	0.22	0.44
Oak Woodland Closed (n=2)		
House Wren	0.83	2.00
American Robin	0.17	1.33
Acorn Woodpecker	0.33	1.00
White-crowned Sparrow	0.17	0.83
Dark-eyed Junco	0.33	0.67
Spotted Towhee	0.00	1.00
Hardwood-Conifer Forest (n=1)		
Swainson's Thrush	0.67	1.33
Western Wood-pewee	0.33	1.00
Spotted Towhee	0.33	1.00
Purple Finch	0.33	0.67
Brown Creeper	0.33	0.67

<sup>1</sup> Detections had to be within the habitat or foraging immediately above the habitat if in flight. Flyovers that were direct flights above the habitat were not considered as associated with the habitat and were not included in these results.

<sup>2</sup> Relative abundance is the mean number of birds detected per 5-minute point count within a 50-meter radius (first column) or 100-meter radius (second column) of each point count station. n = total number of point count stations in this habitat type.

Table 3. Relative abundance of regularly occurring breeding bird species in hardwood-conifer forest at Mulkey Ridge, May-June, 2017. <sup>1</sup>

Species	Relative Abundance <sup>2</sup>	
	< 50 meters	< 100 meters
Pacific Wren	0.44	0.67
Chestnut-backed Chickadee	0.33	0.78
American Robin	0.22	0.67
Orange-crowned Warbler	0.22	0.56
Dark-eyed Junco	0.22	0.56
Brown Creeper	0.22	0.56
Swainson's Thrush	0.33	0.44
Steller's Jay	0.17	0.56

<sup>1</sup> Detections had to be within the habitat or foraging immediately above the habitat if in flight. Flyovers that were direct flights above the habitat were not considered as associated with the habitat and were not included in these results.

<sup>2</sup> Relative abundance is the mean number of birds detected per 5-minute point count within a 50-meter radius (first column) or 100-meter radius (second column) of each point count station. n = total number of point count stations in this habitat type.

Table 4. Species detected during the 2017 breeding season at Bald Hill Farm, Mulkey Ridge, Courtney Creek, and Santiam-Kingston Hills with “special status” as designated by regional state and federal agencies.

Species	Sites <sup>1</sup> (previous years only)	USFWS Birds of Conservation Concern <sup>2</sup>	ODFW Strategy Species <sup>3</sup>
Acorn Woodpecker	BHF		X
Canada Goose (Dusky)			X
Chipping Sparrow	BHF, (MR)		X
Common Nighthawk			X
Grasshopper Sparrow	(BHF)		X
Horned Lark (Streaked)		X	X
Purple Finch	BHF, (MR), CC	X	
Purple Martin	BHF, CC, SKH		X
Rufous Hummingbird	BHF, MR, CC	X	
Short-eared Owl			X
Vesper Sparrow (Oregon)	BHF	X	X
White-breasted Nuthatch (Slender-billed)	BHF		X
Willow Flycatcher (Little)	(BHF), CC, SKH	X	X
Western Bluebird	BHF, CC, SKH		X
Western Meadowlark	BHF, CC, SKH		X
Yellow-breasted Chat	BHF, CC, SKH		X

<sup>1</sup> BHF = Bald Hill Farm; MR = Mulkey Ridge; CC = Courtney Creek; SKH = Santiam-Kingston Hills

<sup>2</sup> USFWS (2008)

<sup>3</sup> ODFW (2016); only included species that are listed for the Willamette Valley ecoregion

Figure 1. Location of point count stations at Bald Hill Farm.

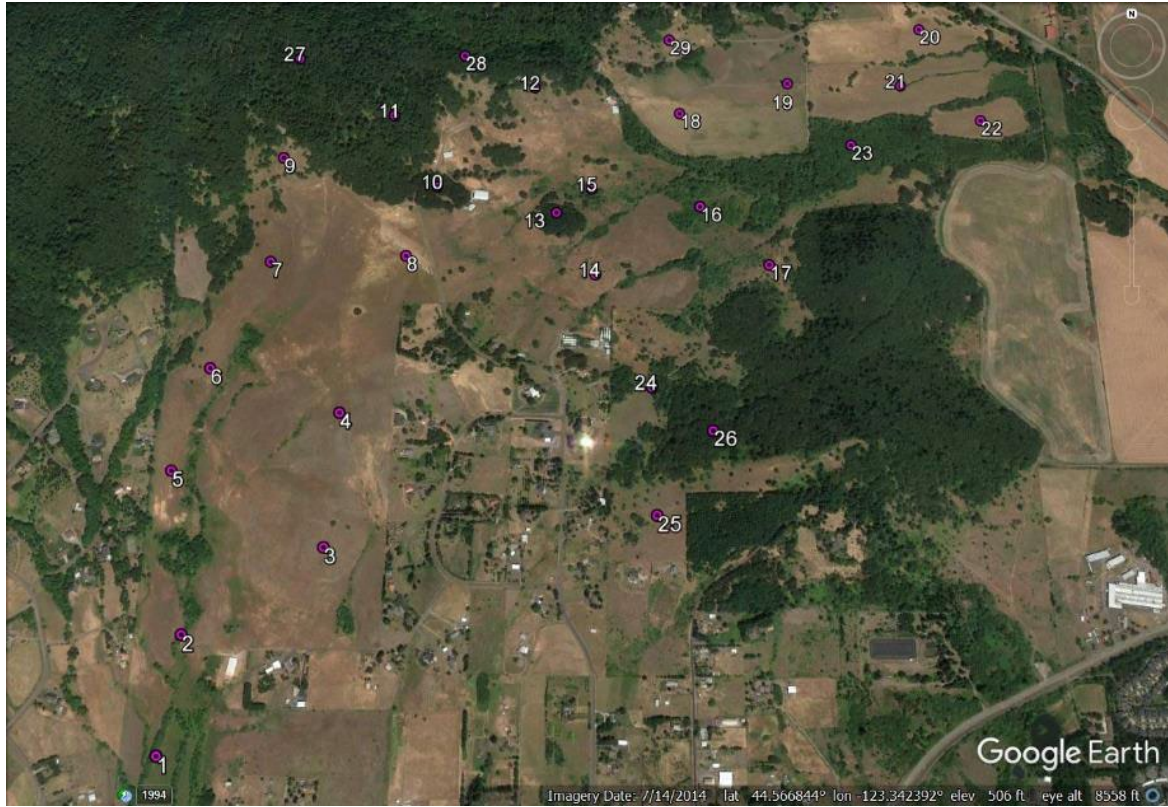
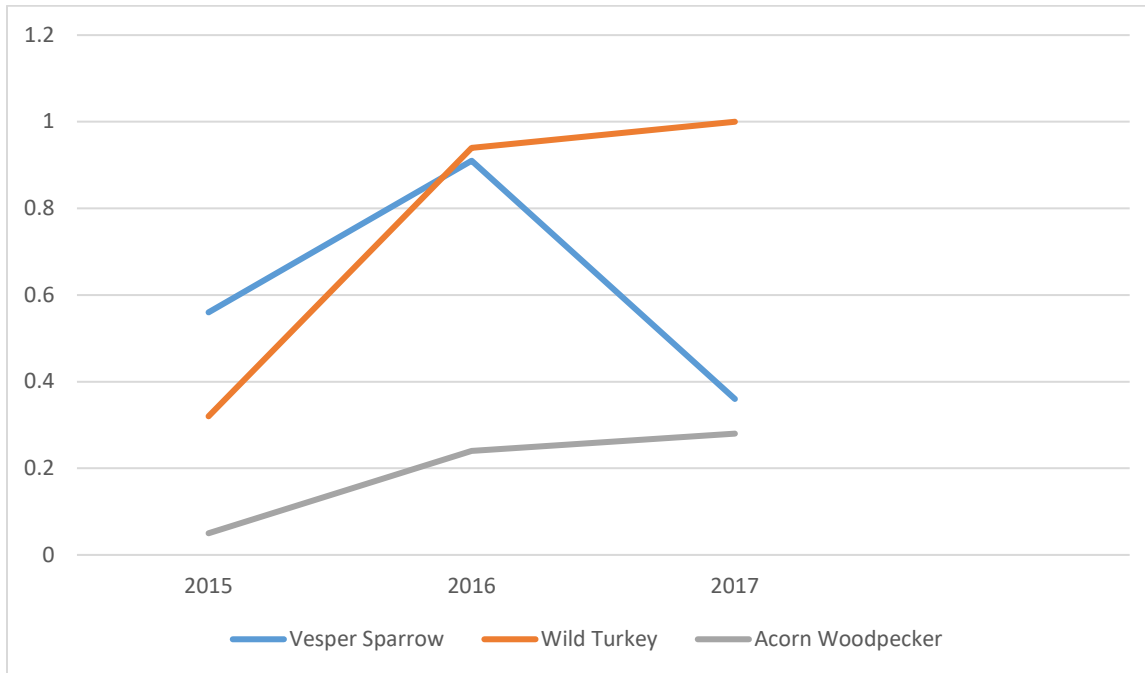


Figure 2. Location of point count stations at Mulkey Ridge.



Figure 3. Relative abundance of Acorn Woodpecker, Oregon Vesper Sparrow, and Wild Turkey on point count surveys at Bald Hill Farm 2015-2017.



Appendix A. Coordinates, elevation, and habitat type for point count stations at Bald Hill Farm.

Point Number	Latitude	Longitude	Elevation (feet)	Habitat Type
5	44.56529	-123.35547	475	Upland Prairie
6	44.56765	-123.35450	467	Oak Savannah
7	44.57020	-123.35278	528	Upland Prairie
9	44.57272	-123.35250	640	Oak Woodland Open
10	44.57217	-123.34744	552	Oak Woodland Open
11	44.57394	-123.34894	626	Oak Woodland Closed
12	44.57480	-123.34420	536	Oak Savannah
15	44.57221	-123.34225	437	Shrubland
16	44.57169	-123.33862	389	Shrubland
17	44.57029	-123.33697	402	Shrubland
27	44.57509	-123.35202	819	Oak Woodland Closed
28	44.57562	-123.34663	569	Conifer-Hardwood Forest

Appendix B. Coordinates, elevation, and habitat type for point count stations at Mulkey Ridge.

Point Number	Latitude	Longitude	Elevation	Habitat Type
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1	44.57254	-123.35717	751	Mixed Conifer-Hardwood Forest
2	44.57065	-123.35932	639	Mixed Conifer-Hardwood Forest
3	44.57503	-123.36120	865	Mixed Conifer-Hardwood Forest
4	44.57261	-123.36110	700	Mixed Conifer-Hardwood Forest
5	44.57342	-123.36485	823	Mixed Conifer-Hardwood Forest
6	44.56948	-123.36250	596	Mixed Conifer-Hardwood Forest

Appendix C. Cumulative list of species detected during breeding bird surveys and incidental observations at Bald Hill Farm (2015-2017), Lupine Meadows (2004-2006 and 2015), Horseshoe Lake-Carnegie J Property (2016), Mulkey Ridge (2014-2015 and 2017), Courtney Creek (2017), and Santiam-Kingston Hills (2017).

Species	Bald Hill Farm	Lupine Meadows	Mulkey Ridge	Carnegie	Courtney Creek	Santiam-Kingston
Acorn Woodpecker	X*	X		O		
American Crow	X*	X	X*	O		X
American Goldfinch	X*	X	X	X	X	X
American Kestrel	X	X		O		X
American Pipit		X				
American Robin	X*	X	X*	X	X	X
Anna's Hummingbird	X*	X	O	O		
Band-tailed Pigeon	O	X	O		X	X
Barn Swallow	X*	X		O	X	X
Belted Kingfisher				X		
Bewick's Wren	X*	X	X	X	X	X
Black-capped Chickadee	X*	X	X*	X	X	X
Black-headed Grosbeak	X*	X	X*	X	X	X
Black-throated Gray Warbler	X*	X	X*	X	X	X
Brewers Blackbird	X	X		O	X	
Brown Creeper	X*	X	X*	X	X	X
Brown-headed Cowbird	X*	X	X	X	X	X
Bullock's Oriole	X*	X			X	
Bushtit	X	X	O	X		X
California Quail	X	X		O	X	X
Canada Goose		X				
Cassin's Vireo	X	X	X			
Cedar Waxwing	X*	X	X	X	X	X
Chestnut-backed Chickadee	X		X*			X
Chipping Sparrow	X*	X	X	X		
Cliff Swallow	X*					X

Common Raven	X*	X			X	X
Common Yellowthroat	X*	X		X	X	X
Cooper's Hawk	O	X	X			
Dark-eyed Junco	X*	X	X*			X
Downy Woodpecker	X*	X	X*	X	X	
Dusky Flycatcher	X					
Eurasian Collared-dove	X*	X		O	X	
European Starling	X*	X		O	X	
Evening Grosbeak	X*	X	X*			
Golden-crowned Kinglet	X		X*			
Golden-crowned Sparrow	O					
Grasshopper Sparrow	O					
Gray Jay			X			
Great-blue Heron	X			X		
Great-horned Owl	O	X	O			X
Hairy Woodpecker	X*		X*	X	X	
Hammonds Flycatcher	X				X	
Hermit Thrush		X				
Hermit Warbler	X		X*			
House Finch	X*	X				
House Sparrow		X				
House Wren	X*	X	X	X	X	X
Hutton's Vireo	X	X	X*			
Killdeer	X*	X		X		
Lazuli Bunting	X*	X		X	X	X
Lesser Goldfinch	X*	X			X	
MacGillivray's Warbler	X		X*		X	X
Mountain Quail	X					
Mourning Dove	X*	X	X*	X	X	X
Nashville Warbler	X					
Northern Harrier	X					
Northern Flicker	X*	X	X*	X	X	X
Olive-sided Flycatcher	X*		O			X
Orange-crowned Warbler	X*	X	X*	X		X
Osprey				O		
Pacific Wren	X*		X*		X	X
Pacific-slope Flycatcher	X*	X	X*	X	X	X
Pileated Woodpecker	X*		X*	X	X	X
Pine Siskin	X	X	O			
Purple Finch	X*	X	X		X	
Purple Martin	O				X	X
Red Crossbill				O		
Red-breasted Sapsucker	X	X	X*	X	X	X
Red-breasted Nuthatch	X	X	X*	X		X
Red-shouldered Hawk	X					
Red-tailed Hawk	X*	X	X*	X		X
Red-winged Blackbird	X*	X		X	X	
Ring-necked Pheasant		X				
Rock Dove		X				

Ruby-crowned Kinglet	X	X				
Rufous Hummingbird	X*	X	X*	X	X	
Savannah Sparrow	X*	X		X		X
Sharp-shinned Hawk	X		O			
Song Sparrow	X*	X	O	X	X	X
Spotted Sandpiper				X		
Spotted Towhee	X*	X	X*	X	X	X
Steller's Jay	X*	X	X*	X	X	X
Swainson's Thrush	X*	X	X*	X	X	X
Townsend's Warbler	X					
Tree Swallow	X*	X		X	X	X
Turkey Vulture	X	X		O		
Vaux's Swift	O	X				
Vesper Sparrow (Oregon)	X*	X				
Violet-green Swallow	X*	X			X	X
Warbling Vireo	X*	X	X	X	X	X
Western Bluebird	X*	X				
Western Kingbird	O					
Western Meadowlark	O	X			X	X
Western Scrub-jay	X*	X		X	X	X
Western Tanager	X*	X	X*	X	X	X
Western Wood-pewee	X*	X	X*	X	X	X
White-breasted Nuthatch (Slender-billed)	X*			X		
White-crowned Sparrow	X*	X		X	X	X
Wild Turkey	X*	X	X			
Willow Flycatcher (Little)	X	X		X	X	X
Wilson's Warbler	X*	X	X*	X	X	X
Wood Duck				X		
Wrentit					X	
Yellow Warbler	X*	X		X		
Yellow-breasted Chat	O	X			X	X
Yellow-rumped Warbler	X	X				

X = Species recorded during any year of surveying.

O = Species only detected incidentally.

\* = Species detected during 2017 surveys; note that CC and SKH were all 2017 detections.