St. Martin's Habitat Conservation Plan

for the threatened Yelm subspecies of the Mazama pocket gopher (*Thomomys mazama yelmensis*) in Lacey, Washington

Prepared for:
St. Martin's Abbey
5000 Abbey Way SE
Lacey, Washington 98503

Prepared by:
Krippner Consulting, LLC
PO Box 853
Anacortes, WA 98221

September 2021

TABLE OF CONTENTS

List of Figures

List of Tables

LIST OF ACROYNMS, ABBREVIATIONS, AND FREQUENTLY USED TERMS

Applicant	The legal entity applying for an Incidental Take Permit. The Applicant for this project and owner of the subject property is St. Martin's Abbey.
BMP	Best Management Practice
CFR	Code of Federal Regulations
Changed Circumstances	Changes in circumstances affecting a species or geographic area covered by a conservation plan or conservation agreement that can reasonably be anticipated by plan or agreement among developers and USFWS, and that can be planned for (e.g., the listing of new species, or a fire or other natural catastrophic event in areas prone to such events).
CNLM	Center for Natural Lands Management
Commission	Washington Fish and Wildlife Commission. The Washington Fish and Wildlife Commission's primary role is to establish policy and direction for fish and wildlife species and their habitats in Washington and monitor WDFW's implementation of the goals, policies, and objectives established by the Commission.
Covered Activities	Activities that a permittee will conduct for which take is authorized in an ESA section 10 permit. The Covered Activities include all actions in the plan area that are 1) likely to result in incidental take, 2) are reasonably certain to occur over the life of the permit, and 3) are under the Applicant's control.
Covered Species	Species for which incidental take is authorized in an incidental take permit and is adequately covered in a habitat conservation plan. The proposed covered species that is the subject of this habitat conservation plan is the Yelm subspecies of the Mazama pocket gopher (*Thomomys mazama yelmensis*), also referred to as the Yelm pocket gopher.
EA	(NEPA definition) Environmental Assessment. A concise public document, prepared in compliance with NEPA, that briefly discusses the purpose and need for an action, alternatives to such action, and provides sufficient evidence and analysis of impacts to determine whether to prepare an Environmental Impact Statement or Finding of No Significant Impact (40 CFR 1508.9).
EPA	Environmental Protection Agency
ESA	The Endangered Species Act of 1973, as amended, (16 U.S.C. 1531-1543; 87 Stat 884) (50 CFR 17.3).

FR	The Federal Register is the official journal of the Federal government that contains most routine publications and public notices of government agencies. The Federal Register is compiled by the Office of the Federal Register (within the National Archives and Records Administration) and is printed by the Government Printing Office. Section 10(c) of the ESA requires each application for an exception or permit under Section 10 to be published in the Federal Register.
Functional-Acre	Functional-acre is a term used only at the project site to evaluate habitat impacts because vegetation cover type and gopher occupancy on the project site varies, and some impacts are only temporary or would result in habitat changes rather than loss. Different multipliers based on habitat quality and impact type are used to calculate the maximum number of functional-acres to be impacted during the 20-year permit term. Multipliers are less than one when the habitat loss or change anticipated would be temporary or substantially less than the value of high functioning habitat secured at the conservation site for this loss or change. Multipliers used for different habitat and impact types in this HCP are provided in Table 4 and maximum functional-acre impact calculations are provided in Table 5. Actual acres of mitigation land from the Leitner Prairie conservation site were purchased to compensate for the maximum functional-acre impacts anticipated at the project site.
Harm	Defined by USFWS to mean "an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering" (50 CFR 17.3).
High quality native grassland	Areas with at least 30% cover of herbaceous vegetation, which include native annual and perennial grasses and forbs, less than 25% shrub cover, and less than 5% tree cover.
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit. A permit issued under section 10(a)(1)(B) of the ESA to a non-Federal party undertaking an otherwise lawful project that might result in the take of an endangered or threatened species. Application for an incidental take permit is subject to certain requirements, including preparation by the permit applicant of a conservation plan, generally known as a "Habitat Conservation Plan" or "HCP."
NEPA	The National Environmental Policy Act of 1969, as amended (42 U.S.C. § 4321 et seq.). A Federal statute that requires Federal agencies to consider the environmental impacts of their discretionary proposed

	actions, and for significant environmental actions seeking public input on decisions and implementation of Federal actions.
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
Permit Area	The geographic area where the incidental take permit applies. It includes the area under the control of the applicant/permittee(s) where covered activities will occur. The permit area must be delineated in the permit and be included within the plan area of the HCP.
Plan Area	The specific geographic area where covered activities described in the HCP, including mitigation, may occur. The plan area must be identified in the HCP. Plan areas must include at least the permit area but often include lands outside of the permit area.
RCW	Revised Code of Washington
RPA	Reserve Priority Areas are identified as areas with higher Mazama pocket gopher habitat value and restoration potential identified by USFWS to aid in recovery planning.
Service Area	Service Areas are geographic areas identified by USFWS to recognize possible differences between subpopulations within the range of the Yelm pocket gopher subspecies.
Take	"…to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct" (ESA Section 3)
Threatened species	Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (ESA section 3(20); 50 CFR 424.10(m)).
Unforeseen circumstances	Changes in circumstances affecting a species or geographic area covered by a conservation plan or agreement that could not reasonably have been anticipated by plan or agreement developers and USFWS at the time of the conservation plan's or agreement's negotiation and development, and that result in a substantial and adverse change in the status of the covered species (50 CFR 17.3).
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife

Chapter 1 Introduction

1.1 Overview and Background

St. Martin's Abbey (the Applicant) owns St. Martin's Abbey/Saint Martin's University Campus (the project site) and is proposing the continuation of ongoing redevelopment, and development activities on a 232-acre portion of their property in the City of Lacey, Washington (see Figure 1, "Vicinity Map" and Figure 2, "Aerial View"). This portion of their property is known to be occupied by the Yelm subspecies of Mazama pocket gopher (*Thomomys mazama yelmensis*, hereafter Yelm pocket gopher), a species listed as threatened under the Endangered Species Act of 1973, as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.) (ESA). The Applicant acknowledges that it will not be possible to completely avoid all adverse effects to this species and its habitat while continuing ongoing activities and upgrading facilities. The Applicant prepared this habitat conservation plan (HCP) in partial fulfillment of requirements for an incidental take permit (ITP) from U.S. Fish and Wildlife Service (USFWS) in accordance with Section 10(a)(1)(B) of the ESA. An ITP provides exceptions to the prohibitions against "take" of species listed under the ESA under specified conditions in compliance with applicable laws and regulations.

The Applicant has protected and maintained a variety of forest, shrub, and grassland habitats on their property for nearly 125 years. These habitats support many native plant and animal species and play an important role in Abbey and campus life, enhancing the well-being of many people. Without the Applicant's active, long-term maintenance of open grassland habitat it is unlikely, given the surrounding dense urban development in Lacey, that the Yelm pocket gopher would exist at this location today.

The Applicant anticipates completing project activities including the construction of approximately 5-6 new buildings; replacement of existing buildings; and construction of associated parking lots, sidewalks, storm water facilities, other utilities, landscaping, and athletic fields on the south portion of the project site in an area called the redevelopment area in this HCP (see Figure 2, "Aerial View") over the next 20 years. Site maintenance on the project site will be ongoing throughout the permit term and will include trail, sidewalk, and road maintenance; landscaping; utility work (for pipes, transmission lines, irrigation, lighting, etc.); cemetery activities; continued mowing of existing fields; and forest management (removal of downed or diseased trees, replanting, invasive plant management, etc.).

The 139-acre redevelopment area proposed for this HCP has been reconfigured and reduced substantially in size in order to avoid and minimize impacts to occupied habitat. In the original Master Plan, new buildings and athletic fields would have been located in two of the three open field areas that are now located outside of the redevelopment area. These three open fields, approximately 26 acres total in size, provide habitat for the Yelm pocket gopher in Lacey, Washington.

The Applicant proposes to mitigate for unavoidable impacts to this species and its habitat by purchasing 4 acres of offsetting mitigation from the USFWS-approved Leitner Prairie conservation site that is occupied by Yelm pocket gophers (see Figure 3, "Conservation Site"). The Applicant will also contribute to the conservation of the species by continuing to manage 26 acres of grassland habitat on the project site for the Yelm pocket gopher during the permit term.

Figure 1. Vicinity Map

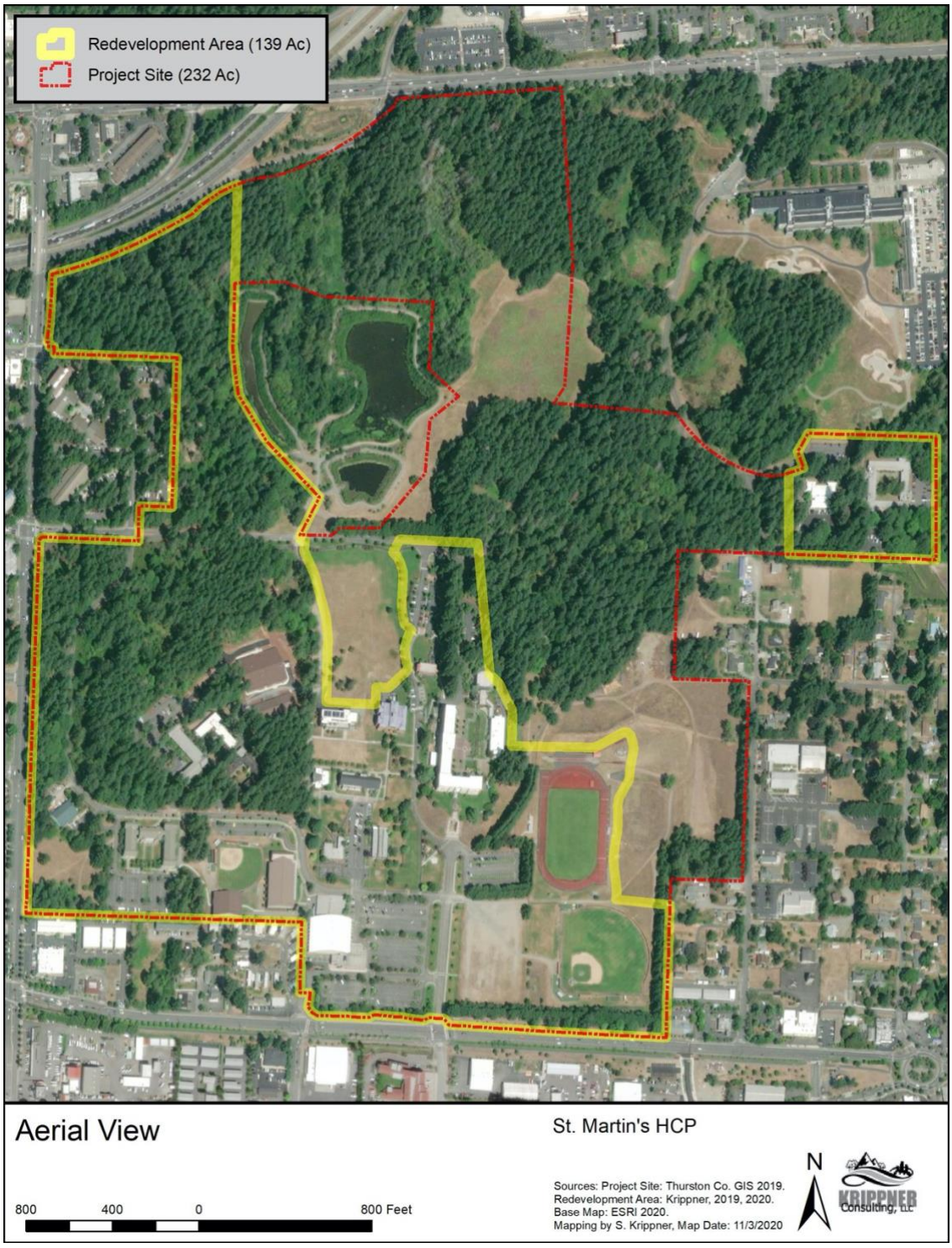

Figure 2. Aerial View

Figure 3. Conservation Site

All anticipated habitat impacts identified inside and outside of the redevelopment area are evaluated and estimated in this HCP. Most habitat impacts will occur within the redevelopment area. A much smaller amount of habitat impacts incidental to infrastructure or recreational facility maintenance or replacement will occur on the project site outside of the redevelopment area. Because vegetation cover type and gopher occupancy on the project site varies, and some impacts are only temporary or would result in habitat changes rather than loss, the value of the habitat losses and changes anticipated were adjusted using different multipliers applied to actual acres of impact. Multipliers were less than one when the habitat loss or change anticipated would be temporary or substantially less than the value of high functioning habitat secured at the conservation site for this loss or change. Multipliers used for different habitat and impact types on the project site were used to estimate functional-acre impacts in this HCP.

Actual acres of mitigation land from the Leitner Prairie conservation site were purchased to compensate for the maximum amount of functional-acre impacts anticipated at the project site. A maximum of 4 functional-acres may be impacted within the 20-year Permit Term. The maximum anticipated 4 functional-acre impacts at the project site have been mitigated with the purchase of 4 actual acres of conservation land at the Leitner Prairie conservation site.

In addition to mitigation at the conservation site, 26 acres of grassland habitat occupied by Yelm pocket gophers will be maintained on the project site by mowing during the 20-year Permit Term to provide Service Area mitigation since the project site is not located in the same Service Area as the conservation site for the Yelm pocket gopher. This additional mitigation measure provides assurance that 26 acres of habitat will continue to be provided for the Yelm pocket gopher in the same Service Area as the impacts during the permit term. Service Areas have been defined by USFWS to recognize possible differences between subpopulations within the range of the Yelm pocket gopher subspecies.

1.2 Purpose and Need

This HCP was prepared to meet statutory, regulatory, and policy requirements for issuance of an ITP. The USFWS may authorize incidental take by a non-Federal entity though the issuance of an ITP in accordance with Section 10(a)(1)(B) of the ESA. As part of the application for an ITP, the Applicant must prepare an HCP. The purposes of this HCP are to:

1. Describe the anticipated impacts of the project and the conservation program on the covered species and its habitat;

2. Establish measures to ensure that any take associated with the project and conservation program will be incidental;

3. Ensure that the impacts of the taking will be minimized and mitigated to the maximum extent practicable, including provisional procedures to deal with changed and unforeseen circumstances;

4. Ensure that mitigation for impacts to listed species will result in a conservation value to the species that fully offsets the impacts;

5. Ensure that adequate funding for implementation of the conservation program will be provided; and

6. Ensure that the take of listed species will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The Applicant needs an ITP because it will not be possible to completely avoid all adverse effects to the threatened Yelm pocket gopher and its habitat while engaging in this otherwise lawful project. Activities that result in take of listed species in the absence of an ITP constitute a violation of the prohibitions in Section 9 of the ESA.

1.3 Permit Duration

The Applicant requests a 20-year renewable ITP. The Applicant believes construction of buildings and redevelopment proposed within the redevelopment area will be completed within this time frame. If the proposed project activities are not complete before the permit expires, the Applicant will renew the permit to ensure coverage for the remaining covered activities. The permit renewal process is described in Section 6.6 of this document.

1.4 Plan Area

The Plan Area includes areas where covered activities described in this HCP will occur (see Figure 2, "Aerial View") and a 4.0-acre portion of the 36-acre Leitner Prairie conservation site where offsetting mitigation will be provided (see Figure 3 "Conservation Site"). Covered activities are anticipated to occur mainly within the 139-acre redevelopment area. Exceptions to this include non-routine utility and infrastructure maintenance and repair and ongoing recreational activities.

1.5 Permit Area

The Permit Area is a subset of the Plan Area and is limited to the 232-acre project site where Covered Activities and resulting incidental take will occur.

The permit area occurs within the plan area and is defined as the geographic area of the impacts of the activities for which the ITP is requested within the plan area (i.e., the Covered Activities). It includes the area under the control of the Applicant where covered activities will occur, mostly within the 139-acre redevelopment area. Maintenance of existing infrastructure and recreational facilities will also occur outside of the redevelopment area within the Applicant's 232-acre project site in Lacey, Washington. Project activities within and outside of the redevelopment area that would affect habitat have been evaluated; estimated in terms of total maximum habitat impacts; and included as covered activities in this HCP.

Open fields on the property outside of the redevelopment area will continue to be maintained, mainly by mowing, to control invasive weeds and woody vegetation. The Applicant does not need take coverage for field maintenance activities because they are covered by the 4(d) Special Rule published for the Mazama pocket gopher on April 9, 2014 (79 FR 68 19795-19796).

1.6 Covered Species

The Applicant proposes to cover the Yelm pocket gopher for incidental take because this species and its habitat are found on the project site.

1.7 Regulatory Framework

1.7.1 Endangered Species Act

The U.S. Congress enacted the ESA to protect plants and animals threatened with or in danger of extinction. The USFWS is responsible for implementing the ESA for those species under its jurisdiction. Except where take is exempted under Section 4(d) of the ESA or approved pursuant to Section 7 or 10, take of any fish or wildlife species that is federally listed as threatened or endangered is prohibited under Section 9 of the ESA.

Section 3 of the ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct" (16 United States Code [USC] § 1532 (19)). The term "harm" is defined to include any act "which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 C.F.R. § 17.3).

Section 10 of the ESA allows non-Federal Applicants, under certain terms and conditions, to incidentally take ESA-listed species that would otherwise be prohibited under Section 9. When a non-Federal landowner or other non-Federal entity wishes to proceed with an activity that is legal in all other respects, but that may result in the incidental taking of a listed species, an ITP is required. Incidental take is defined as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity" (50 CFR § 17.3). Section 10 of the ESA requires that an Applicant submit an HCP as a component of an application for an ITP. The USFWS is required to verify that the HCP complies with the provisions of the ESA [50 CFR 17.22 (b)(2)] prior to issuance of an ITP.

Section 7(a)(2) of the ESA requires each Federal agency to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat (16 USC § 1536 (a)(2)). Issuance of an ITP is a Federal action that requires USFWS consultation in accordance with Section 7.

An HCP submitted in support of a Section 10 permit application must specify (16 U.S.C. § 1539(a)(2)(A)(i)-(iv); 50 C.F.R. § 17.22(b)(1)(iii)):

- The impact that will likely result from such taking;
- What steps the Applicant will take to monitor, minimize, and mitigate such impacts, the funding that will be available to implement such steps, and the procedures to be used to deal with unforeseen circumstances;
- What alternative actions to such taking the Applicant considered and the reasons why such alternatives are not proposed to be utilized; and
- Such other measures that the Director (of USFWS) may require as being necessary or appropriate for purposes of the plan.

To issue an incidental take permit, USFWS must find that (16 U.S.C. § 10(a)(2)(B); 50 C.F.R. §§ 17.22(b)(2) and 17.32(b)(2)):

- The taking will be incidental;
- The Applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such takings;
- The Applicant will ensure that adequate funding for the conservation plan and procedures to deal with unforeseen circumstances will be provided;
- The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;
- The measures, if any, required under paragraph (b)(1)(iii)(D) of this section will be met; and
- (The Director) has received such other assurances as he or she may require that the plan will be implemented.

1.7.2 National Environmental Policy Act

The National Environmental Policy Act of 1969, as amended (NEPA) (42 U.S.C. § 4321 et seq.), requires that Federal agencies analyze and publicly disclose the social, economic and environmental effects associated with "major Federal actions" (§ 4332). The issuance of an ITP under Section 10(a)(1)(B) of the ESA is considered a "major Federal action" and is therefore subject to NEPA compliance. The Applicant understands that USFWS is required to complete a NEPA analysis of the effects of issuing the requested permit on the "human environment", including the incidental take authorized by permit issuance and the effects associated with implementation of an HCP. The results of this analysis will be documented in either an Environmental Action Statement supporting a determination that an action can be categorically excluded from further analysis, an Environmental Assessment (EA) supporting a Finding of No Significant Effect, or an Environmental Impact Statement resulting in a Record of Decision.

1.7.3 National Historic Preservation Act

Section 106 of the National Historic Preservation Act of 1966, as amended (16 USC § 40 et seq.) (NHPA), requires Federal agencies to take into account the effects of their undertakings on properties eligible for inclusion in the National Register of Historic Places. An undertaking is defined as a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency; including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a Federal agency. "Properties" are defined as "cultural resources," which includes prehistoric and historic sites, buildings, and structures that are listed or eligible for listing in the National Register of Historic Places. The issuance of an ITP is an undertaking subject to compliance with this statute, and the Applicant understands that USFWS must consult with the

Regional Historic Preservation Officer and others as needed to secure NHPA clearance prior to issuing any permit.

1.7.4 Other Relevant Laws and Regulations

The Applicant understands that an ITP is valid providing the proposed project remains in compliance with all relevant Federal, state, and local laws, regulations, and ordinances and acknowledges that he is responsible for ensuring that that the proposed project meets all applicable requirements.

The Washington Fish and Wildlife Commission (Commission) is the supervising authority for the Washington Department of Fish and Wildlife (WDFW). The Commission's primary role is to establish policy and direction for fish and wildlife species and their habitats in Washington and monitor implementation of the goals, policies, and objectives established by the Commission. The Commission also classifies wildlife and establishes the basic rules and regulations governing the time, place, manner, and methods used to harvest or enjoy fish and wildlife. The Washington Administrative Code (WAC) defines endangered as:

> "*any wildlife species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state*" (WAC 232-12-297, § 2.4);

and defines threatened as:

> "*any wildlife species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats*" (WAC 232-17-297, § 2.5).

The Commission designated the Mazama pocket gopher in the state as threatened in 2006 (WAC 232-12-011[1]). This designation classifies the species as protected wildlife (WAC 121-12-011) subject to regulation under the Revised Code of Washington (RCW 77.12). Unlawful taking of species designated as threatened by the Commission is prohibited under state law (RCW 77.15.130).

Washington State Code provides that taking of endangered and threatened fish and wildlife is not unlawful if authorized by a permit issued under the ESA (RCW 77.15.130(1)(c)(ii)). The Applicant will satisfy Washington State prohibitions against taking state-listed species by securing an ESA permit authorizing incidental take of the federally-listed Yelm pocket gopher.

The Washington State Environmental Policy Act (RCW 43.21C) and its implementing regulations (WAC 197-11) may require review by City of Lacey or other local entities to ensure that any permits or authorizations associated with the project identify possible environmental impacts resulting from governmental decisions.

Chapter 2 Project Description and Covered Activities

2.1 Project Description

The Applicant is proposing to conduct the following activities during the permit term:

- New landscaping on the slope in front of Old Main, between Harned Hall and O'Grady Library, and in other campus areas;
- Construction of approximately 5-6 new buildings;
- Re-development of old buildings;
- New sidewalks and parking lots;
- New roads to access new buildings and parking lots;
- Maintenance of existing landscaping, sidewalks, roads, parking lots, and buildings;
- Utility work (pipelines, transmission lines, lighting, etc.); and
- Other activities that support campus activities.

New landscaping in front of Old Main and some redevelopment activities are expected to begin upon permit issuance. Redevelopment of existing buildings, construction of new buildings, and ongoing maintenance activities will occur throughout the 20-year permit term. New buildings, redevelopment, and new landscaping activities will only occur within the 139-acre redevelopment area. Ongoing maintenance or facility replacement activities listed above may also occur on the project site outside of the redevelopment area. The maximum amount of anticipated habitat impacts for the 20-year permit term is provided in Chapter 4, Table 5, "Project Site Impacts".

The Applicant has determined that the activities described here cannot completely avoid impacts to listed species or their habitats on the project site.

2.2 Covered Activities

Covered activities include actions related to development, redevelopment, ongoing maintenance, landscaping, and vegetation management on the project site.

The steps required for development or redevelopment of buildings will occur within the redevelopment area, and follow this general sequence of events:

1) Geotechnical investigation – Soil test pits, up to 12 feet deep are excavated to sample soils for project permitting and design.
2) Installation of construction fencing - Temporary construction fencing is installed to limit the area of disturbance.

3) Establishment of staging areas for equipment and materials - Temporary staging areas for construction management trailers, equipment storage, aggregate, topsoil, and other construction-related requirements are set-up near the redevelopment project.

4) Fuel and maintain vehicles on-site – Construction equipment is fueled and maintained near the redevelopment project.

5) Clearing vegetation – Vegetation is cleared for the new development. Equipment that may be used for vegetation clearing includes mowers, brush cutters, rotary cutters, chain saws, chippers, and stump grinders.

6) Installation of temporary storm water controls - Storm water management controls, such as straw wattles, sediment fencing and infiltration basins, may be installed in the project area before or during construction. Creation of temporary erosion control features such as infiltration basins may require excavation and grading.

7) Excavation and grading - Soils on the site are graded and leveled by cut and fill in accordance with approved project plans. Equipment used for these tasks includes graders, excavators, and dump trucks.

8) Construct permanent stormwater facilities – Permanent stormwater facilities may include bioswales, French drains, dispersal trenches, infiltration basins, or catchment basins.

9) Addition and compaction of fill - Aggregate fill material is spread and compacted for new building, parking lot, roadway, and sidewalk surfaces. Equipment used for these tasks includes graders, scrapers, rollers, dump trucks, concrete mixer trucks, and concrete pump trucks, and pavers.

10) Move or install utilities – Above ground and underground utility lines, such as for water, sewer, cable, or electricity, will be installed or relocated. Lighting will also be relocated or installed.

11) Dig and install building footings – Soil will be excavated to install concrete footings for new or relocated buildings.

12) Construct buildings and pave roads, parking lots, and sidewalks – Buildings will be constructed and pavement for new roads, parking lots, and sidewalks will be poured and leveled in support of new buildings.

13) Install sod for athletic fields or lawns – Grass is seeded or sod is laid to complete athletic fields and open lawn space.

14) Landscaping – Landscaped areas next to roads, sidewalks, and buildings are planted with trees, shrubs, and flowers.

Ongoing activities, both inside and outside of redevelopment areas, that may occur in habitat areas are included in Chapter 4, Table 5, "Project Site Impacts", and include:

1) Utilities work – The repair, replacement, or installation of water, gas, transmission, lighting, irrigation, and other utility lines to service existing facilities (see Figure 7, "Projected Development and Landscaping", in Section 4.2 for existing utility locations). Utility work on state and city land that is adjacent to and bounded by the project site is also covered.
2) Road, sidewalk, trail, and parking lot maintenance – The repair or replacement of existing roads, sidewalks, trails, and parking lots.
3) Landscape maintenance – Removal and replacement of landscaped trees and shrubs.
4) Maintenance and use of existing cemetery grounds.

Regular mowing and other vegetation management that occurs on the project site does not need take coverage because these ongoing management activities are already covered by the 4(d) Special Rule published for the Mazama pocket gopher on April 9, 2014 (79 FR 68 19795-19796). Regular mowing between campus buildings is conducted every two weeks during the growing season. Regular mowing of field areas occurs at least once per growing season, or up to 4 times per year. Other vegetation management includes the removal of dead or diseased trees and shrubs and management of invasive plants by hand, mechanical removal, or herbicide treatment in accordance with Environmental Protection Agency (EPA)-approved instructions.

Chapter 3 Environmental Setting and Biological Resources

3.1 Environmental Setting

3.1.1 Climate

The City of Lacey is located in Thurston County in western Washington at the southern extent of Puget Sound. The average precipitation in the area averages approximately 50 inches/year. The area experiences cool, wet, winters and mild summers. The warmest and driest months generally occur in July and August, with December and January generally the coldest months and November through February generally receiving the greatest amount of precipitation. Fog is common in the area. The average maximum temperature is 60.3˚ F and the average minimum temperature is 39.6˚ F (Western Regional Climate Center database 2017).

3.1.2 Topography/Geology

Thurston County is located in the geologic area known as the Puget Trough, bordered to the west by the Olympic Mountains and to the east by the Cascade Mountains. Most of the geology and soils in the County can be attributed to the deposition and erosion caused by several past glaciations and the advance and retreat of the Vashon glacier. These actions left behind coarse, well drained, sandy glacial outwash. Glacial drift, till, and outwash are found in the majority of the low elevation areas in Thurston County.

Typically, prairie lands found in Thurston County occur on glacial outwash soils and are sandy, well drained layers of often very deep outwash (Drost et al 1998). The prairies that formed in Thurston County on this plateau of glacial gravels generally have sandy to gravelly, deep, well-drained soils with low water-holding capacity.

The topography of the property varies with some areas being relatively flat and other areas with slopes up to 30%. Soil types include Nisqually loamy fine sand, Indianola loamy sand, Yelm fine sandy loam, Everett very gravelly sandy loam, Giles silt loam, Norma silt loam, Bellingham silty clay loam (see Figure 4 "NRCS Soils").

3.1.3 Hydrology/Streams, Rivers, and Drainages

The property is located within the Woodland Creek – Frontal Henderson Inlet subbasin (US Geologic Survey Hydrologic Unit Code 171100190502). Woodland Creek, an anadromous salmon-bearing stream, extends through the east portion of the project site, east of the redevelopment area. Forested and scrub-shrub wetlands are found in the north and central portions of the project site.

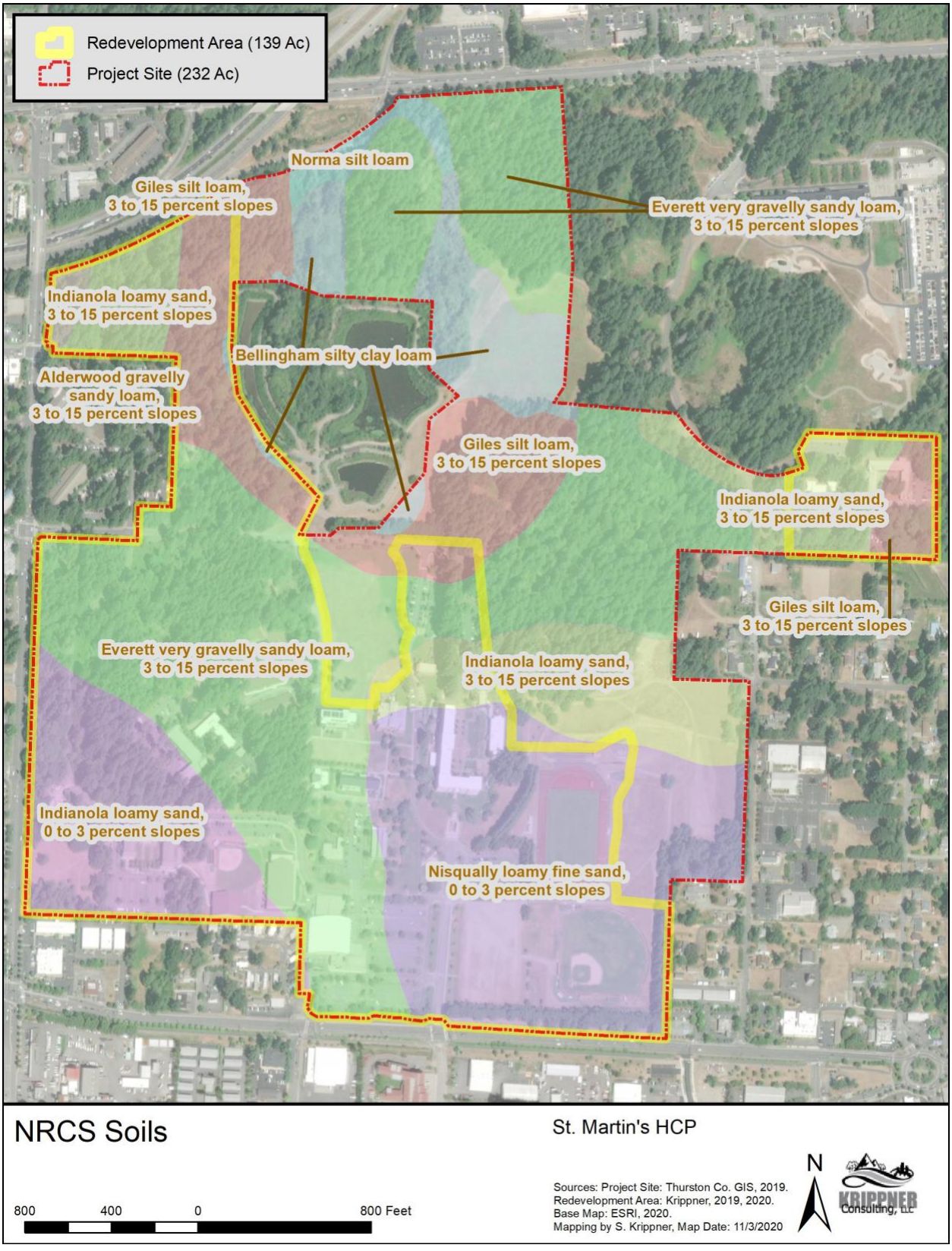

Figure 4. NRCS Soils

3.1.4 Existing Land Use

The project site is used for St. Martin's Abbey and University campus activities. The developed Abbey and University campus facilities are located on the south portion of the site. Existing Abbey and University campus facilities include numerous buildings, parking lots, roads, sidewalks, trails, hard and soft surface athletic fields, utility lines, and storm water facilities. Developed, impervious surfaces, including compacted lawn, are shown as "developed" areas in Figure 5, "Land Use and Habitats." Approximately 71 acres, or 30% of the 232-acre project site is covered by developed areas (see Table 1, "Land Use and Habitat Area Calculations"). Developed areas are concentrated mostly within the redevelopment area.

Table 1. Land Use and Habitat Area Calculations

Land Use and Habitat Categories	Outside Redevelopment Area (acres)	Inside Redevelopment Area (acres)	Project Site Total (acres)
Developed	2.1	68.4	70.5
Stormwater Facility	0.0	0.7	0.7
Forest	61.9	57.5	119.4
Degraded Grassland - Occupied	26.3	3.4	29.7
Degraded Grassland - Unoccupied	0.0	1.4	1.4
Landscape Trees and Shrubs	3.5	7.1	10.6
Total	**93.8**	**138.5**	**232.3**

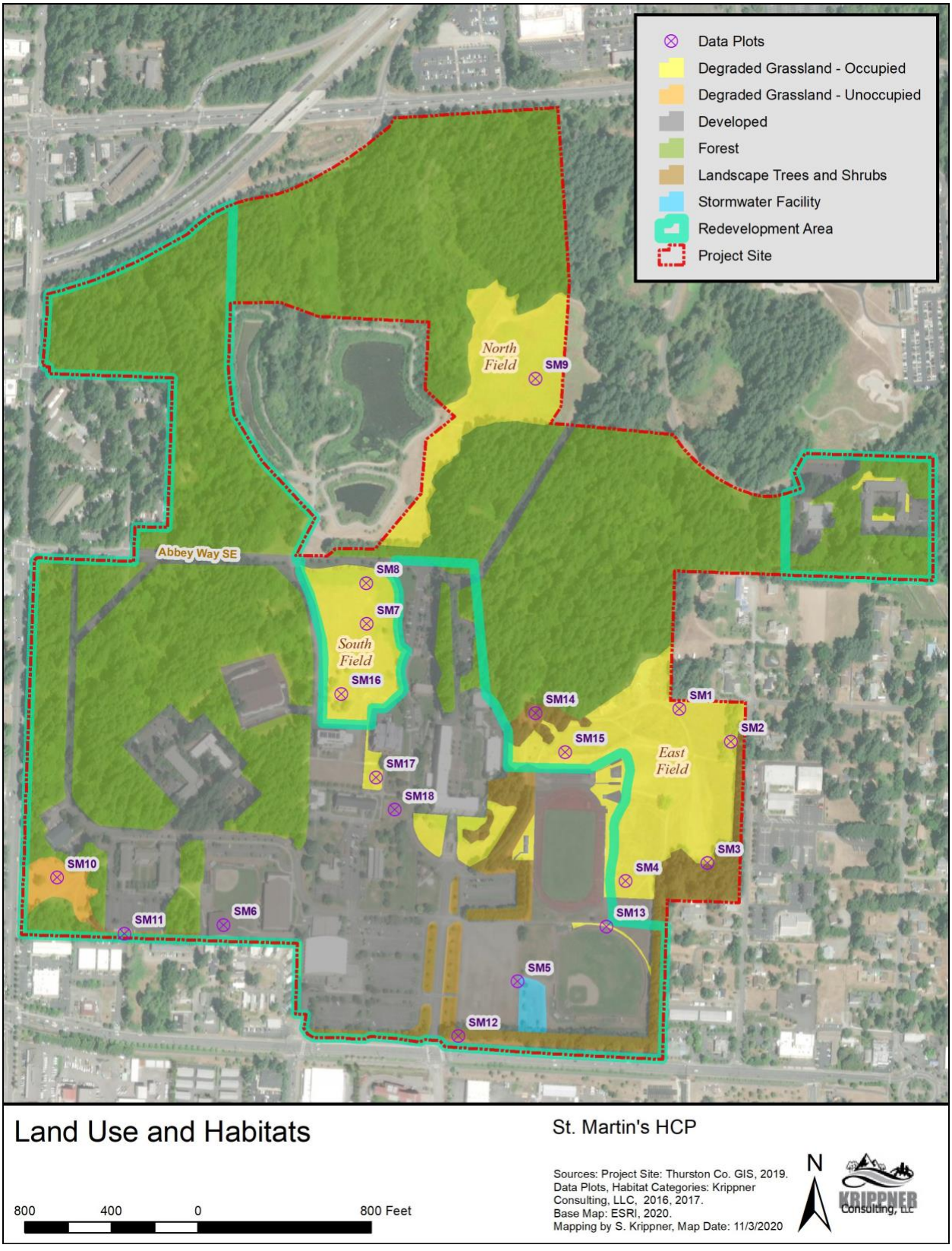

Figure 5. Land Use and Habitats

3.2 Biological Resources

The stewardship of native forest areas and open meadows is an important part of Abbey and campus life. Approximately 119 acres, or 51%, of the project site is forested. Forest areas are dominated by conifer and deciduous trees including Douglas fir, western red cedar, big leaf maple, vine maple, osoberry, and hazelnut. Understory plants include salmonberry, salal, and sword fern.

Approximately 31 acres, or 13%, of the project site is managed as grassland. Three grass-dominated fields located north and east of the developed University campus facilities are maintained on a regular basis by mowing outside of the redevelopment area. These areas are identified on Figure 5 as the East Field (east of the hard surface track), South Field (south of Abbey Way SE), and North Field (north of Abbey Way SE). More isolated patches of grassland are found in the redevelopment area. Habitat conditions, including soil conditions and vegetation, are evaluated at representative data plots in the three field areas and in the redevelopment area (see Figure 5, "Land Use and Habitats", Table 2. "Habitat Conditions Recorded in Field Areas", Table 3 "Habitat Conditions Recorded Inside the Redevelopment Area", and Appendix A, "Data Forms and Photos").

The East Field (Figure 5; SM1-4 and SM14-15) is mowed approximately 4 times during the growing season, most of it is fenced and not accessible to the general public. A soft surface running track was built in this area by 1972. The open field is not used for recreational activities very often and the soft surface track is used for cross country running practice on an irregular basis. Throughout the East Field soils appear to be disturbed by past activities. None of the soils observed matched the mapped Nisqually fine loamy sand or Indianola loamy sand. Gravel was present in the soil profile at all locations tested and soils were compacted in some areas. The East Field is dominated by non-native grasses and forbs, forbs are preferred forage for gophers (Stinson 2019). Forb cover is relatively high, varying from 15 to 40% in the data plots. Dominant forbs include non-native sheep sorrel (*Rumex acetosella*), narrow-leaf plaintain (*Plantago lanceolata*), hairy cat's ear (*Hypochaeris radicata*), white clover (*Trifolium repens*), and dandelion (*Taraxacum officinale*). Two native forbs, yarrow (*Achillea millefolium*) and small-flower lupine (*Lupinus bicolor*), that are common on remaining native prairie areas in the region are also present but are very limited in distribution. Dominant non-native grasses include bentgrass (*Agrostis sp*.), bluegrass (*Poa sp*.), velvetgrass (*Holcus sp*.), perennial ryegrass (*Lolium perenne*), and orchardgrass (*Dactylis glomerata*). Gopher mounds are patchily distributed and have been consistently observed in this field area from 2015 through recent years.

The South Field (Figure 5; SM7-8, and SM16) is located south of Abbey Way SE in the main campus area. It is mowed every two weeks during the growing season and has much higher pedestrian use than the other two fields given its central location on the campus. Soils were dumped here from Interstate 5 construction in the 1960s. The gravelly sandy loam soils found here are very compacted in some areas. Forb cover is relatively high ranging between 15 and 50%. Dominant grass and forb species are similar to those found in the East Field. Gopher mounds were first surveyed here on August 19, 2015 by Tammy Schmidt from WDFW and have consistently been observed throughout this field area every year since work on this HCP began in 2016.

Table 2. Habitat Conditions Recorded in Field Areas

Data Plot	% Forb	% Grass	NRCS Mapped Soil Type	Recorded Soil Conditions
East Field				
SM1	40	70	Indianola loamy sand	0-12" sandy loam 12-16" gravelly sandy loam
SM2	40	50	Indianola loamy sand	0-24" 10YR 2/2 loamy sand with some gravel
SM3	15	30	Nisqually loamy fine sand	0-20" 10YR 2/1 – coarse loamy sand with some gravel
SM4	40	70	Nisqually loamy fine sand	0-20" 10YR3/4 gravelly sandy loam; compacted 10-20" Filling and grading made this area 3 feet higher for a soft surface running track (visible on 1972 aerial view)
SM14	30	75	Indianola loamy sand	1-10" 10YR 2/2 gravelly loamy sand 10-20" 10YR 3/4 gravelly loamy sand
SM15	20	100	On border of Indianola loamy sand and Nisqually loamy fine sand	0-20" 10YR 3/2 gravelly sandy loam Graded in 2009 for adjacent track facility, soils not compacted
South Field				
SM7	40	80	Everett very gravelly sandy loam	0-20" 2.5Y 4/3 gravelly sandy loam Soils from I-5 construction were dumped and spread here (visible on 1965 aerial view)
SM8	15	100	Giles silt loam	Gravelly sandy loam similar to SM7
SM16	50	80	Everett very gravelly sandy loam	0-3" 10YR 2/2 gravelly sandy loam 3-7" 10YR 3/4 compacted gravelly sandy loam Soils very compacted below 7"
North Field				
SM9	20	100	Bellingham silty clay loam	0-20" 10YR 4/3 silty clay loam No soil disturbance observed

Table 3. Habitat Conditions Recorded in the Redevelopment Area

Data Plot	% Forb	% Grass	Vegetation or Land Cover	Soil and Habitat Conditions
			Degraded Grassland - Occupied	
SM13	60	60	Grassland with high diversity of forbs, 10 species including native yarrow, and 3 species of grasses observed in the data plot	0-16" loose sand and gravel fill; Small, narrow patch (0.1-acre) of suitable habitat bordered by compacted gravel and developed athletic fields on all sides.
SM17	80	80	Grassland with high diversity of forbs, 7 species, and 2 species of grasses observed in the data plot	0-16" 10YR 3/2 gravelly sandy loam; Leveled lawn between campus buildings and sidewalks
			Degraded Grassland - Unoccupied	
SM10	30	85	Grass-dominated field separated from other habitat areas by wetlands, forest, and developed areas and a distance of approximately 1,200 feet; high ground water may limit habitat here	0-20" 10YR 2/2 loamy sand 20-25" 10YR 3/3 loamy sand Soils match mapped soil type, no soil disturbance, past or present is apparent
			Landscape Trees and Shrubs	
SM11	5	100	Grassy landscape strip planted with Douglas fir and western red cedar trees; mowed every two weeks during the growing season	0-16" 10YR 2/2 gravelly sandy loam Filling and grading occurred here approximately 5 years ago
SM12	60	40	Two rows of large Doulas fir trees, sparsely vegetated understory beyond the plot	0-14" 10YR 2/2 gravelly sandy loam with large rocks Very compacted soil below 14 inches
			Developed	
SM5	30	80	Weedy grasses and forbs where vegetation covers gravelly soil	Gravelly, compacted fill soils adjacent to storm facilities
SM6	60	20	Weedy grasses and forbs; area is maintained for tennis courts	0-12" compacted sand >12" compacted gravel Soils have been filled, graded, and compacted for tennis courts
SM18	80	80	Grass-forb area between campus buildings and sidewalks	0-4" 10YR 3/2 - loam Gravel fill/hardpan at 4 inches

The North Field (Figure 5; SM9) is located north of Abbey Way SE between city storm water facilities and forest habitat. This area is open to the public, but foot traffic is lower here. Walkers mainly use designated paths and frisbee goal players use only portions of the field. Soils do not appear to be disturbed and gophers are inhabiting a soil type in which they are not typically found, Bellingham silty clay loam. The field is mowed approximately 4 times per year. A small portion of the North Field is currently being used for an ongoing study of ecological restoration at Saint Martin's University. Non-native grasses are mowed and de-thatched, then native forbs are established by seeding and planting in spring and fall seasons in designated plots that are monitored over time. Gopher mounds were observed in the restoration area in 2019. The regular mowing regime is adjusted as necessary for this small-scale native plant restoration program. The North Field is dominated by grasses and forb cover is lower than in the other fields, except in the experimental restoration area. Dominant grasses include reed canarygrass (*Phalaris arundinacea*), *Festuca sp.*, and *Poa sp.* Weedy forbs include hairy cat's ear, dandelion, and vetch (*Vicia sp*.). Gopher mounds were first surveyed here on August 11, 2015 by Tammy Schmidt from WDFW and have consistently been observed in this field area every year since work began on this HCP in 2016. They are patchily distributed in this field.

Gopher-occupied degraded grassland in the redevelopment area (approximately 3.4 acres) includes areas bordering the hard surface running track; the slope in front of Old Main; and several smaller patches of suitable soils and vegetation that are surrounded by impervious surfaces (SM13 and SM17). Soils in all of these areas have been disturbed to some extent by past campus construction activities.

One patch of degraded grassland not occupied by gophers (approximately 1.4 acres) is located in the southwest corner of the project site in the redevelopment area. This is the only area besides the North Field where the soil does not appear to be disturbed by campus activities and the soil matches the mapped soil type, in this case Indianola loamy sand. This area is isolated from gopher-occupied areas by forest, wetlands, and developed areas, and its use by gophers may be limited by seasonal high ground water.

Several interior roads and trails are lined by landscaped areas. Areas landscaped with trees and shrubs have suitable gopher soils, but burrowing is limited by woody tree and shrub roots (SM11-12). Forage plants for gophers are also scarce in some of the landscaped areas. Approximately 7 acres of landscape trees and shrubs are maintained on a regular basis in the redevelopment area. In these areas, diseased and dead trees and shrubs are replaced, noxious weeds are controlled, and mowing occurs every two weeks where grass is present. Soils have been disturbed by varying levels of filling, grading, and compaction.

Soils beneath most of the lawn areas between buildings and in athletic fields are so compacted that no suitable soils for burrowing exist in these areas (SM5-6 and SM18). Therefore, these areas are identified as developed in Figure 5 along with existing roads, parking lots, hard surface athletic fields, and buildings.

3.2.1 Covered Species

The Applicant proposes to cover the Yelm pocket gopher for unavoidable incidental take that may occur as a result of engaging in activities related to the otherwise lawful Abbey and University campus maintenance and redevelopment activities.

3.2.2 Status and Distribution

On April 9, 2014, the Service published a final rule in the Federal Register listing the Yelm pocket gopher as threatened throughout their range in the State of Washington (79 FR 19760; April 9, 2014) (USFWS 2014a). The Service also published a final rule designating critical habitat for the Yelm pocket gopher (79 FR 19712; April 9, 2014) (USFWS 2014b). The project site is not located in a designated critical habitat area.

Yelm pocket gophers are found on grassland habitats, including remnant and degraded prairies, in Thurston County. The approximate range of the Yelm pocket gopher is shown in Figure 6. "Yelm Pocket Gopher Service Areas and Reserve Priority Areas". Their range has been divided into three geographic Service Areas to recognize possible differences between subpopulations within the range of this subspecies. Reserve Priority Areas have been identified as areas with higher habitat value and restoration potential by USFWS to aid in recovery planning (USFWS 2015). Neither the project site nor the conservation site is located in a Reserve Priority Area.

Yelm pocket gophers are known today from several locations throughout Thurston County, including the Baker, Mound, Rock, Ruth, Frost, Violet, Yelm, Chambers, Barnard's, Hawk's, and Tenalquot Prairies. They occur most commonly on sites mapped as having Alderwood, Cagey, Everett, Godfrey, Indianola, Kapowsin, McKenna, Nisqually, Norma, Spanaway, Spanaway-Nisqually complex, and Yelm soils (79 FR 19728).

Prairie habitat that provides habitat for Yelm pocket gophers has been lost, degraded, and fragmented in recent times (approximately 1890 to the present time) due to urban development, conversion to other uses, and ingrowth of woody vegetation (USFWS 2014a). Many surviving subpopulations are likely small and appear to be isolated from other subpopulations, although there are few data on dispersal to help delineate genetically connected populations. Small subpopulations are unlikely to persist for long without at least occasional demographic and genetic recharge by dispersing individuals from other nearby subpopulations. Re-colonization becomes less likely as habitat is fragmented and populations become isolated (Stinson 2005).

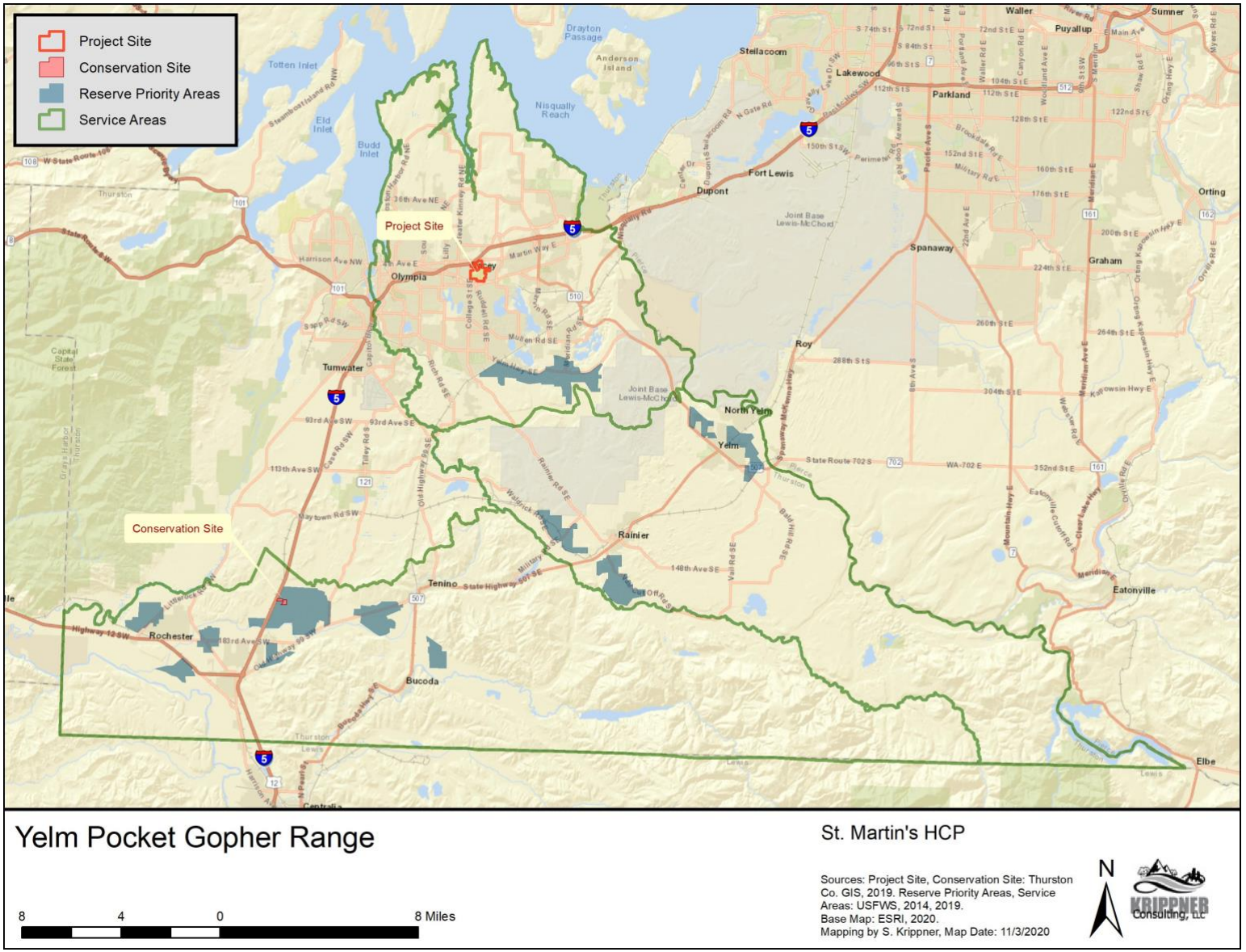

Figure 6. Yelm Pocket Gopher Service Areas and Reserve Priority Areas

3.2.3 Life History and Ecology

Yelm pocket gophers spend most of their time within their system of burrows. Gophers are believed to be generally solitary and exclude other gophers from their burrows except when breeding and when females have litters. When pocket gophers have established a territory, they generally remain there, although they will shift their home range in response to seasonally wet soils. Pocket gopher territory sizes (i.e., burrow systems) vary with habitat quality and reproductive status (Stinson 2019).

Mazama pocket gophers attain sexual maturity by the breeding season after their birth, when approximately 9 months old and rear a single litter of about 5 (2-7) pups per year (Witmer et al. 1996, Verts and Carraway 2000). Gopher populations can increase dramatically in the summer after the dispersal of young of the year, and may increase to three to four times the spring adult population. In addition to this annual influx of young-of-the-year, gopher populations also fluctuate year-to-year due to environmental conditions.

Pocket gophers have been called 'keystone species' and 'ecosystem engineers' because they affect the presence and abundance of plants and other animals (Vaughan 1961, 1974; Reichman and Seabloom 2002). Their extensive excavations affect soil structure and chemistry; food caches and latrines enrich the soil, affecting plant community composition and productivity. Mazama pocket gophers are also an important prey species for many predators, including hawks, owls, coyotes, and weasels; and their burrows provide retreats for salamanders, western toads, frogs, lizards, small mammals, and invertebrates (Stinson 2005).

3.2.4 Habitat Characteristics and Use

Yelm pocket gophers live on open meadows, prairies and grassland habitats of the glacial outwash plain where there are porous, well-drained soils (Dalquest 1948). They can live in a wide range of grasslands, including pastures and agricultural lands.

Yelm pocket gophers forage on a wide variety of plant material, including leafy vegetation, roots, shoots, and tubers (USFWS 2014a). When succulent in summer months, perennial forbs are a preferred food over grasses, and fleshy roots and bulbs, such as camas (*Camasia* spp.) are important when green vegetation is not available. The availability of forbs may provide nutrients important for gopher growth and reproduction (Stinson 2019). Gophers also eat fungi and disseminate the spores of species that have an important role in facilitating plant growth (Stinson 2019).

The distribution and abundance of pocket gophers is greatly affected by soils. Soil characteristics that affect gophers include depth and texture, particularly rock and clay content that affects burrowing ability, permeability that can result in periodic flooding of burrows, and water-holding capacity and fertility that affect growth of plant foods. Pocket gophers generally prefer deep, light-textured, porous, well-drained soils, and do not occur in peat or heavy clay soils (Chase et al. 1982, Baker et al. 2003). They are seldom found in very rocky soil (Steinberg 1996, Olson 2011).

Yelm pocket gopher habitat in the south Puget Sound has been and continues to be lost to development, agriculture, and succession to forest. Most habitat that remains is fragmented and degraded by Scot's broom and other non-native plants. Frequent mowing and herbicide use also

degrades habitat. Direct threats include predation by cats and dogs and illegal trapping or poisoning. Habitat loss, fragmentation, degradation, and direct threats are likely to continue affecting gopher populations because Thurston County's population and associated residential and commercial development are projected to grow substantially in the next few decades (Sustainable Thurston 2011: A11).

3.2.4 Occurrence in the Project Area

Yelm pocket gophers can be difficult to detect because they spend most of their lives underground, with the exception of very brief surface forays for feeding or for dispersal of young from their natal burrow systems (USFWS 2014a, Stinson 2019). Yelm pocket gophers are typically detected by searching potential habitat for the presence of gopher mounds indicating below-ground burrowing. Detection of mounds can verify presence of the species on a site but does not provide abundance or distribution data (Olson 2011). Within-site distribution is likely to change in small and large ways across years. Therefore, occupied habitat is considered to be the area of suitable soils with a common management history and a cover type contiguous with the occupied area.

Yelm pocket gopher mounds have been recorded every year from 2016 through 2020 in areas identified as occupied habitat in Figure 5. Habitat conditions and gopher occupancy in these areas are described in more detail earlier in Chapter 3. Most areas occupied by gophers on the project site are open fields dominated by non-native grasses and forbs, maintained by mowing during the growing season. Soil types occupied by gophers on the project site include gravelly sandy loam, sandy loam, loamy fine sand, silty clay loam, and gravel and sand fill soils.

Chapter 4 Potential Biological Impacts and Take Assessment

4.1 Direct and Indirect Impacts

Impacts to Yelm pocket gophers incidental to proposed development, redevelopment and ongoing maintenance may result from direct and indirect impacts. Direct impacts are those caused by or resulting from the proposed project and include, but are not limited, to mortality of individuals due to crushing within burrows as a result of heavy equipment operations, or injury of individuals during digging, soil excavation, or trenching activities. Indirect impacts are those caused by, or resulting from, the proposed project and are later in time, but are still reasonably certain to occur. Indirect impacts include effects such as removal of vegetation that the species eats, or compaction of soils resulting in destroyed burrow systems. Gophers are likely to be impacted on the project site, mainly in the redevelopment area, both directly by excavation and grading activities and indirectly by activities that result in vegetation removal and soil compaction during construction, landscaping, or infrastructure repair.

4.2 Anticipated Take and Impacts of the Taking

Section 3 of the ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct" [16 USC § 1532 (19)]. The term "harm" includes any act "which actually kills or injures wildlife." Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering (50 C.F.R. § 17.3).

An HCP must analyze the impact likely to result from taking covered species [ESA section 10(a)(2)(A)(i), 50 CFR 17.32(b)(1)(iii)(C)(1)]. To identify the sources of take that may result in an impact, it is necessary to consider each component of the covered activities. Once the causes, types, and amounts of take have been identified, the resulting impact can be assessed.

Stressors associated with the covered activities that could result in take through harm of Yelm pocket gophers include loss of needed food materials (forage), soil disturbance, compaction to burrows for breeding and sheltering, and crushing that results in injury or death.

Individual pocket gophers in areas with degraded or limited food resources are expected to require larger home ranges with more extensive burrow systems (Olson 2011). Yelm pocket gophers are known to be antagonistic towards each other, except when breeding, which generally results in avoidance behavior that likely distributes individuals across a landscape (Stinson 2019). This distribution behavior, combined with the larger expected home ranges in areas with degraded or limited food resources, might result in impacts to fewer individuals when compared to habitat impacts in areas with higher relative habitat quality. This effects analysis considers effects on habitat as a surrogate for effects to the species.

When construction is initiated in the redevelopment area of the project site, habitat will be lost along with any individuals. Incidental take is expected to be highest during initial site clearing, grading, and excavation, as these activities will extend below the ground and into burrow systems, natal nests, and food caches. Burrow systems may be destroyed, and individual animals harmed during these construction activities.

Take in the form of harm may occur during site clearing, excavation, and grading if equipment injures or kills individuals, or if forage plants are removed and soils for burrow systems are removed, compacted, or covered with impermeable surfaces. Take may occur wherever suitable habitat is removed and covered with impervious surfaces. Harm may occur when individuals experience a measurable disruption to their normal behavior when the food items they rely on (forage resources) are removed or disturbed, or there is an increased energetic demand from having to relocate and/or rebuild tunnel systems and food caches.

Observing or documenting instances of take may be difficult or impossible because Yelm pocket gophers remain underground for most of their lives. The loss of suitable habitat on the project site will therefore serve as a surrogate for the amount of take anticipated over the term of the requested permit. The permanent loss or degradation of suitable habitat will be limited to the redevelopment area where new buildings are constructed, or where new landscaping limits foraging opportunities for gophers (see Figure 7, “Projected Development and Landscaping in the Redevelopment Area”). Other covered activities, such as landscape maintenance and infrastructure repair, are not expected to result in permanent habitat loss but may result in temporary impacts to habitat. Suitable habitat in the redevelopment area has been degraded by past construction activities and is of limited quality due to the presence of woody vegetation, disturbed soils, and small patch size of remaining habitat areas. Because vegetation cover type and gopher occupancy in the redevelopment area varies, and some impacts are only temporary or would result in habitat changes rather than loss, habitat that may be affected has been evaluated in terms of its habitat functions and the type of impacts that are projected to occur. The multipliers that are used to estimate functional habitat values and anticipated impacts are summarized in Table 4, “Multipliers for Habitat Functions and Impacts.”

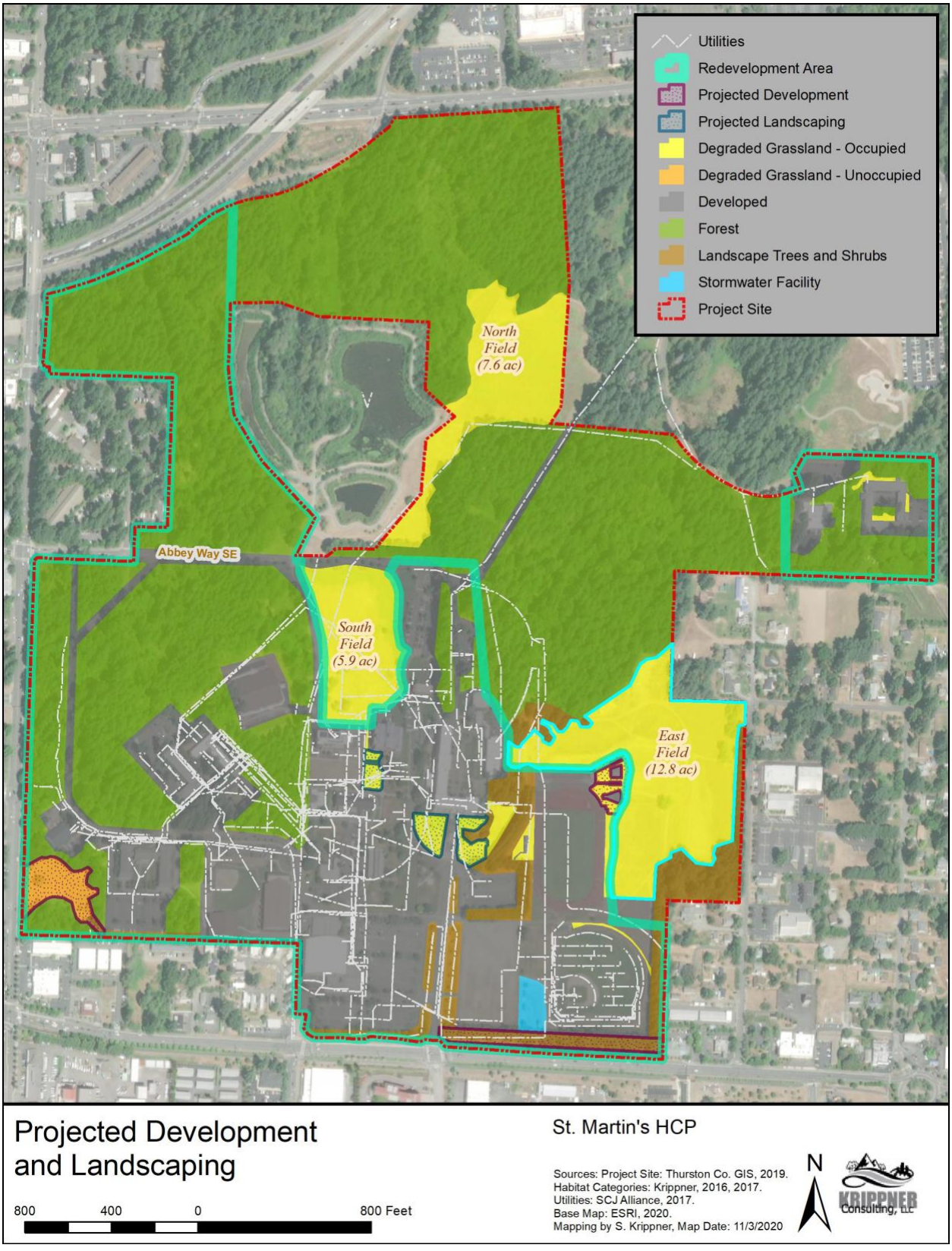

Figure 7. Projected Development and Landscaping in the Redevelopment Area

Table 4. Multipliers for Habitat Functions and Impacts

Land Use and Habitats	Covered Activities		
	Construction of Buildings and associated facilities/ Impervious surfaces	**Install, Replace, and/or Maintain plantings**	**Utility repairs/ replacement, Infrastructure repairs, and other temporary habitat impacts**
Degraded grassland - occupied	1.2	0.7	0.3
Degraded grassland – unoccupied	0.7	0.5	0.1
Landscape trees and shrubs	0.2	0.1	0.1
Developed/Stormwater/Forest	0	0	0

The multipliers in Table 4 provide a method for evaluating habitat function and the type of impact projected to occur in each of the habitat types identified on the project site. For example, areas vegetated with landscape trees and shrubs are less likely to provide suitable soils for gopher burrowing and forage plants than grassland areas. Therefore, the multipliers for this habitat type are much lower than for degraded grassland habitat, whether it is occupied or not. Multipliers are also lower when the impacts would only result in temporary impacts in the case of infrastructure repairs, building redevelopment, or landscape maintenance activities, or when habitat changes due to new landscaping.

Figure 7 shows areas where permanent impacts from new buildings, impervious surfaces, or landscaping is anticipated to occur in degraded grassland or landscape tree and shrub areas within the 20-year permit term. All other areas mapped as degraded grassland and landscape trees and shrubs within the redevelopment area, and a small portion of the utility lines, other infrastructure, and recreational facilities located outside of the redevelopment area in degraded grassland areas will be impacted temporarily when soils are disturbed for a short period of time in limited areas during the Permit Term in order to replace landscape plants or maintain or replace utilities or other infrastructure including recreational facilities. The maximum amount of habitat impacts anticipated during the permit term on the project site, both inside and outside of the redevelopment area is provided in Table 5, "Project Site Impacts" and Table 6, "Permanent and Temporary Impact Summary."

The total acres anticipated to be affected by project activities in degraded grassland and landscape tree and shrub areas during the 20-year permit term are summarized by impact type and habitat type in Table 5, "Project Site Impacts." Using the multipliers provided in Table 4, the maximum number of functional-acres of habitat that may be impacted by project activities during the permit term is anticipated to be 4 functional-acres. Of these 4 functional-acres of impact, approximately 3 functional-acres will be permanently impacted where habitat will be developed or converted to landscape trees and shrubs, and one functional-acre will be temporarily impacted by ground disturbing activities related to infrastructure or landscape improvements (see Tables 5 and 6 for more details).

Table 5. Project Site Impacts

Maximum Impacts to Habitat	Acres Impacted	Multiplier	Functional-Acres Impacted
Degraded grassland - occupied			
Buildings and associated facilities/impervious surfaces*	**0.6**	**1.2**	**0.72**
Landscaping with trees and shrubs*	**1.3**	**0.7**	**0.91**
Utilities, infrastructure, and other temporary impacts	1.6	0.3	0.48
Degraded grassland – unoccupied			
Buildings and associated facilities/impervious surfaces*	**1.4**	**0.7**	**0.98**
Landscaping with trees and shrubs	0	0.5	0
Utilities, infrastructure, and other temporary impacts	0	0.1	0
Landscape trees and shrubs			
Buildings and associated facilities/impervious surfaces*	**1.6**	**0.2**	**0.32**
Landscape tree and shrub maintenance/utilities, infrastructure, and other temporary impacts	5.5	0.1	0.55
Total			**3.96**

*Permanent impacts are in bold text.

Table 6. Permanent and Temporary Habitat Impact Summary

Covered Activities	Estimated Frequency	Estimated Duration	Functional-Acres of Impact
Permanent			
New buildings and associated facilities	Averaging one new building every 4 years	12 to 18 months	2.02
New landscaping	Averaging once every 5 years	2 to 3 months	0.91
Total Functional-Acres			**2.93**
Temporary			
Utilities and other infrastructure maintenance or relocation in grassland areas	Averaging once every 7 years for utilities and other infrastructure	2 to 4 weeks	0.48
Landscape maintenance and infrastructure maintenance or relocation in landscaped areas	As needed to replace dead or diseased landscape plants; likely not more than twice during the Permit Term at any one location Maintenance of irrigation lines averaging 1-2 times per year Infrastructure same as above	1 to 5 days for plant replacements; 1 to 2 weeks for irrigation lines 2 to 4 weeks for infrastructure	0.55
Total Functional-Acres			**1.03**

Chapter 5 Conservation Program

The Conservation Program describes the actions the Applicant and the Land Manager for the Kaufman HCP will implement to provide for the conservation of the Covered Species. The Applicant proposes to offset impacts to Yelm pocket gopher and their habitat by acquiring 4 acres of habitat managed for the Yelm pocket gopher at the USFWS-approved Leitner Prairie conservation site. The conservation site with its higher productivity and better landscape position has more potential to contribute to the conservation of the species than the project site. The Applicant will also contribute to the conservation of the species by continuing to manage 26 acres of grassland habitat outside of the redevelopment area in the East, South, and North Fields for the Yelm pocket gopher during the permit term.

Capitol Land Trust holds the easement for the Leitner Prairie conservation site, and the Center for Natural Lands Management (CNLM) is currently under contract with Kaufman as the Land Manager. CNLM is a non-profit conservation organization that specializes in South Sound prairie restoration and species conservation. CNLM will be the long-term Land Manager that holds the endowment for funding conservation activities at the site in perpetuity. The terms and conditions include meeting specific performance standards for providing habitat for Yelm pocket gophers in perpetuity. CNLM submits annual reports to document if they are meeting their management goals for the property, and what adaptive management measures are in place or will be enacted if CNLM is not currently meeting the goals (CNLM 2020).

In accordance with USFWS guidance for development of HCPs (USFWS and NMFS 2016), the conservation program consists of six components:

1. Biological Goals
2. Biological Objectives
3. Avoidance and Minimization Measures
4. Mitigation Measures
5. Monitoring Plan
6. Adaptive Management Plan

5.1 Biological Goals

Biological goals are intended to be broad, guiding principles that clarify the purpose and direction of the Applicants' HCP (USFWS and NMFS 2016). The biological goals describe what the conservation program aims to accomplish over the course of the permit term for species covered by the plan. The biological goals are intended to address specific threats to the Yelm pocket gopher cited in the USFWS listing rule for this species (79 FR 19760-19796) and describe how the Conservation Plan will mitigate for unavoidable effects.

The Applicant will contribute to the conservation of the Yelm pocket gopher by securing and providing for the perpetual management of an offsetting amount of suitable habitat to result in overall benefits to the species. Conservation site biological goals are the same as those described in the Kaufman HCP (Krippner 2016). The Applicant will also continue to manage the East, South, and North Fields, 26 acres total in size, as grassland habitat for the Yelm pocket gopher

on the project site during the permit term. Biological goals for the project and conservation sites are as follows:

1. Minimize and mitigate activities that unavoidably compact, grade, remove, or cover suitable soils with impervious surfaces at the project site. Mitigation will occur at the conservation site.

2. Minimize and mitigate unavoidable removal of forage vegetation at the project site. Mitigation will occur at the conservation site.

3. To permanently prevent the loss of forage vegetation necessary for successful Yelm pocket gopher feeding at the conservation site, avoid, or minimize and mitigate encroachment of native and nonnative plant species that compete with forage vegetation.

4. To permanently prevent the loss of burrowing habitat necessary for successful Yelm pocket gopher breeding and sheltering at the conservation site, avoid, minimize, and mitigate encroachment of native and nonnative trees and shrubs that overtake soils with woody roots.

5. To prevent the loss of a viable population of Yelm pocket gophers at the conservation site, restore and manage sufficient suitable habitat for this species.

6. To prevent the loss of a viable population of Yelm pocket gophers at the project site, manage grassland habitat for the Yelm pocket gopher on the project site by annual mowing.

5.2 Biological Objectives

Biological objectives describe measurable performance targets to evaluate progress towards achieving the program's biological goals. Objectives provide benchmarks for determining the effectiveness of the conservation program and inform effective adaptive management over the duration of the permit. Project and conservation site biological objectives are the same as those described in the Kaufman HCP (Krippner 2016). They are as follows:

1. Control unauthorized access and activities on the project and conservation sites. This objective is intended to support biological goals 1 and 5.

2. Limit the extent of construction or other project activities in suitable soils and minimize soil disturbance and compaction to the extent possible within designated project areas. Mitigation for soil compaction, grading, and removing or covering suitable soils with impervious surfaces will be mitigated at the conservation site. This objective is intended to support biological goal 1.

3. Manage plant species at the conservation site, especially Scot's broom, to the following performance standard. Ensure that no more than 10% of the area on the site consists of Scots broom and woody vegetation greater than 12 inches in height in years 2016 through 2024, and no more than 5% cover of Scot's broom and woody

vegetation greater than 12 inches in height thereafter. This objective is intended to support biological goals 3 and 4.

4. Manage the conservation site to restore and maintain a grassland consisting of forb cover of at least 20% for the first three years after permit issuance, increasing to at least 40% from years 2019 through 2024, and at least 80% thereafter. All performance standards for measuring the success of Leitner Prairie restoration efforts aimed at conserving the Yelm pocket gopher were met in Year 5 (2020). This objective is intended to support biological goals 2, 3, and 4.

5. To further support the Yelm pocket gopher, the conservation site will be managed to restore and maintain areas that meet the definition of high quality grasslands (defined on page 9 in Appendix C of the Kaufman HCP as areas with at least 30% cover of herbaceous vegetation, which include native annual and perennial grasses and forbs, less than 25% shrub cover, and less than 5% tree cover). By year 2019, at least 10% of the Leitner Prairie site will meet this standard, and by year 2025, at least 20% will achieve this standard. This site will be managed to maintain this standard thereafter. This objective is intended to support biological goals 2, 3, and 4.

6. Manage the conservation site to support Yelm pocket gophers by achieving at least 20% occupancy at the Leitner Prairie site (based on mound presence), by 2019. Manage the site to increase this occupancy rate to achieve at least 30% occupancy by 2025 and thereafter. This objective is intended to support biological goal 5.

7. Manage open fields on the project site to support Yelm pocket gophers. This objective is intended to support biological goal 6.

5.3 Avoidance and Minimization Measures

The June 2010 Master Plan for long range planning at St. Martin's included buildings in the field south of Abbey Way SE, additional athletic fields, and the president's residence in the east fenced field area (See Figure 8 "Master Plan Changes to Minimize Impacts"). This would have resulted in the loss of at least 20 acres of habitat for Yelm pocket gophers at the project site. The Applicant has made major changes to their Master Plan, removing these project elements from the East and South Field areas in order to avoid the loss of 20 or more acres of gopher habitat. These changes were made for this HCP.

Best Management Practices (BMPs) will be used when conducting project activities including, but not limited to, constructing new buildings and associated facilities and athletic fields; installing new landscaping; renovating buildings; repairing infrastructure; and managing the East, South, and North Field areas. BMPs for these activities are provided in Appendix B.

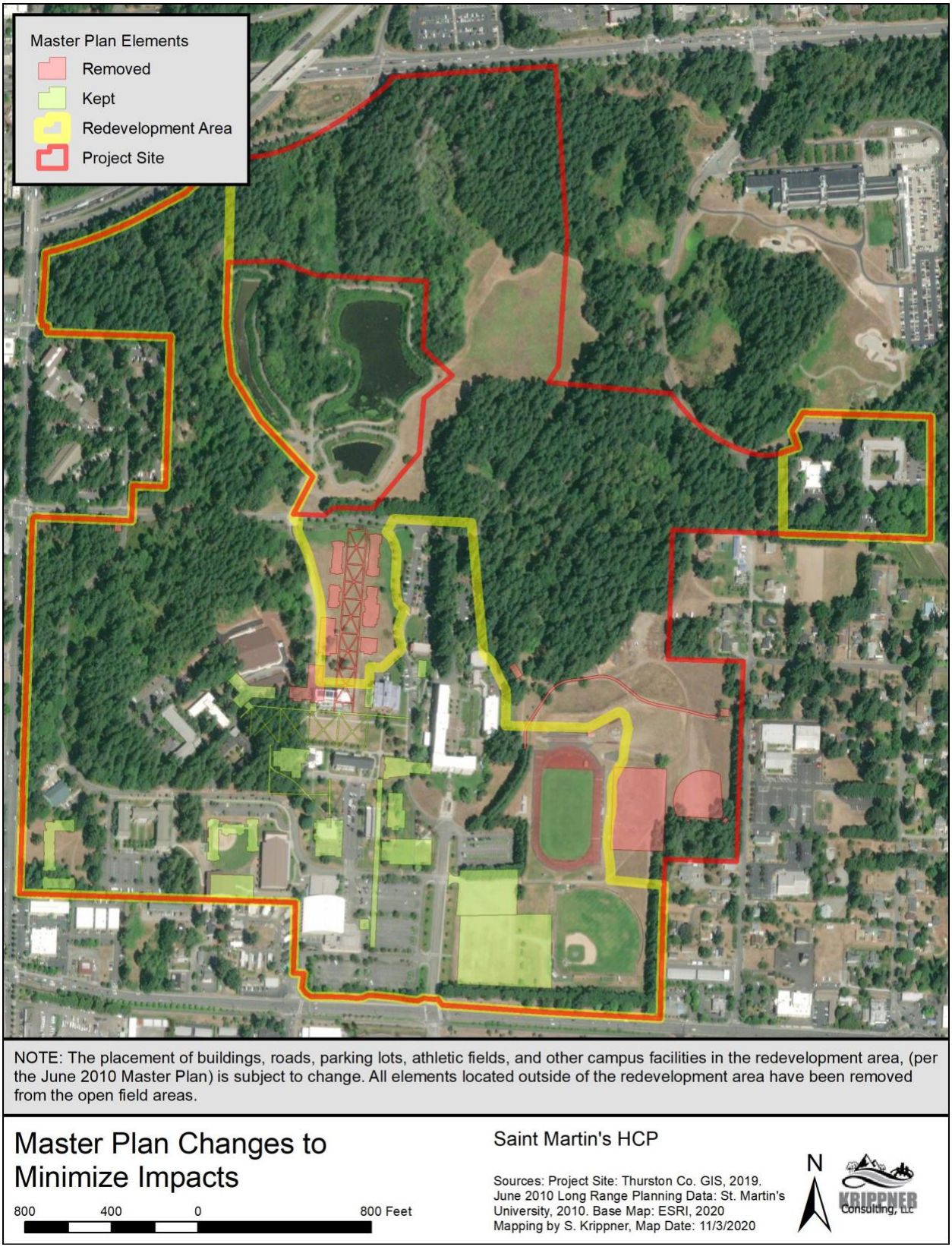

Figure 8. Master Plan Changes to Minimize Impacts

5.4 Measures to Mitigate Unavoidable Take

This HCP provides mitigation measures intended to rectify, reduce, and compensate for the impacts of the unavoidable incidental taking associated with the Covered Activities at the project site. The mitigation proposal is the acquisition of mitigation credits from the Service-approved Leitner Prairie conservation site of 4 acres of higher-quality habitat that is perpetually dedicated to the management and conservation of the Yelm pocket gopher. The 4 acres of high-quality conservation credits purchased are equivalent to the 4 functional-acres impacted by the Covered Activities. This transaction has been completed and is documented in the "Leitner Prairie Mitigation Site Agreement to Purchase Conservation Credits" attached as Appendix C. Management requirements for the Leitner Prairie conservation site are described in the Kaufman HCP in Appendix C, the site management plan for this site (Krippner 2016). These management obligations require that the site be restored to native prairie grassland habitat, and that forage plants are present in abundance to support Yelm pocket gophers in perpetuity. Various management techniques are recommended to achieve the management goals and objectives. These include mowing, targeted herbicide treatment, prescribed burning, native prairie plant seeding, and ongoing monitoring.

The credits to be purchased at the Service-approved conservation area of Leitner Prairie are of a different service area than those of the Yelm pocket gophers found on St. Martin's University campus. There is an out-of-service area multiplier that results in the need for additional mitigation. The Applicant will commit to this additional mitigation by maintaining existing habitat conditions on 26-acres of occupied grassland in the Plan Area for the Yelm pocket gopher for the 20-year permit term. The Applicant will provide funding to implement ongoing management actions on the 26-acre occupied grassland, and document that such management actions have been implemented to date. The Applicant believes that this mitigation proposal is in keeping with the principles outlined in the USFWS Guidance. Specifically, the Conservation Site:

a. Is covered by soils that are highly preferred by gophers;

b. Is currently occupied by Yelm pocket gophers;

c. Is predominantly vegetated by low-statured forbs and grasses, and is not a monoculture; and

d. Is legally and permanently conserved, managed, and endowed to help ensure its long-term ecological value consistent with conservation of the Covered Species.

5.5 Monitoring

USFWS determined that monitoring is essential to determining and documenting the success of conservation programs (50 CFR 17.32) and informing adaptive management efforts. Monitoring is required at the project site and at the conservation site.

Project Site

Monitoring at the project site includes the tracking and documentation of covered activities that result in habitat impacts, ongoing field maintenance, and any restoration activities that occur each year. Documentation of these activities and the resulting tally of the functional-acres impacted at the project site each year will be provided in the Annual Report. Annual report templates for documenting these monitoring results each year are provided in Appendix D.

Conservation Site

Monitoring at the conservation site includes annual surveys for evaluating habitat conditions to ensure that performance standards for Covered Species' habitat have been met. In accordance with the Kaufman HCP (Krippner 2016), the Land Manager is responsible for vegetation management and monitoring each year to meet the terms and conditions of the ITP for Kaufman HCP.

Annual monitoring of the conservation site includes quantitative measures of the following to evaluate conservation benefits to the Yelm pocket gopher:

1. Percent Scot's broom / woody cover > 12 inches tall;
2. Percent grassland with forb cover;
3. Percent high quality grassland (as defined previously); and
4. Gopher mounds present.

Monitoring surveys at the conservation site in support of the Kaufman HCP started in 2016 and will continue on an annual basis for 20 years, until 2035 when the Kaufman HCP expires.

Surveys for percent cover of vegetation types and pocket gopher mounds will be conducted every year from June 1 through October 31 from 2016 through 2025, then every 2 years from year 2026 through 2035. In alternating years from 2026 through 2035, the sites will still be monitored for any signs of problems in terms of human access, habitat modifications, or noxious weeds. Survey area coverage is approximately 5% of the conservation site each year.

Survey methods are described further in the Kaufman HCP, Appendix C: Leitner Prairie Site Management Plan, Appendix 2: Survey Protocol (Krippner 2016).

After the Kaufman HCP permit has expired at the end of 2035, monitoring surveys will continue to be conducted by the Land Manager every three years in perpetuity.

5.6 Adaptive Management Strategy

The U.S. Department of the Interior defines adaptive management as a structured approach to decision making in the face of uncertainty that makes use of the experience of management and the results of research in an embedded feedback loop of monitoring, evaluation, and adjustments in management strategies (Williams et al. 2009). Uncertainties may include a lack of biological

information for the Covered Species, a lack of knowledge about the effectiveness of mitigation or management techniques, or doubt about the anticipated effects of the Project. Adaptive management is a required component of HCPs that allows for the incorporation of new information into conservation and mitigation measures during HCP implementation. Effective implementation of this approach requires explicit and measurable objectives, and identifies what actions are to be taken and when they are to occur. Adaptive management measures do not generally trigger the need for an amendment.

Adaptive management is standard practice at all federally-approved conservation sites and will be used to ensure success at the conservation site, as described in the following paragraphs. Adaptive management may also be used at the project site if monitoring results indicate that ongoing management of the field areas is no longer benefiting the Yelm pocket gopher. However, this is not a requirement of this HCP. Any adaptive management that might be applied in the field areas would be conducted in coordination with USFWS.

Adaptive management is being used at the conservation site in conjunction with site monitoring to adjust and improve management techniques as site conditions change over time and as new information on the Covered Species and their management becomes available.

Adaptive management is intended to improve the effectiveness of ongoing management to achieve the biological goals for the Covered Species and their habitat. To ensure that management actions remain focused on the biological goals and objectives specified in the conservation program, the following remedial actions will be employed if the conservation program's specified goals and objectives are not met:

If any unauthorized human access or activities occur on the conservation site, the Land Manager will increase monitoring and patrol of the site and install additional signage delineating property boundaries with trespass warnings. If these activities continue, improved fencing intended to restrict human access may be installed or other means may be used to prevent human entry. Fencing may include locked gates to control access points to the properties. Any fences and gates will be patrolled and maintained as necessary to continue to control unauthorized access (Krippner 2016).

If performance targets are not met in a given monitoring year, management actions will be adjusted, or new techniques will be tested with the purpose of meeting performance targets in future years. All performance standards for measuring the success of Leitner Prairie restoration efforts aimed at conserving the Yelm pocket gopher were met in Year 5 (2020). These include standards for woody vegetation, forb cover, high quality native grassland and gopher occupancy. Year 10 (2025) standards for forb cover, high quality native grassland and gopher occupancy were also met ahead of schedule in Year 5 (2020). Targeted herbicide and prescribed burning (when conditions allow) followed by native seeding are being conducted each year to ensure that all of the performance standards for Leitner Prairie are met by Year 10 (2025) (CNLM 2020).

Uncertainty regarding biological or ecological factors on the project and conservation sites that can be affected with recurring management actions (such as new management techniques to control invasive and woody plant species) may be addressed by testing and comparing alternative approaches with control treatments. If field testing is conducted,

results will be evaluated, and subsequent management will be modified to reflect the improved understanding resulting from such testing. The study design, methods, results, and modifications to ongoing management activities will be described in the annual report. Any change/adaption to the management regime will be based on best available science and focused on ensuring that the biological goals described in the HCP are achieved.

5.7 Reporting

The Applicant is responsible for reporting project activities during the permit term for this HCP. The Land Manager for the Kaufman HCP is responsible for reporting on monitoring and management results for the conservation site as described in the Kaufman HCP.

Project Site

The Applicant will provide a report each year of the permit term documenting the following:

1. Brief summary or list of project activities accomplished during the reporting year (e.g. this includes development/construction activities until such time as these activities are complete).
2. Ongoing tally of the functional-acres of habitat impacted.
3. Description of any take of the covered species observed (includes cause of take, form of take, take amount, location of take and time of day, and deposition of dead or injured individuals).
4. Description of any minor or major amendments that the Applicant intends to seek or has discussed with the Service.
5. Description of ongoing management and any restoration activities in the East, South, and North Field areas.
6. Confirmation that the endowment is sufficient to cover the cost of annual mowing through the end of the 20-year Permit Term.

Annual reports will be provided every year of the 20-year permit term. Templates for the annual report are provided in Appendix D.

Conservation Site

For the conservation site, the Land Manager for the Kaufman HCP provides an annual report until the Kaufman HCP expires in 2035 and a report every three years in perpetuity to USFWS describing monitoring and management activities for the prior and upcoming years and the status of the conservation site. To date, Year 1 through 5 (2016 through 2020) annual reports have been submitted to USFWS.

The Annual Report required until 2035 for the conservation site includes:

1. Activity and date of conservation actions since last monitoring report.
2. Current on-site conditions that are or may be adversely affecting Covered Species and their habitat, as well as any actions being undertaken or contemplated to address such conditions.
3. An evaluation of how conservation goals and performance standards are being met; what activities need to be taken to meet them in future years (per the Adaptive Management Strategy); or recommendations for revisions to goals and performance standards if changed circumstances have occurred.
4. Adaptive management actions that have been implemented or tested and the results of these actions. Adaptive management is likely to include changes to the type of or timing of mowing, seeding, or invasive species management in order to increase cover of native prairie vegetation and forage for gophers.
5. Conservation actions anticipated prior to the next monitoring report submission.

After the Kaufman HCP expires in 2035, the Land Manager will provide a monitoring report to USFWS every three years to document site conditions, species observations, and conservation actions taken to improve habitat for Covered Species.

Compliance monitoring for the Kaufman HCP includes providing documentation to USFWS that describes when mitigation credits are formally dedicated to this project.

Chapter 6 Plan Implementation

6.1 Plan Implementation

The Applicant is responsible for project site monitoring and annual reporting each year of the permit term.

The Conservation Plan for Leitner Prairie conservation site is currently being implemented by the Land Manager in accordance with the Kaufman HCP.

6.2 Changed Circumstances

Changed circumstances include natural events such as fire, flood, climate change, earthquake, new species invasions, or disease; the listing of other species within the plan area that may be affected by covered activities or other events that could affect the Leitner Prairie Land Manager's or the Applicant's ability to meet the biological goals and objectives of the HCP.

Project Site

Conservation on the project site is limited to field maintenance activities that benefit the Yelm pocket gopher. There are no specific biological objectives to achieve other than maintaining grassland in these areas. Fire, if it occurs, is not expected to spread very far due to the regular mowing (approximately 4 times per year during the growing season) that will occur in part to prevent fire. If needed, any areas affected by fire will be reseeded with native grasses and forbs. Flooding, if it occurs, would be a natural event in the wet winter months and no action should be required to alleviate it in the fields. Earthquakes are similar in that they are natural events and no

action should be required to alleviate their possible ground disturbing effects on gopher burrows. Climate change is expected to result in warmer temperatures overall, more precipitation in the winter and less in the summer. While this may affect the composition of the grassland vegetation community over time, it is not expected to be detrimental to gophers because they store food in underground food caches. Disease is not something that will be monitored, but if gopher mounds are suddenly absent from previously occupied areas, this will be reported in the annual report so that state or federal biologists can, if deemed necessary, follow-up with further studies. New species invasions may include the spread of noxious weeds. If a new noxious weed appears to be degrading grassland conditions, then weed control measures will be used to eradicate or manage it as recommended by the Thurston County noxious weed control board. In the unlikely event that management actions are required to address changed circumstances, contingency funds from the endowment will be used to address them and maintain grassland habitat for the Yelm pocket gopher on the project site.

Conservation Site

Changed circumstances for the conservation site must be addressed in perpetuity by the Land Manager in accordance with the Kaufman HCP (Krippner 2016) and the terms and conditions of the ITP for the Kaufman HCP. To address any changed circumstances, the Land Manager will alter or adapt site management actions using best available science to promote the continued goals and objectives of habitat conservation for the Covered Species. If any do occur, USFWS will be consulted to adjust minimization or mitigation measures to address these circumstances. Site management actions will be altered/adapted using best available science to promote the continued goals and objectives of habitat conservation for the Covered Species. Any costs of these activities will be covered by Kaufman Construction & Development, Inc. as part of ongoing management of the Leitner Prairie conservation site as described in the Kaufman HCP.

6.3 Unforeseen Circumstances

Unforeseen circumstances include circumstances that were not anticipated by the Applicant or USFWS during the preparation of the HCP that result in a substantial and adverse change in the status of the Covered Species. Unforeseen Circumstances are defined by Federal regulation (50 CFR §17.3) as "changes in circumstances affecting a species or geographic area covered by a conservation plan or agreement that could not reasonably have been anticipated by plan or agreement developers and the USFWS at the time of the conservation plan's or agreement's negotiation and development, and that result in a substantial and adverse change in the status of the covered species."

USFWS bears the burden of demonstrating that Unforeseen Circumstances exist, using the best scientific and commercial data available. If an Unforeseen Circumstance occurs during the term of the HCP, and if USFWS determines that additional conservation and mitigation measures are necessary to respond to such Unforeseen Circumstances, then USFWS may require more conservation measures of the Permittee, but only if such measures are limited to modifications within conserved habitat areas, if any, or the HCP's operating conservation program for the affected species, and if such measures maintain the original terms of the HCP to the maximum extent possible.

Notwithstanding the foregoing paragraph:

1. USFWS will clearly document any findings of Unforeseen Circumstances. In determining whether any event constitutes an unforeseen circumstance, USFWS will consider, but not be limited to, the following factors: 1) the extent of the current range of affected species, 2) percentage of range adversely affected by the HCP, 3) the percentage of range of the affected species conserved by the HCP, 4) the ecological significance of that portion of the range affected by the HCP, 5) the level of knowledge about the affected species and habitat and the degree of specificity of the species' conservation program under the HCP, and 6) whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

2. USFWS will not require the commitment of additional land, water, or financial compensation without the consent of the Applicant or impose additional restrictions on the use of land, water, or natural resources otherwise available for use by the Applicant under the original terms of the HCP, including additional restrictions on covered actions that are permitted under the HCP.

3. Nothing in this HCP will be construed to limit or constrain USFWS or any other governmental agency from taking additional actions at its own expense to protect or conserve a species included in the HCP. Nothing in this agreement allows the Federal government or any other party to take any portion of this property without property owner agreement.

In the event of Unforeseen Circumstances USFWS will provide written notice (except where there is substantial threat of imminent, significant adverse impacts to a Covered Species) to the Applicant with a detailed statement of the facts regarding the unforeseen circumstance involved, the anticipated impact(s) to the Covered Species and their habitat(s), and all information and data that supports the assertion. In addition, the notice will include any proposed conservation measure(s) that is believed would address the Unforeseen Circumstance, an estimate of the cost of implementing such conservation measure(s), and the likely effects upon the Applicant. No additional cost may be required of the Applicant should additional measures need to the implemented.

6.3.1 Evaluation of Unforeseen Circumstances

During the period necessary to determine the nature and location of additional or modified mitigation, the USFWS may perform an analysis of the Covered Species or its habitat. The Applicant may submit additional information to the USFWS. The USFWS may use requested or provided information to propose modifications or redirection of existing conservation measures.

6.3.2 The "No Surprises" Regulations

The USFWS "No Surprises" regulations (69 FR 71723) states that if the Applicant is properly implementing an HCP that has been approved by USFWS, no additional commitment of resources beyond that already specified in the plan will be required. "Properly implemented conservation plan" means any HCP and permit whose commitments and provisions have been and are being fully implemented by the Applicant and in which the Applicant is in full

compliance with the terms and conditions of the permit, so the HCP is consistent with the agreed-upon operating conservation program for the project. A properly-implemented conservation plan for the HCP includes implementation of all elements of the conservation plan, including the Adaptive Management, Monitoring Program, and responses to Changed Circumstances.

The Applicant seeks the regulatory (No Surprises) assurances for the Covered Species in the plan. In accordance with No Surprises, the Land Manager for the conservation site will be responsible for implementing and funding adaptive management and remedial measures in response to any Changed Circumstances as described in the HCP. The Land Manager would only be obligated to address Unforeseen Circumstances within the specified limits described above.

The Applicant understands that No Surprises assurances are contingent on the proper implementation of the ITP and the HCP. The Applicant also understands that USFWS may suspend or revoke the Federal permit, in whole or in part, in accordance with Federal regulations (50 CFR Section 13.27 and 13.28 and other applicable laws and regulations) in force at the time of such suspension if the Applicant fails to comply with the agreement.

6.4 Amendments

It may be necessary at some time over the duration of the proposed permit for the USFWS and the Applicant to clarify provisions of the HCP or the requested ITP with respect to program implementation or the meaning and intent of language contained in these documents. Such clarifications will not change the substantive provisions of any of the documents in any way, and will not increase the amount, extent, or duration of permitted take of Covered Species, but merely clarify and make more precise the existing provisions.

In addition, it may be necessary to make administrative changes or minor modifications to the documents at some time over the duration of the proposed permit. Such changes will not result in substantive changes to any provisions of the documents. Examples of such administrative changes or minor modifications include correction of typographic errors in the documents, changes in the legal business name or mailing address of a permittee, or clarification of reporting procedures. Requests for administrative changes and minor modifications must be received in writing and may be reviewed and approved by the USFWS Washington Fish and Wildlife Office or the USFWS Regional Office in accordance with applicable regulations and policies (50 CFR 13).

Except as provided for above, the HCP and the ITP may not be amended or modified in any way without the written approval of the Applicant and the USFWS. Major amendments to the HCP or the ITP would be required for changes in location, covered activity, type or amount of take, or covered species. Examples of changes requiring major amendments to the documents include the listing of a species not currently addressed in the HCP that may be affected by the Covered Activities; the modification of any Covered Activity, minimization, or mitigation measure under the HCP, including funding, that may affect the type or amount of take, the effects of the Covered Activities, or the nature or scope of the minimization or mitigation measures in a manner or to an extent not previously considered in issuing the ITP; or any other modification of the Covered Activities that causes an effect to the Covered Species or their designated critical habitat not considered in the original ITP.

Such major amendments will be processed by the USWFS in accordance with the provisions of the ESA and the applicable regulations (50 CFR 13 and 17) and will be subject to the appropriate level of environmental review under the provisions of NEPA.

6.5 Permit Suspension/Revocation

The USFWS may suspend or revoke their permit if the Applicant fails to implement the HCP in accordance with the terms and conditions of the permit or if suspension or revocation is otherwise required by law. The USFWS may suspend or revoke the Section 10(a)(1)(B) permit, in whole or in part, in accordance with the ESA, associated implementing regulations, or other applicable laws and regulations in force at the time of such suspension or revocation.

6.6 Permit Renewal

If unanticipated construction delays or other delays preclude completion of the project during the requested duration of the ITP, the Applicant may need to submit a formal request to USFWS to renew the permit.

Upon expiration, a Section 10(a)(1)(B) permit may be renewed, provided that the issued permit is renewable, and that biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP. To renew the permit, the Applicant shall submit to the Service, in writing:

- a request to renew the permit referencing the original permit number;
- certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, any changes to the original information must be listed and described clearly;
- a description of any take that has occurred under the existing permit; and
- a description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.

If upon review of current environmental baseline and status of the species information and consideration of the future proposal the Service concurs with the information provided in the request, it shall renew the permit consistent with permit renewal procedures required by the regulations in existence at time of renewal. If the Applicant fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration.

Chapter 7 Funding Assurances

An HCP submitted in support of a Section 10 permit application must specify the funding that will be available to implement the minimization and mitigation measures identified in the plan [16 U.S.C. § 1539(a)(2)(A)(i)-(iv); 50 C.F.R. § 17.22(b)(1)(iii)].

Project Site: The total cost estimated for field maintenance during the 20-year permit term is provided in Appendix E. This includes the annual cost for mowing the three fields (26 acres total in size), the estimated cost of equipment replacement, inflation adjustments, and a 10% contingency fund. Costs for reporting project activities during the permit term for this HCP are

negligible. Funding for the field maintenance during the 20-year permit term is assured by a dedicated endowment funded by St. Martin's Abbey. The Abbey endowment resolution is provided in Appendix F. Confirmation that the endowment amount is sufficient to cover the cost of mowing through the end of the 20-year permit term will be provided each year in the annual report.

Conservation Site: The Applicant secured offsetting mitigation and provided for the continued perpetual operation and maintenance of the site to conserve the Yelm pocket gopher. The purchase agreement documenting this transaction from Kaufman Construction & Development, Inc. from their Leitner Prairie conservation site is provided in Appendix C. The conservation site credit purchase and agreement will be finalized, and related documentation will be provided to the USFWS prior to any ground disturbing activities at the project site.

Because perpetual operation and maintenance remains the obligation of the Land Manager of that site, and because financial arrangements providing for these ongoing activities have been completed, the Applicant believes that they have fulfilled the financial assurances required to meet permit issuance criteria.

Chapter 8 Alternatives to the Taking

8.1 Summary

An HCP is required to describe "what alternative actions to such taking the Applicant considered and the reasons why such alternatives are not being utilized" [ESA §10(a)(2)(A)(iii)].

8.2 Alternative #1

Because the property is known to be occupied and Yelm pocket gophers and individuals may occur anywhere on the site, it is not possible to develop, redevelop, and maintain areas on the project site while completely avoiding all impacts to the species and its habitat.

Because construction and other project activities proposed on the project site are otherwise lawful activities for which incidental take could be authorized under Section 10 of the ESA, the Applicant has decided to move forward with the proposed activities by pursuing an ITP.

Literature Cited

Baker, R. J., R. D. Bradley, and L. R. McAliley, Jr. 2003. Pocket Gophers. Pp. 276-287 *in* G. A. Feldhamer, B. C. Thompson, and J. A. Chapman. Wild Mammals of North America: Biology, Management, and Conservation (2nd ed.). John Hopkins University Press, Baltimore, MD. 1,232 pp.

Center for Natural Lands Management. 2020. Year 5 – Annual Report for 2020: Leitner Prairie and Deschutes Corridor (MBW090). Prepared for Kaufman Holdings, Inc., Kaufman Real Estate, LLC, and Liberty Leasing & Construction, Inc. December 17, 2020.

Chase, J. D., W. E. Howard, and J. T. Roseberry. 1982. Pocket gophers. Pp 239-255 *in* J. A. Chapman and G. A. Feldhamer (eds.). Wild Mammals of North America. John Hopkins University Press, Baltimore, MD. 1,147 pp.

Dalquest, W. W. 1948. Mammals of Washington. University of Kansas Publications, Museum of Natural History 2:1- 444.

Drost, B. W., G. L. Turney, N. P. Dion, and M. A. Jones. 1998. Hydrology and Quality of Ground Water in Northern Thurston County, Washington. U.S. Geological Survey. Water-Resources Investigations Report 92-4109 [Revised].

Krippner Consulting, LLC. 2016. The Kaufman Habitat Conservation Plan for Taylor's Checkerspot Butterfly (*Euphydyas editha taylori*); Streaked horned lark (*Eremophila alpestris strigata*); and two subspecies of the Mazama Pocket Gopher (*Thomomys mazama pugetensis* and *Thomomys mazama yelmensis*); in Thurston County, Washington. Prepared for Kaufman Holdings, Inc.; Kaufman Real Estate, LLC; and Liberty Leasing & Construction, Inc. January 2016. This document can be accessed at: https://ecos.fws.gov/docs/plan_documents/thcp/thcp_1464.pdf

Olson, G.S. 2011. Mazama pocket gopher occupancy modeling. Washington Department of Fish and Wildlife, Olympia, Washington. 45pp.

Reichman, O. J., and E. W. Seabloom. 2002. The role of pocket gophers as subterranean ecosystem engineers. Trends in Ecology and Evolution 17: 44-49.

Stinson, D. W. 2005. Washington State Status Report for the Mazama Pocket Gopher, Streaked Horned Lark, and Taylor's Checkerspot. Washington Department of Fish and Wildlife, Olympia. 129+ xii pp.

Stinson, D. W. 2019. DRAFT Mazama Pocket Gopher Recovery Plan and Periodic Status Review. Washington Department of Fish and Wildlife, Olympia. 100 pp.

Steinberg, E. K. 1996. Population studies and management of the threatened Mazama pocket gopher: a regional perspective. Final Report, Contract #WAFO-092795, The Nature Conservancy. 50 pp.

Sustainable Thurston. 2011. Draft Housing Panel White Paper, September 2011. Thurston Regional Planning Council, Olympia, WA.

USFWS (U.S. Fish and Wildlife Service) and NMFS (National Marine Fisheries Service). 2016. Habitat Conservation Planning and Incidental Take Permit Processing Handbook. U. S. Department of the Interior, U. S. Fish and Wildlife Service, Arlington, Virginia, and U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Silver Spring, Maryland.

USFWS (U.S. Fish and Wildlife Service). 2014a. Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Olympia Pocket Gopher, Roy Prairie Pocket Gopher, Tenino Pocket Gopher, and Yelm Pocket Gopher, With Special Rule; Final Rule. Federal Register 77, (April 9, 2014), No. 68:19760-19796.

USFWS (U.S. Fish and Wildlife Service). 2014b. Endangered and Threatened Wildlife and Plants; of Critical Habitat for Mazama Pocket Gophers; Final Rule. Federal Register 79, (April 9, 2014), No. 68:19712-19757.

USFWS (U.S. Fish and Wildlife Service). 2015. Mazama Pocket Gopher Conservation Strategy and Mitigation Guidance. Washington Fish and Wildlife Office, Lacey, Washington. Memorandum (July 1, 2015).

Vaughan, T. A. 1961. Vertebrates inhabiting pocket gopher burrows in Colorado. Journal of Mammalogy 42:171-174.

Vaughan, T. A. 1974. Resource allocation in some sympatric subalpine rodents. Journal of Mammalogy 55:764-795.

Verts, B. J., and L. N. Carraway. 2000. *Thomomys mazama*. Mammalian Species 641:1-7.

Williams, B.K, R.C. Szaro, and C.D. Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington DC.

Witmer, G. W., R. D. Sayler, and M. J. Pipas. 1996. Biology and habitat use of the Mazama pocket gopher (*Thomomys mazama*) in the Puget Sound area, Washington. Northwest Science 70:93-98.

Appendix A –Data Forms and Photos

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM1

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM1	Plot Location: Near north boundary of fenced play field area
Soil Texture and Color: 0-12" – 10 YR 2/2 sandy loam 12-16" – 10YR 3/2 gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): None known or apparent
NRCS Mapped soil type: Indianola loamy sand (3 to 15% slopes)	Difference between mapped soil type and actual (if any): Yes – actual soil is sandy loam in A horizon and gravelly sandy loam in B horizon
Percent cover of grasses: 70%	Percent cover of forbs: 40%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 3 – *Agrostis sp.; Poa sp.; Holcus sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 – *Trifolium repens; Plantago lanceolata; Hypochaeris radicata*
Other vegetation (shrubs or trees) in plot or representative area: Mosses; *Mahonia aquifolium; Pseudotsuga menziesii*	
Gopher mounds observed in plot (yes/no/maybe): No, but mole mounds are prevalent	Gopher mound distribution observed in area represented by this plot: A low density of gopher mounds has been observed in this area to date.
Approximate distance to other known potential habitat or occupied area: Within a habitat area	Ongoing vegetation management: Brush and grass cut approximately 4 times/year starting in March, then every other month during the growing season

SM1 Photos (2-11-16) and Summary Description

View North

View East

View South of elevated track

View West

SM1 is located in an occupied habitat area (the East Field) with sandy loam and gravelly sandy loam soils dominated by weedy grasses and forbs. Gopher mound density appears to be low overall in this area. This open field area encompasses approximately 14 acres of sandy gravelly soil that has been disturbed by activities including an elevated running track. Current maintenance of this area includes mowing approximately 4 times during the growing season. The area bordering the forest near SM1 is currently being used for staging wood chips and other landscape-related debris. It is located near potential habitat on private properties to the north and east. Other data plots that characterize this area include SM2-4 and SM 14-15.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM2

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM2	Plot Location: Near northeast play field area boundary
Soil Texture and Color: 0-24" 10YR 2/2 loamy sand with some gravel	Soil Disturbance (compaction, past grading or filling, etc.): None known or apparent
NRCS Mapped soil type: Indianola loamy sand (3 to 15% slopes)	Difference between mapped soil type and actual (if any): Yes – actual soil has some gravel mixed with the matrix of loamy sand
Percent cover of grasses: 50%	Percent cover of forbs: 40%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 3 - *Agrostis sp.; Dactylis glomerata; Holcus sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 - *Rumex acetosella; Plantago lanceolata; Hypochaeris radicata*
Other vegetation (shrubs or trees) in plot or representative area: Mosses; *Hedera helix* and *Pseudotsuga menziesii* nearby	
Gopher mounds observed in plot (yes/no/maybe): No, only mole mounds observed	Gopher mound distribution observed in area represented by this plot: A few potential mounds south of plot
Approximate distance to other known potential habitat or occupied area: Within habitat area	Ongoing vegetation management: Same as SM1

SM2 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM2 is located in an occupied habitat area (the East Field) with loamy sand and gravel soils dominated by weedy grasses and forbs. Gopher mound density appears to be low overall in this area. Current maintenance of this area includes mowing approximately 4 times during the growing season. Other data plots that characterize this area include SM1, SM3-4, and SM14-15.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM3

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM3	Plot Location: At south field edge bordering young forest
Soil Texture and Color: 0-20" – 10YR 2/1 – Loamy sand with some gravel	Soil Disturbance (compaction, past grading or filling, etc.): None noted
NRCS Mapped soil type: Nisqually loamy fine sand (0 to 3% slopes)	Difference between mapped soil type and actual (if any): Yes, actual loamy sand is coarse, not fine, and gravel is present
Percent cover of grasses: 30%	Percent cover of forbs: 15%
Number and name (if known) of grass species with at least 5 percent cover in the plot: Wood chip mulch limits grass and forb cover here 1 – *Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 2 - *Hypochaeris radicata; Taraxacum officinale*
Other vegetation (shrubs or trees) in plot or representative area: Mosses; young *Pseudotsuga menziesii*	
Gopher mounds observed in plot (yes/no/maybe): No gopher mounds, but mole mounds fresh and common	Gopher mound distribution observed in area represented by this plot: Potential gopher mounds observed north and south of plot in grass-forb habitat
Approximate distance to other known potential habitat or occupied area: Within potential habitat area	Ongoing vegetation management: Some open areas beneath trees may be cut 4 times/year: starting in March, then every other month during the growing season

SM3 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM3 is located adjacent to disturbed grass-forb habitat that has a low level of gopher occupancy. Soils are loamy sand with gravel. Most of the Douglas fir tree stands contiguous with this data plot are relatively linear and bordered by developed areas. Shrub cover is dense in the forest stand at the south end of the East Field.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM4

Date (s): 2/11/16; 3/8/16; 5/19/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM4	Plot Location: South portion of field where running track was developed by 1972
Soil Texture and Color: 0-20" – 10YR3/4 – gravelly sandy loam somewhat compacted from 10-20"	Soil Disturbance (compaction, past grading or filling, etc.): Filling and grading has occurred to make this area approximately 3 feet higher than surrounding land for the soft surface running track developed by 1972 (44 years ago), ground is undulating in immediate area
NRCS Mapped soil type: Nisqually loamy fine sand (0 to 3% slopes)	Difference between mapped soil type and actual (if any): Yes – gravelly sandy loam was likely imported from adjacent areas for development of past running track
Percent cover of grasses: 70%	Percent cover of forbs: 40%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 1 - *Anthoxanthum odoratum*	Number and name (if known) of forb species with at least 5 percent cover in the plot 3 - *Hypochaeris radicata*; *Trifolium repens; Plantago lanceolata*
Other vegetation (shrubs or trees) in plot or representative area: mosses	
Gopher mounds observed in plot (yes/no/maybe): Yes	Gopher mound distribution observed in area represented by this plot: Raised area is occupied to some extent
Approximate distance to other known potential habitat or occupied area: Within habitat area	Ongoing vegetation management: Brush and grass cut 4 times/year: starting in March, then every other month during the growing season

Other notes: vole holes; vegetation community similar to middle of field except bunchgrass cover is lower there.

SM4 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM4 is located in an occupied habitat area (the East Field) with gravelly sandy soils dominated by weedy grasses and forbs. Gopher mound density appears to be low and patchily distributed in this area. The open field habitat area encompasses approximately 14 acres of sandy gravelly soil that has been disturbed by activities including an elevated running track that was used in past years. Soils in the immediate vicinity are undulating and more compacted than in areas located north of the soft surface running track (SM1 and SM2). Current maintenance of this area includes mowing approximately 4 times during the growing season. Other data plots that characterize this area include SM1-3, and SM14-15.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM5

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM5	Plot Location: Narrow fenceline area between compacted gravel parking area and stormwater basin
Soil Texture and Color: Gravelly and compacted	Soil Disturbance (compaction, past grading or filling, etc.): Gravelly, compacted soils
NRCS Mapped soil type: Nisqually loamy fine sand	Difference between mapped soil type and actual (if any): No – gravel fill soils present
Percent cover of grasses: 80%	Percent cover of forbs: 30%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 - *Agrostis sp.; Holcus sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 4 - *Hypochaeris radicata*; *Trifolium repens; Plantago lanceolata; Cardamine hirsute*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): No, only mole mounds present	Gopher mound distribution observed in area represented by this plot: Compacted, gravelly soils do not appear to be very suitable for gophers.
Approximate distance to other known potential habitat or occupied area: N/A – Developed area	Ongoing vegetation management: Mowing every two weeks throughout growing season

Notes: The area represented by this plot is mapped as developed because compacted fill soils are very unlikely to provide habitat for gophers.

SM5 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM5 has very compacted gravelly soil that is not likely to provide habitat for gophers. Therefore, this area and others on campus, like other grassy areas sampled between buildings but not formally recorded as data plots, are not considered to be gopher habitat. The areas sampled between buildings typically had a layer of sod (3-4" deep) underlain by hardpan gravel fill.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM6

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM6	Plot Location: Past tennis court area, south of existing ballfield near south campus boundary
Soil Texture and Color: 0-12" - compacted sand >12" – compacted gravel	Soil Disturbance (compaction, past grading or filling, etc.): Yes, soils have been filled, graded, and compacted for tennis courts
NRCS Mapped soil type: Indianola loamy sand	Difference between mapped soil type and actual (if any): Yes – soils have been filled, graded, and compacted
Percent cover of grasses: 20%	Percent cover of forbs: 60%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 - *Poa sp.; Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 2 - *Trifolium repens; Hypochaeris radicata*
Other vegetation (shrubs or trees) in plot or representative area: mosses	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: No gopher mounds observed in developed area represented by this plot.
Approximate distance to other known potential habitat or occupied area: N/A – Developed area	Ongoing vegetation management: Mowing every two weeks throughout growing season

Other notes: The area represented by this plot is mapped as developed because compacted fill soils are very unlikely to provide habitat for gophers. Surface water ponds here during heavy precipitation events.

SM6 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM6 has very compacted gravelly soil that is not likely to provide habitat for gophers. It is the site of a former tennis court. Therefore, this area and others on campus, like other grassy areas sampled between buildings but not formally recorded as data plots, are not considered to be gopher habitat.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM7

Date (s): 2/11/16; 3/8/16; 5/4/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM7	Plot Location: mowed field referred to as South Field, south of Abbey Way SE
Soil Texture and Color: 0-20" – 2.5Y 4/3 – gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): According to monks present in 1960s, soils from I-5 construction were dumped and spread here; aerial imagery from 1965 indicates this as well.
NRCS Mapped soil type: Everett very gravelly sandy loam, 3-15% slopes	Difference between mapped soil type and actual (if any): May be less gravelly than the mapped soil type
Percent cover of grasses: 80%	Percent cover of forbs: 40%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 - *Agrostis sp.; Poa sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 - *Hypochaeris radicata*; *Trifolium repens; Plantago lanceolata*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): Yes	Gopher mound distribution observed in area represented by this plot: Gopher mounds recorded by WDFW in this area in summer 2015
Approximate distance to other known potential habitat or occupied area: In an occupied area	Ongoing vegetation management: Mowing every two weeks throughout growing season

SM7 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM7 and SM8 characterize the South Field south of Abbey Way. Gopher mounds were surveyed by WDFW in 2015 in this field and in the North Field north of Abbey Way. According to monks present in 1960s, soils from I-5 construction were dumped and spread here; aerial imagery from 1965 indicates this too. Soils are gravelly sandy loam. This field is mowed every two weeks throughout the growing season. Since Abbey Way is not a wide or busy road, it is not likely to be a barrier to gopher dispersal. Therefore, the gopher population likely occupies approximately 14 acres of relatively contiguous open habitat in this area.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM8

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM8	Plot Location: mowed field referred to as South Field, south of Abbey Way SE
Soil Texture and Color: Similar to SM7	Soil Disturbance (compaction, past grading or filling, etc.): Same as SM7
NRCS Mapped soil type: Giles silt loam (3 to 15% slopes)	Difference between mapped soil type and actual (if any): Yes – actual soil is gravelly sandy loam
Percent cover of grasses: 100%	Percent cover of forbs: 15%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 1 – *Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 4 - *Trifolium repens; Rumex acetosella; Plantago lanceolata; Hypochaeris radicata*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: Gopher mounds recorded by WDFW in this area in summer 2015
Approximate distance to other known potential habitat or occupied area: In an occupied area	Ongoing vegetation management: Mowing every two weeks throughout growing season; irrigation on approximately 20% of the field south of Abbey Way

SM8 Photos (2-11-16) and Summary Description

	
View North	View East
	
View South	View West
Same description as SM7. The northeast corner of the field south of Abbey Way is irrigated in summer (approximately 20% of the total field area south of Abbey Way).	

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM9

Date (s): 2/11/16; 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM9	Plot Location: Grass-dominated field north of Abbey Way and east of City stormwater facility, referred to as North Field
Soil Texture and Color: 0-20" – 10YR 4/3 – silty clay loam	Soil Disturbance (compaction, past grading or filling, etc.): No soil disturbance noted.
NRCS Mapped soil type: Bellingham silty clay loam	Difference between mapped soil type and actual (if any): No difference observed.
Percent cover of grasses: 100%	Percent cover of forbs: 20%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 - *Festuca sp.; Poa sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 –*Hypochaeris radicata; Taraxacum officinale; Vicia sp.*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: Gopher mounds recorded by WDFW in this area in summer 2015
Approximate distance to other known potential habitat or occupied area: In an occupied area	Ongoing vegetation management: Mowing 3-4 times during the growing season

SM9 Photos (2-11-16) and Summary Description

View North

View East

View South

View West

SM9 characterizes the grass-dominated field north of Abbey Way. This is notably the only area known to be occupied by gophers at Saint Martin's where soils do not appear to be disturbed and they match the mapped soil type: Bellingham silty clay loam. This field is mowed 3-4 times throughout the growing season. Since Abbey Way is not a wide or busy road, it is not likely to be a barrier to gopher dispersal. Therefore, the gopher population occupies approximately 14 acres of relatively contiguous open habitat in this area. This habitat area is also contiguous with suitable habitat on land owned by Washington State Department of Ecology.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM10

Date (s): 3/8/16; one check for mounds mid-summer 2016	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM10	Plot Location: Grassy field in southwest corner of campus
Soil Texture and Color: 0-20" – 10YR 2/2 loamy sand 20-25" – 10YR 3/3 loamy sand	Soil Disturbance (compaction, past grading or filling, etc.): None noted
NRCS Mapped soil type: Indianola loamy sand, 0-3% slopes	Difference between mapped soil type and actual (if any): None noted
Percent cover of grasses: 85%	Percent cover of forbs: 30%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 3 – *Festuca sp.; Holcus sp. Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 6 - *Trifolium repens; Rumex acetosella; Plantago lanceolata; Taraxacum officinale; Thymus sp.; one unknown weedy forb*
Other vegetation (shrubs or trees) in plot or representative area: Mosses	
Gopher mounds observed in plot (yes/no/maybe): No, but lots of fresh mole mounds are present	Gopher mound distribution observed in area represented by this plot: None observed in this field area or nearby
Approximate distance to other known potential habitat or occupied area: 1,200 feet southwest of a grass-forb patch that is approximately 6 acres in size	Ongoing vegetation management: Brush and grass cut 4 times/year: starting in March, then every other month during the growing season

Notes: This small patch is surrounded by developed areas and forest, and campus buildings and forest separate this patch from the nearest other grass-forb patch that is approximately 6 acres in size. Soils were saturated at 25" below the surface. Wetlands are nearby in the forest.

SM10 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

SM10 characterizes the grassy field at the southwest corner of the site that is isolated from other habitat areas by roads, buildings, and small patches of forest and wetlands. This is notably the only data plot (besides SM9) where soils appear undisturbed and matched to the mapped soil type, in this case: Indianola loamy sand. This field is mowed approximately 4 times throughout the growing season. Mole mounds are abundant here, but no gopher mounds have been observed to date in this isolated habitat patch, approximately 1.4 acres in size.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Soil and vegetation data collected in 10 m^2 area – 10 meters of the approximately 1-meter wide grassy strip

SM11

Date (s): 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM11	Plot Location: Grassy strip along south edge of campus between a parking lot and commercial properties
Soil Texture and Color: 0-16" – 10YR 2/2 – gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): Filling and grading likely occurred here, associated with the new building and parking lot, built approximately 5 years ago
NRCS Mapped soil type: Indianola loamy sand, 0-3% slopes	Difference between mapped soil type and actual (if any): Yes, actual soil is gravelly sandy loam
Percent cover of grasses: 100%	Percent cover of forbs: 5%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 – *Festuca sp.; Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 - *Hypochaeris radicata; Taraxacum officinale; Vicia sp.*
Other vegetation (shrubs or trees) in plot or representative area: Young *Pseudotsuga menziesii and Thuja plicata*	
Gopher mounds observed in plot (yes/no/maybe): No, only mole mounds observed	Gopher mound distribution observed in area represented by this plot: None observed in this area
Approximate distance to other known potential habitat or occupied area: 1,000 feet south of a grass-forb patch that is approximately 6 acres in size	Ongoing vegetation management: Mowing every two weeks throughout growing season

Notes: This narrow landscape strip planted with trees is surrounded by developed areas and forest, and campus buildings, compacted fill soils and forest separate this area from occupied habitat.

SM11 Photos (3-8-16) and Summary Description

	
View North	View East
	
View South	View West

SM11 characterizes a narrow grassy strip of land at the southwest corner of the site that is connected with the field described by SM10. Soils are likely disturbed by past development activities. Mowing occurs every two weeks during the growing season. Tree roots here limit burrowing habitat and the percent cover of forbs is very low (5%), likely limiting forage opportunities for gophers. Mole mounds were observed, but no gopher mounds have been observed to date in this area.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM12

Date (s): 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM12	Plot Location: Tree border along south boundary of campus between gravel parking area for overflow parking and major arterial
Soil Texture and Color: 0-14" – 10YR 2/2 – gravelly sandy loam with large rocks	Soil Disturbance (compaction, past grading or filling, etc.): Yes, very compacted soil below 14" deep
NRCS Mapped soil type: Nisqually loamy fine sand, 0-3% slopes	Difference between mapped soil type and actual (if any): Yes, actual soil is gravelly sandy loam, compacted below 14" deep
Percent cover of grasses: 40%	Percent cover of forbs: 60%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 1 – *Holcus sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 4 - *Taraxacum officinale; Geranium robertianum; Lapsana communis; Cardamine hirsute*
Other vegetation (shrubs or trees) in plot or representative area: *Pseudotsuga menziesii; Rubus armeniacus; Hedera helix*	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: None observed in area
Approximate distance to other known potential habitat or occupied area: Trees lining the south boundary are approximately 300 feet south of a 14-acre patch of grass-forb that provides potential habitat for gophers.	Ongoing vegetation management: Occasional weed management beneath trees

Notes: Tree canopy here is planted in two rows bordering the campus boundary; understory grasses and forbs are sparse beyond the plot area itself and the area is narrow and bordered by developed areas (roads and compacted fill).

SM12 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

The tree canopy habitat contiguous with SM12 is narrow, linear and bordered by developed areas. It is unlikely to provide habitat for gophers, except perhaps near open field areas or where grasses and forbs provide adequate forage beneath the tree canopy. The soil is gravelly, sandy loam, and is compacted below 14” deep. Compacted soils may limit the potential of this area to provide habitat for gophers. Weeds are occasionally managed below the tree canopy.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot area in this case encompasses the strip of loose sand and gravel soil that provides burrowing habitat for gophers.

SM13

Date (s): 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM13	Plot Location: Immediately north of ball field fence in southeast portion of site
Soil Texture and Color: 0-16" – loose sand and gravel fill	Soil Disturbance (compaction, past grading or filling, etc.): This narrow strip along the fence line of the developed field has been filled with loose sand and gravel
NRCS Mapped soil type: Nisqually fine sandy loam, 0-3% slopes	Difference between mapped soil type and actual (if any): Yes, actual soil is loose sand and gravel fill
Percent cover of grasses: 60%	Percent cover of forbs: 60%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 3 – *Digitaria sp.; Agrostis sp.; Fescue sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 10 – *Trifolium pratense; Trifolium repens; Rumex acetosella; Achillea millefolium; Plantago lanceolata; Cardamine hirsute; Stellaria media; Hypochaeris radicata; Geranium molle;* Species in Apiaceae family
Other vegetation (shrubs or trees) in plot or representative area: mosses	
Gopher mounds observed in plot (yes/no/maybe): Yes	Gopher mound distribution observed in area represented by this plot: 2-3 potential areas of mounding were observed along the fence line outside of the developed ball field in this plot area
Approximate distance to other known potential habitat or occupied area:	Ongoing vegetation management: Regular mowing in the growing season

SM13 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

SM13 characterizes a narrow strip of loose gravel and sand soil that borders a relatively new ball field and fence line. Gopher mounds are clearly present in this border area. SM13 holds the record for the highest number of forb species counted in a plot (10). One of these species is native yarrow. Native lupine (*Lupinus bicolor*) was observed north of this plot in May 2016.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM14

Date (s): 3/8/16; 5/4/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM14	Plot Location: Near forest and base of slope (drumlin), north of running track
Soil Texture and Color: 1-10" – 10YR 2/2 – gravelly loamy sand 10-20" – 10YR 3/4 – gravelly loamy sand	Soil Disturbance (compaction, past grading or filling, etc.): No disturbance is apparent.
NRCS Mapped soil type: Indianola loamy sand, 3-15% slopes	Difference between mapped soil type and actual (if any): Yes – actual soil is loamy sand but is also gravelly
Percent cover of grasses: 75%	Percent cover of forbs: 30%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 – *Agrostis sp.; Dactylis glomerata*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 2 - *Hypochaeris radicata; Plantago lanceolata*
Other vegetation (shrubs or trees) in plot or representative area: Mosses; *Pseudotsuga menziesii* in canopy	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: A few likely gopher mounds are located in this tree canopy area
Approximate distance to other known potential habitat or occupied area: Adjacent to open field area, in an occupied habitat area	Ongoing vegetation management: Regular mowing in growing season: 6 to 10 times per year

Other notes (potential barriers to movement, etc.):

SM14 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

SM14 characterizes East Field edge habitat located next to the track facility. Gopher mounds were observed in this area in June 2015 and May 2016. This area is mowed on a regular basis during the growing season. Grasses and weedy forbs are dominant in the understory. The soil is gravelly loamy sand. This area is mapped as landscape tree and shrub due to the presence of Douglas fir and various landscape trees.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM15

Date (s): 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM15	Plot Location: Grassy area in East Field immediately north of developed track
Soil Texture and Color: 0-20" – 10YR 3/2 – gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): Area was cleared and graded in 2009 for development of adjacent track facility, but soils are not very compacted
NRCS Mapped soil type: On border of Indianola loamy sand, 3-15% slopes and Nisqually fine sandy loam, 0-3% slopes	Difference between mapped soil type and actual (if any): Yes – actual soil is gravelly sandy loam
Percent cover of grasses: 100%	Percent cover of forbs: 20%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 3 – hydroseed mix spread recently here included bluegrass and perennial ryegrass, species observed - *Poa sp.; Agrostis sp.; Lolium perenne.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 5 - *Trifolium repens; Rumex acetosella; Achillea millefolium; Hypochaeris radicata; Taraxacum officinale*
Other vegetation (shrubs or trees) in plot or representative area: Mosses	
Gopher mounds observed in plot (yes/no/maybe): No, only mole mounds	Gopher mound distribution observed in area represented by this plot: Low density of mounds in open field area
Approximate distance to other known potential habitat or occupied area: Within a potential habitat area	Ongoing vegetation management: Brush and grass cut 4 times/year: starting in March, then every other month during the growing season

SM15 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

SM15 characterizes an area of the East Field that was disturbed as recently as 2009 when the new track was constructed. This area was hydroseeded with perennial ryegrass and bluegrass following construction. The soil is gravelly sandy loam and is not compacted. A variety of forbs are also present in this area. No gopher mounds were observed in this general area.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM16

Date (s): 3/8/16	Field Scientists: Linda Krippner; Steve Krippner
Plot Name: SM16	Plot Location: In frisbee golf field immediately north of science building
Soil Texture and Color: 0-3" – 10YR 2/2 - gravelly sandy loam 3-7" – 10YR 3/4 – compacted gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): Same as SM7 Soils were very compacted, particularly below 7"
NRCS Mapped soil type: Everett very gravelly sandy loam, 3-15% slopes	Difference between mapped soil type and actual (if any): Similar to mapped soil, but very compacted
Percent cover of grasses: 80%	Percent cover of forbs: 50%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 1 – *Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 3 - *Trifolium repens; Plantago lanceolata; Hypochaeris radicata*
Other vegetation (shrubs or trees) in plot or representative area: Some wood chip mulch on surface too	
Gopher mounds observed in plot (yes/no/maybe): Yes	Gopher mound distribution observed in area represented by this plot: Mounds were identified in this field by WDFW in summer 2015
Approximate distance to other known potential habitat or occupied area: In an occupied area	Ongoing vegetation management: Mowing every two weeks throughout growing season

SM16 Photos (3-8-16) and Summary Description

View North

View East

View South

View West

The description here is similar to SM7 and SM8, other data plots in the South Field. However, soils are very compacted starting at 7 inches deep. Soil compaction may not be uniform in this area and/or soil may only be compacted near the surface and not at greater depths because gopher mounds were observed within this plot area.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM17

Date (s): 5/8/17	Field Scientists: Linda Krippner
Plot Name: SM17	Plot Location: Grass-forb slope between Harned Hall and O-Grady Library
Soil Texture and Color: 0-16" – 10YR 3/2 – gravelly sandy loam	Soil Disturbance (compaction, past grading or filling, etc.): Soils have likely been disturbed during building construction in the past, they are not the mapped soil type
NRCS Mapped soil type: Nisqually fine sandy loam, 0-3% slopes	Difference between mapped soil type and actual (if any): Yes – actual soil is gravelly sandy loam
Percent cover of grasses: 80%	Percent cover of forbs: 80%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 –*Poa sp.; Agrostis sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 7 - *Trifolium repens; Rumex acetosella; Hypochaeris radicata; Taraxacum officinale; Myosotis discolor; Stellaria media; Plantago lanceolata*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): Maybe, potential mounds are present	Gopher mound distribution observed in area represented by this plot: Low density of mounds present on grassy slope
Approximate distance to other known potential habitat or occupied area: Within a potential habitat area	Ongoing vegetation management: Mowing every two weeks throughout growing season

SM17 Photos (5-8-17) and Summary Description

View North

View East

View South

View West

This west-facing slope between two campus buildings has gravelly, sandy loam soils. Potential gopher mounds are present. A diversity of forbs, preferred gopher forage, is present.

Saint Martin's Abbey/Saint Martin's University Campus HCP
Data forms for characterizing habitat conditions, data plot size is 100 m^2

SM18

Date (s): 5/8/17	Field Scientists: Linda Krippner
Plot Name: SM18	Plot Location: Between Old Main and Harned Hall
Soil Texture and Color: 0-4" – 10YR 3/2 - loam at 4" - hardpan	Soil Disturbance (compaction, past grading or filling, etc.): Soils were hardpan, gravel fill at 4 inches
NRCS Mapped soil type: Nisqually loamy fine sand (0 to 3% slopes)	Difference between mapped soil type and actual (if any): Yes, soils are hardpan at 4 inches
Percent cover of grasses: 80%	Percent cover of forbs: 80%
Number and name (if known) of grass species with at least 5 percent cover in the plot: 2 – *Agrostis sp.; Poa sp.*	Number and name (if known) of forb species with at least 5 percent cover in the plot: 4 - *Trifolium repens; Plantago lanceolata; Hypochaeris radicata; Lotus corniculatus;*
Other vegetation (shrubs or trees) in plot or representative area:	
Gopher mounds observed in plot (yes/no/maybe): No	Gopher mound distribution observed in area represented by this plot: None observed here, likely due to a lack of suitable soils for burrowing
Approximate distance to other known potential habitat or occupied area: Occupied habitat is in close proximity, across the sidewalk in two directions	Ongoing vegetation management: Mowing every two weeks throughout growing season

SM18 Photos (5-8-17) and Summary Description

View North

View East

View South

View West

The soil consists of a 4-inch layer of sod, then gravelly hardpan. This grass lawn area is mowed on a regular basis throughout the growing season. Due to the lack of suitable soils, gophers are not likely to occupy this area. The conditions observed in this plot are typical of the relatively flat areas (likely graded and compacted during development) vegetated by grass lawn located between buildings on campus. This area is mapped as developed due to the lack of suitable burrowing soils.

Appendix B – Best Management Practices

Best Management Practices for St. Martin's Habitat Conservation Plan

These Best Management Practices (BMPs) have been prepared to avoid and minimize impacts to the Yelm pocket gopher on Saint Martin's Campus. The first set of BMPs that follow are those specific to construction activities, and the second set are for landscaping, management and restoration activities. These BMPs should be followed as closely as possible where soils are suitable for gopher burrowing, particularly where forage plants such as grasses and forbs (non-woody, non-grass, herbaceous plants such as dandelions) are also present.

For construction activities in suitable gopher soils:

1) Avoid working in areas with obvious gopher mounding activity.
2) Avoid soil disturbing activities between the dates of March 1 to July 15 as this coincides with the breeding season and mothers with pups will not be able to move out of the way of danger.
3) To minimize soil compaction:
    a. Park vehicles on existing pavement or already graded and compacted areas.
    b. Use low compaction equipment.
    c. Use equipment and machinery with rubber tires inflated to a low psi.
    d. Make the fewest passes over an action area as possible.
    e. Use the smallest machinery for the job possible.
4) Work slowly when disturbing soil to allow more time for animals to move away from the construction area.
5) Minimize the amount of time soil is removed from an area and backfill trenches with the excavated soils as soon as possible following utility or other work. Screen out large rocks, if necessary and possible to restore suitable burrowing soils.
6) Seed or plant disturbed areas with an herbaceous mix (grasses and/or forbs) which complements vegetation adjacent to the affected area, or a native prairie mix whenever possible. Native plants include, but are not limited to, yarrow (*Achillea millefolium*), nodding onion (*Allium cernuum*), camas (*Camassia* spp.), field chickweed (*Cerastium arvense*), California oatgrass (*Danthonia californica*), blue wildrye (*Elymus glaucus*), showy fleabane (*Erigeron speciosus*), Roemer's fescue (*Festuca roemerii*), strawberry (*Fragaria* spp.), prairie junegrass (*Koeleria macrantha*), and lupine (*Lupinus* spp.).
7) Stop work temporarily if a gopher is exposed to allow the animal time to escape by burrowing or running away across the ground surface.
8) If mortality occurs, the body should be collected, placed in a sealed plastic bag, and placed on ice or in a freezer with the following information recorded in pencil or permanent marker and placed in the bag with the animal: the date, location, and name and contact information of the person recording the information. Any mortality should be reported immediately to the Service by contacting the Washington Fish and Wildlife

Office Section 10 Coordinator at WashingtonFWO@fws.gov or (360) 753-9440 and arrangements should be made to provide the animal to the Service.

For landscaping, field management, and ecological restoration activities:

1) Avoid working in areas with obvious gopher mounding activity.
2) Avoid soil disturbing activities more than one foot deep between the dates of March 1 to July 15 as this coincides with the breeding season and mothers with pups will not be able to move out of the way of danger.
3) Minimize the area of disturbance.
4) Use the lightest, smallest equipment possible for the job.
5) Minimize the amount of time that soil is disturbed. Screen out large rocks, if necessary and possible to restore suitable burrowing soils.
6) Use "weed-free" protocols to avoid spreading invasive plant species.
7) Avoid the use of herbicides and pesticides whenever possible. Use more Earth-friendly or natural products to use instead. When these options are limited, use herbicides to control noxious weeds and invasive/nonnative/nuisance vegetation in a manner that avoids non-target plants, such as spot spraying/selective application of herbicide instead of broadcast spraying.
8) Seed or plant disturbed areas with an herbaceous mix (grasses and/or forbs), or a native prairie mix whenever possible. Native plants include, but are not limited to, yarrow (*Achillea millefolium*), nodding onion (*Allium cernuum*), camas (*Camassia* spp.), field chickweed (*Cerastium arvense*), California oatgrass (*Danthonia californica*), blue wildrye (*Elymus glaucus*), showy fleabane (*Erigeron speciosus*), Roemer's fescue (*Festuca roemerii*), strawberry (*Fragaria* spp.), prairie junegrass (*Koeleria macrantha*), and/or lupine (*Lupinus* spp.).
9) Remove encroaching trees and shrubs. Aggressively control and remove nonnative Scot's broom (*Cytisus scoparius*), tall oatgrass (*Arrhenatherum elatius*), laurel spurge (*Daphne laureola*), leafy spurge (*Euphorbia esula*), and tansy ragwort (*Senecio jacobaea*).
10) Stop work temporarily if a gopher is exposed to allow the animal time to escape by burrowing or running away across the ground surface.
11) If mortality occurs, the body should be collected, placed in a sealed plastic bag, and placed on ice or in a freezer with the following information recorded in pencil or permanent marker and placed in the bag with the animal: the date, location, and name and contact information of the person recording the information. Any mortality should be reported immediately to the Service by contacting the Washington Fish and Wildlife Office Section 10 Coordinator at WashingtonFWO@fws.gov or (360) 753-9440 and arrangements should be made to provide the animal to the Service.

Appendix C –Leitner Prairie Mitigation Site Agreement to Purchase Conservation Credits

LEITNER PRAIRIE MITIGATION SITE
AGREEMENT TO PURCHASE CONSERVATION CREDITS

THIS AGREEMENT TO PURCHASE LEITNER PRAIRIE MITIGATION SITE CREDITS ("Agreement") is made by and between KAUFMAN HOLDINGS, INC., a Washington corporation, and KAUFMAN REAL ESTATE, LLC, a Washington limited liability company, and Liberty Leasing, LLC, a Washington limited liability company (jointly, the "Sellers") and St. Martin's Abbey, a Washington public benefit corporation, (the "Buyer") (collectively, the "Parties").

RECITALS

WHEREAS, October 3, 2013, the U.S. Fish and Wildlife Service issued a final rule listing the Taylor's Checkerspot Butterfly as an endangered species and the Streaked Horned Lark as a threatened species under the Endangered Species Act ("ESA") of 1973, 16 U.S.C. §1531 *et seq* (78 Fed. Reg. 61452 (Oct. 3, 2013)); and

WHEREAS, on April 9, 2014 the U.S. Fish and Wildlife Service issued a final rule listing four subspecies of the Mazama pocket gopher as threatened under the ESA (79 Fed. Reg. 19760 (Apr. 9, 2014)); and

WHEREAS, the Sellers own an approximately 36.18 acre conservation site for Taylor's Checkerspot Butterfly, Streaked Horned Lark, and the Yelm subspecies of Mazama Pocket Gopher (*Thomomys mazama yelmensis*) located in Thurston County, Washington, two Parcels, #09200011008 and #12630110600, referred to as the "Leitner Prairie Conservation Site" (hereinafter "Leitner Prairie"); and

WHEREAS, the Sellers have applied to the U.S. Fish and Wildlife Service ("USFWS") and received an incidental take permit pursuant to Section 10(a) of the ESA pursuant to Federal Fish and Wildlife Permit No. TE91853B-0, dated March 21, 2016 ("Kaufman ITP"), attached hereto as **Exhibit A**; and

WHEREAS, the USFWS issued the Kaufman ITP pursuant to the terms and conditions of the approved Kaufman Habitat Conservation Plan ("Kaufman HCP"), excerpts of which are attached hereto as **Exhibit B**, which included a requirement for Sellers to establish and manage Leitner Prairie as a permanent conservation site for covered species; and

WHEREAS, in approving the Kaufman HCP, the USFWS acknowledged that Leitner Prairie provided fourteen (14) acres of mitigation credits in excess of what was required to mitigate the impacts of Sellers' proposed development projects, and that such credits could be sold with proceeds to fund the costs of the Kaufman HCP, including, but not limited to, initial restoration activities and the conservation endowment; and

WHEREAS, One of the fourteen (14) acres of mitigation credits was previously sold, leaving Thirteen (13) acres of available mitigation credits ("Credits") which are units of trade

representing the ecological value of the Leitner Prairie, as measured by acreage, function, and value to the Taylor's Checkerspot Butterfly, Streaked Horned Lark, and the Yelm subspecies of Mazama pocket gopher (*Thomomys mazama yelmensis*); and

WHEREAS, the Buyer intends to prepare a Habitat Conservation Plan ("St. Martin's HCP") identifying proposed development projects and mitigation measures for the same listed species covered by the Kaufman HCP and Kaufman ITP, and wishes to obtain four (4) Credits in Leitner Prairie for use as mitigation pursuant to the St. Martin's HCP for potential impacts that may arise from proposed development.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, it is agreed as follows:

AGREEMENT

1. **Recitals.** The Parties acknowledge that the above recitals are true and correct and are incorporated into this Agreement.

2. **Effective Date.** The Effective Date of this Agreement is the date on which the last of the Parties signs this Agreement. If more than thirty (30) days have transpired between the first and last signature, this Agreement shall be null and void.

3. **Terms of Purchase.** Subject to the terms of this Agreement, and for the consideration herein stated, the Sellers agree to sell and the Buyer agrees to purchase four (4) Credits in Leitner Prairie upon all the terms, covenants, and conditions set forth in this Agreement.

a. The Purchase Price of the Credits is Two Hundred Thousand Dollars ($200,000.00), which shall be paid by the Buyer as described herein, payable to the Sellers via check, cashier's check, or wired federal funds and delivered to 7908 Sweet Iron Court SE, Tumwater WA 98501. Each individual Credit is valued at Fifty Thousand Dollars ($50,000).

b. Upon execution of this Agreement, the Buyer will pay a non-refundable deposit of ten percent (10%) of the Purchase Price, or Twenty Thousand Dollars ($20,000.00) ("Deposit"), as earnest money. The Deposit shall be credited to the balance of the Purchase Price, provided that the Buyer purchases the Credits in accordance with the terms and conditions of this Agreement.

c. Within thirty (30) days of the Effective Date of this Agreement, the Buyer shall retain Krippner Consulting, LLC, to prepare a Habitat Conservation Plan ("St. Martin's HCP") identifying proposed development projects and mitigation measures for the same listed species covered by the Kaufman HCP and Kaufman ITP at the Buyers 5000 Abbey Way SE, Lacey, WA 98503 project which is an ongoing redevelopment and new development project which covers 232 acres of the St. Martin's Abbey Property in Lacey, WA. Within two hundred seventy (270) days of the Effective Date of this Agreement the Buyer and Krippner Consulting, LLC shall

prepare and gain approval from USFWS for St. Martin's HCP, in whole, or in part in phased approvals.

d. Within thirty (30) days of receiving any USFWS approval for the whole, or any part, or phase of the St. Martin's HCP, the Buyer shall deliver to Seller payment of Fifty Thousand Dollars ($50,000.00) per mitigation credit approved, up to but not exceeding Two Hundred Thousand Dollars ($200,000.00) including the deposit. It is mutually agreed and contemplated that there may be multiple payments and closings to accommodate the partial or phased approvals of St. Martin's HCP.

e. Seller shall have no obligation to sell any mitigation credits in whole or part, not paid for in full within 360 days of the Effective Date of this Agreement, and this agreement shall be null and void for mitigation credits not purchased by that date.

4. Transfer of Credits.

a. Within ten (10) days of the Effective Date, the Sellers shall set aside and reserve the Credits for purchase by the Buyer and shall send written notice of such reservation to USFWS.

b. Upon receipt of any payment in whole or in part of the Purchase Price by the Buyer, the Sellers shall transfer the Credits for purchase, along with an executed Bill of Sale, to the Buyer ("Closing") and submit to USFWS a written request to transfer the Credits to the Buyer, along with such other documentation as may be necessary to effect the transfer of the Credits. The Sellers shall provide the Buyer with evidence that the Credits have been transferred. The Credits shall be free of liens, encumbrances, restrictions, rights, and conditions, except those expressly provided for under this Agreement.

c. The Sellers shall bear the risk of loss of the Credits prior to Closing.

d. **The sale is not intended as a sale or transfer to the Buyer of a security, license, lease, easement, or possessory or non-possessory interest in real property, nor the granting of any interest in the foregoing.**

5. Default.

a. If the purchase of the Credits is not consummated because of a default by the Sellers, then the Sellers shall promptly return the Deposit, or Purchase Price, if any, to the Buyer. At its option, the Buyer may pursue an action for specific performance.

b. If the purchase of the Credits is not consummated because of a default by the Buyer, then the Sellers, as their sole remedy, shall have the right to retain the Deposit as full liquidated damages and not as a penalty.

6. Compliance with Permit. After Closing, the Buyer does not assume any obligation to support, pay for, monitor, report on, sustain, continue in perpetuity, manage, or otherwise be obligated or liable for the continued expense or maintenance of the Leitner Prairie. After Closing, the Sellers retain responsibility for compliance with the Kaufman ITP and HCP as to mitigation, permanent conservation, and ongoing maintenance and monitoring of the Leitner Prairie as set forth in the Leitner Prairie Conservation Site Management Plan (Appendix D to the Kaufman HCP, a copy of which is included within **Exhibit B** hereto), subject to the disclaimer under Paragraph 7 of this Agreement.

7. Disclaimer of Liability. The Sellers' duties, rights, responsibilities, and obligations in continued expenses, management, and maintenance of Leitner Prairie are limited to this Agreement, the HCP, and the Kaufman ITP. After Closing, the Sellers are not responsible for and shall not be liable for any act of the USFWS, its employees or agents, in conjunction with valuation of the Credits for purposes of mitigation within the St. Martin's HCP.

8. Indemnification. The Buyer agrees to indemnify the Sellers, its employees, members, managers, affiliates, and agents from any and all liabilities, damages, losses, and costs, including, but not limited to reasonable attorneys' fees, to the extent caused by the negligence, recklessness, or intentional wrongful conduct of the Buyer or anyone employed or used by the Buyer in the performance of this Agreement.

9. Assignment. The Buyer shall not assign or apportion its rights under this Agreement, including its rights to the Credits, either voluntarily or by operation of law, without express written consent of the Sellers, which is to be given in the Sellers' reasonable discretion. Subject to the foregoing limitation, this Agreement shall inure to the benefit of and be binding upon the Parties' respective successors and assigns.

10. Notices. All notices required under this Agreement shall be in writing and shall be sent by certified or registered mail or hand delivered to addresses set out below. Notices shall be deemed delivered and given when mailed, if mailed, or when delivered by hand, upon receipt.

Notices to the Sellers: John and Theresa Kaufman
7908 Sweet Iron Ct. SE
Tumwater, WA 98501
john@kaufmancd.com
theresa@kaufmancd.com

Notices to the Buyer: St. Martin's Abbey
Attn: Andrew Moyer
5000 Abbey Way SE.
Lacey, WA 98503
Amoyer@stmartin.edu

Any notice or demand given, delivered, or made by the United States mail shall be deemed so given, delivered, or made on the third business day after the same is deposited in the United States mail, registered or certified letter, addressed as above provided, with postage prepaid. All Parties agree that any notice may be sent via electronic mail to the above Parties; provided, however, that a copy of notice given via electronic mail is simultaneously sent to the noticed party via overnight delivery. The Buyer and the Seller may from time to time notify the other of changes with respect to whom and where notice should be sent by sending notification of such changes pursuant to this paragraph.

11. Applicable Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Washington.

12. Entire Agreement; Severability. This Agreement contains the entire agreement between the Parties and the Parties agree that no representation was made by or on behalf of the other which is not contained in this Agreement, and that in entering into this Agreement neither

relied upon any representation not especially herein contained. This Agreement supersedes and replaces any prior agreements and understandings, whether oral or written, between the Parties. This Agreement shall not be binding upon the Sellers and the Buyer until executed by an officer of the Sellers and the Buyer, if applicable its corporate seal affixed, and an executed copy of the Agreement has been delivered to the Buyer and the Sellers. In case any term of this Agreement shall be held to be invalid, illegal or unenforceable, in whole or in part, neither the validity of the remaining part of such term or the validity of any other term of this Agreement shall in any way be affected thereby.

13. **Amendments**. This Agreement may not be amended, modified, altered, or changed in any respect whatsoever, except by a further agreement in writing duly executed by each of the Parties. No failure by the Buyer or the Sellers to insist upon the strict performance of any covenant, duty, agreement, or condition to this Agreement or to exercise any right or remedy upon a breach thereof shall constitute a waiver of any such breach or of any other covenant, agreement, term, or condition. The Buyer or the Sellers by notice may, but shall be under no obligation to, waive any of its rights, or any conditions to its obligations hereunder, or any duty, obligation, or covenants. No waiver shall affect or alter this Agreement, but each covenant, term, and condition of this Agreement shall continue in full force and effect with respect to any other then existing or subsequent breach thereof.

14. **Calculation of Time.** Business days shall be computed without including Saturdays, Sundays, or national legal holidays, and any time period ending on a Saturday, Sunday, or national legal holiday shall be extended until 5:00 pm Pacific Standard Time on the next business day.

15. **Counterparts**. This Agreement may be executed in any number of counterparts, any one and all of which shall constitute the Agreement of the Parties and shall be deemed one original instrument. This Agreement may be executed by each party upon a separate copy as attached to another copy in order to form one or more counterparts.

16. **Captions.** The captions of this Agreement have no effect upon its interpretation and are for convenience and ease of reference only.

17. **Representation and Warranty of the Seller**. The Sellers represent and warrant that, as of the Effective Date, the Sellers own the Credits and that the same are transferable to the Buyer. Except as otherwise stated under this Agreement, the Sellers further represent and warrant that they are authorized by USFWS to hold, sell, and transfer the Credits to the Buyer pursuant to the terms and conditions of the approved Kaufman HCP.

18. **Attorneys' Fees.** In the event either of the Parties finds it necessary to bring an action at law or other proceeding against the other to enforce any term, covenant, or condition of this Agreement or any instrument executed pursuant to this Agreement, or by reason of any breach or default under this Agreement, the prevailing party in any such action or proceeding (and any subsequent appeal) shall be paid all costs and reasonable attorneys' fees by the other party. This provision shall survive Closing.

19. Unforeseen or Uncontrollable Circumstances. Neither of the Parties shall be in default or violation as to any obligation of this Agreement, and no condition precedent or subsequent shall be deemed to fail to occur if such party is prevented from fulfilling such obligation by, or such condition fails to occur due to, forces beyond the party's reasonable control, including without limitation, destruction or impairment of facilities resulting from a natural disaster, fire, epidemic, war, riot, civil disturbance, sabotage, epidemic, or an act or failure to act by a court, public authority, or third party, which forces by exercise of due diligence and foresight such party could not reasonably have expected to avoid.

20. No Joint Venture. It is not intended by this Agreement to, and nothing contained in this Agreement shall, create any partnership, joint venture, or other arrangement between the Buyer and the Sellers. No term or provision of this Agreement is intended to be, or shall be, for the benefit of any person, firm, organization, or corporation not a party to this Agreement, and no such other person, firm, organization, or corporation shall have any right or cause of action under this Agreement.

IN WITNESS WHEREOF, the Parties to this Agreement have duly executed this Agreement, to become effective in accordance with the terms of this Agreement.

SELLERS:

KAUFMAN HOLDINGS, INC.

By: _____

Its: Vice President

Date: 12/15/20

KAUFMAN REAL ESTATE, LLC

By: Theresa Wall

Its: President

Date: 12/15/20

LIBERTY LEASING AND CONSTRUCTION CORPORATION

By: Theresa Wall

Its: President

Date: 12/15/20

BUYER:

ST. MARTIN'S ABBEY,

By: + Marion Irvin, OSB

Its: President

Date: December 11, 2020

APPROVED BY

UNITED STATES FISH AND WILDLIFE SERVICE:

This transfer of Credits authorized by this Agreement is consistent with the terms and conditions described in the Kaufman HCP and Federal Fish and Wildlife Permit No. TE91853B-0 dated March 21, 2016. The Service has verified that the Leitner Prairie has been established and is in compliance with the terms and conditions of the Kaufman HCP as of the date of this Agreement.

By: _____

Its: _____

Date: _____

STATE OF WASHINGTON)
) SS.
COUNTY OF THURSTON)

I certify that I know or have satisfactory evidence that Theresa Wall is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the Vice President of Kaufman Holdings, Inc. to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated this 15th day of December, 2020.

CHAD M STEINBRECHER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 07/05/2022

Print Name: Chad M Steinbrecher
Notary Public, State of Washington
My appointment expires 7-5-2022

STATE OF WASHINGTON)
) SS.
COUNTY OF THURSTON)

I certify that I know or have satisfactory evidence that Theresa Wall is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the President of Kaufman Real Estate, LLC to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated this 15th day of December, 2020.

CHAD M STEINBRECHER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 07/05/2022

Print Name: Chad M Steinbrecher
Notary Public, State of Washington
My appointment expires 7-5-2022

STATE OF WASHINGTON)
) SS.
COUNTY OF THURSTON)

I certify that I know or have satisfactory evidence that Theresa Will is the person who appeared before me, and said person acknowledged that he/she signed this instrument, on oath stated that he/she was authorized to execute the instrument and acknowledged it as the President of Liberty Leasing, LLC to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated this 15th day of December, 2020.

CHAD M STEINBRECHER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 07/05/2022

Print Name: Chad M Steinbrecher
Notary Public, State of Washington
My appointment expires 7-5-2022

STATE OF WASHINGTON)
) SS.
COUNTY OF THURSTON)

I certify that I know or have satisfactory evidence that Marion Nguyen is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that (he)/she was authorized to execute the instrument and acknowledged it as the President of the St. Martins Abbey to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

Dated this 11th day of December, 2020.

TANAA GUYER NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES 08-14-24 COMMISSION #14668

Print Name: Tanāa Guyer
Notary Public, State of Washington
My appointment expires 8/14/2024

Appendix D - Annual Report Templates

Word Template for St. Martin's Habitat Conservation Plan Annual Report

Compliance Monitoring Results

Brief summary of project activities that impacted suitable gopher soils.

Excel table showing the ongoing tally of project impact acres and functional-acres.

Map attachments showing project activity areas in suitable gopher soils, if available.

Description of any take of the covered species observed (includes cause of take, form of take, take amount, location of take and time of day, and deposition of dead or injured individuals).

Description of any minor or major amendments that the Applicant intends to seek or has discussed with USFWS.

Confirmation that the endowment amount remaining is sufficient to cover the mowing costs for the remaining permit term years.

Effectiveness Monitoring Results

East Field

Mow Dates:

Invasive Plant Management Activities and Dates:

Monitoring Dates:

Ecological Restoration Activities:

Gopher Mounds Present (Y or N):

Monitoring results or other reports documenting field conditions attached, if available:

Repeat above for South Field and North Field.

		Total for Permit Term		Year __		All Previous Monitoring Years Combined	
	Multiplier	Acres Impacted	Functional-Acres Impacted	Acres Impacted	Functional-Acres Impacted	Acres Impacted	Functional-Acres Impacted
Degraded grassland - occupied							
Buildings and associated facilities/impervious surfaces	1.2	0.6	0.72		0		0
Landscaping with trees and shrubs	0.7	1.3	0.91		0		0
Utilities, infrastructure, and other temporary impacts	0.3	1.6	0.48		0		0
Degraded grassland – unoccupied							
Buildings and associated facilities/impervious surfaces	0.7	1.4	0.98		0		0
Landscaping with trees and shrubs	0.5	0	0		0		0
Utilities, infrastructure, and other temporary impacts	0.1	0	0		0		0
Landscaped trees and shrubs							
Buildings and associated facilities/impervious surfaces	0.2	1.6	0.32		0		0
Landscape tree and shrub maintenance/utilities, infrastructure, and other temporary impacts*	0.1	5.5	0.55		0		0
Totals			3.96		0		0

*Note that these activities resulting in temporary impacts to landscape tree and shrub areas may occur more than once in these areas during the permit term with no additional mitigation required.

Appendix E – Estimated Cost of Field Maintenance

St. Martin's HCP **Endowment Cost Summary**

Description	Estimated Cost for 20-Year Permit Term
Labor / Mowing Fees	$87,293
Equipment Replacement	$40,413
Contingency (10%)	$12,771
Total	**$140,476**

See following pages for inflation, labor, and mowing equipment replacement cost estimates.

St. Martin's HCP **Inflation Rate Calculation**

Year	Inflation Rate
2010	1.64%
2011	3.16%
2012	2.07%
2013	1.47%
2014	1.62%
2015	0.12%
2016	1.26%
2017	2.14%
2018	2.44%
2019	1.81%
Average Rate	**1.77%**

St. Martin's HCP **Labor Cost with Inflation Summary**

Year	Permit Term Year	Labor Cost
2020		$3,600
2021	1	$3,665
2022	2	$3,731
2023	3	$3,798
2024	4	$3,866
2025	5	$3,936
2026	6	$4,007
2027	7	$4,079
2028	8	$4,152
2029	9	$4,227
2030	10	$4,303
2031	11	$4,381
2032	12	$4,459
2033	13	$4,540
2034	14	$4,621
2035	15	$4,705
2036	16	$4,789
2037	17	$4,875
2038	18	$4,963
2039	19	$5,053
2040	20	$5,143
Total Labor Cost for Permit Term =		**$87,293**

St. Martin's HCP **Mowing Equipment Cost Estimate**

Year	Inflation Rate	Initial Cost in 2017 and Estimated Cost of Mowing Equipment if it were purchased in a given year	Permit Term Year
2017	N/A	$28,106	
2018	2.44%	$28,792	
2019	1.81%	$29,313	
2020	1.80%	$29,841	
2021	1.80%	$30,378	1
2022	1.80%	$30,924	2
2023	1.80%	$31,481	3
2024	1.80%	$32,048	4
2025	1.80%	$32,625	5
2026	1.80%	$33,212	6
2027	1.80%	$33,810	7
2028	1.80%	$34,418	8
2029	1.80%	$35,038	9
2030	1.80%	$35,668	10
2031	1.80%	$36,311	11
2032	1.80%	$36,964	12
2033	1.80%	$37,629	13
2034	1.80%	$38,307	14
2035	1.80%	$38,996	15
2036	1.80%	$39,698	16
2037	**1.80%**	**$40,413**	**17**
2038	1.80%	$41,140	18
2039	1.80%	$41,881	19
2040	1.80%	$42,635	20

Since the estimated replacement rate for the mowing equipment is once every 20 years, we will assume that the equipment is likely to need replacement by Permit Year 17 (2037) and use the estimated cost of mowing equipment for that year.

Appendix F – Abbey Endowment Resolution for Field Maintenance

Saint Martin's Abbey, 5000 Abbey Way, S.E., Lacey, Washington 98503-7500
T. 360.491.4700 • F. 360.438.4441

Resolution 12/15/2020 (Members) Subject: Funding for Gopher Habitat Maintenance.

WHEREAS: St. Martin's Abbey is seeking final approval from the U.S. Fish and Wildlife (USF&W) for a Habitat Conservation Plan (HCP) for the protection of the Mazama pocket gophers of the Yelm subspecies *Thomomys mazama yelmensis* on designated portions of St. Martin's Abbey properties .**AND**

WHEREAS: The HCP requires a commitment to the long-term maintenance of Mazama pocket gopher habitat per USF&W instructions. **BE IT THEREFORE**

RESOLVED: The Abbey Administration is hereby authorized to reallocate $150,000.00 from the Abbey Concerns Fund (Fund 24) into a Habitat Conservation Endowment (quasi-endowment) to be setup at the discretion of the Abbey finance team for a period of at least twenty years to ensure funding for the ongoing maintenance/equipment replacement expenses of the HCP.

Approved by the Corporation on: 15 December 2020

Br. Nicolaus Wilson O.S.B. Vice President

Last page left blank intentionally.