Environmental Assessment

National Environmental Policy Act Review for the Kaufman Habitat Conservation Plan

U.S. Fish and Wildlife Service

January 2016

SCJ ALLIANCE
CONSULTING SERVICES

Environmental Assessment

Project Information

Project:	National Environmental Policy Act Environmental Assessment of the proposed Federal action of U.S. Fish and Wildlife Service issuance of an Endangered Species Act Section 10(a)(1)(B) Incidental Take Permit to Kaufman Real Estate LLC, Kaufman Holdings Inc., and Liberty Leasing & Construction, Inc., based on "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:	U.S. Fish and Wildlife Service
Prepared by:	SCJ Alliance 8730 Tallon Lane NE, Suite 200 Lacey, WA 98516 360.352.1465 scjalliance.com
Contact:	Jean Carr, Principal
Project Reference:	SCJ # 1599.01

DISCLOSURE STATEMENT

For SCJ Alliance concerning the preparation of the Environmental Assessment for 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 (Kaufman HCP).

I, Jean Carr, of SCJ Alliance have made inquiry and to the best of my knowledge and belief declare that executing the contracted work of preparing the Environmental Assessment (EA) for the Kaufman Habitat Conservation Plan does not represent an actual or potential conflict of interest and SCJ Alliance does not have any financial or other interest in the outcome of this project.

I understand the term "conflict of interest" to mean that because of other activities or relationships with other persons, the contractor is unable or potentially unable to render impartial assistance or advice to the Government, or the contractor's objectivity in performing the contract work is or might be otherwise impaired, or the contractor may have an unfair competitive advantage. I understand the phrase "no financial or other special interest in the outcome of the project" to include any financial benefits such as a promise of future construction or design work on the project, as well as indirect benefits the consultant is aware of other than the enhancement of the contractor's professional reputation.

Signed: _____
Jean Carr, Principal

Employers name: SCJ Alliance

Address: 8730 Tallon Lane, NE Suite 200
Lacey, WA 98516

Phone number: 360.352.1465

Table of Contents

DEFINITIONS **3**

LIST OF ACRONYNMS AND ABBREVIATIONS **4**

EXECUTIVE SUMMARY **5**

1. INTRODUCTION **8**

1.1 Background 8

1.2 Proposed Action 9

1.3 Purpose of and Need for the Proposed Federal Action 9

1.4 Project Description 9

1.5 Regulatory Context 10

2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION **13**

2.1 Introduction 13

2.2 Alternatives Analyzed 13

3. AFFECTED ENVIRONMENT **15**

3.1 Ecological 16

3.1.1 Climate 16

3.1.3 Surface and Groundwater 16

3.1.4 Topography 17

3.1.5 Soils 17

3.1.6 Vegetation 17

3.2 Aesthetic 22

3.2.1 Noise 22

3.3 Cultural Resources 23

3.4 Economic 23

3.4.1 Socioeconomics 23

3.4.2 Land Use 23

3.5 Social 23

3.5.1 Environmental Justice 23

3.6 Health 25

3.6.1 Air Quality 25

4. ENVIRONMENTAL CONSEQUENCES 25

5. LIST OF PREPARERS 38

6. LITERATURE CITED..... 39

Page

LIST OF TABLES

Table 1. Species Status and Critical Habitat 19

Table 2. 2010 Population 24

LIST OF APPENDICES

Appendix A. Washington Information System for Architectural and Archaeological Records Data (WISAARD) Table for Kaufman Properties

Appendix B. Public Comments Received

DEFINITIONS

Applicants – The legal entities jointly applying to the USFWS for an Incidental Take Permit. The Applicants include Kaufman Holdings, Inc., Kaufman Real Estate, LLC, and Liberty Leasing & Construction, Inc.

Conservation Sites – Two properties, Leitner Prairie and Deschutes Corridor, owned by the applicants comprising approximately 87.5 acres proposed to be permanently dedicated to management and conservation of the covered species in accordance with the Applicants' HCP.

Covered Activities – The Covered Activities include work related to site management (before development), development, and ongoing management (post construction) associated with the 13 project development sites. Covered Activities also include ongoing vegetation and habitat management at the three onsite habitat set-aside areas and the two proposed permanent Conservation Sites.

Covered Species – Federally listed species that may be subjected to incidental take as a result of the Applicants' proposed development and construction activities, and which are therefore the subject of the conservation program described in their HCP. The Covered Species include the endangered Taylor's checkerspot butterfly (*Euphydryas editha taylori*); the threatened streaked horned lark (*Eremophila alpestris stigmata*) and two threatened subspecies of Mazama pocket gophers (*Thomomys mazama pugetensis*) and *(Thomomys mazama yelmensis*).

Incidental Take – Take that results from, but is not the purpose of, carrying out an otherwise lawful activity.

Incidental Take Permit – An Incidental Take Permit (ITP) is a permit issued under Section 10(a)(1)(B) of the Endangered Species Act (ESA) to non-federal entities that are undertaking otherwise lawful projects that might result in the incidental take of an endangered or threatened species.

Permit Area – The Permit Area is defined by the Applicants' HCP as the 13 project development sites and two permanent conservation sites. These 15 properties are shown on Figure 1.

Project development sites – The 13 Thurston County properties owned by the Applicants comprising approximately 204 acres (83 ha) proposed for development in accordance with the Applicants' HCP.

LIST OF ACRONYNMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
EA	Environmental Assessment
ESA	Endangered Species Act of 1973, as amended
FAA	Federal Aviation Administration
FONSI	Finding of No Significant Impact
FR	Federal Register
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
JBLM	Joint Base Lewis-McCord
LLC	Limited Liability Company
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
RCW	Revised Code of Washington
SIP	Maintenance State Implementation Plan
TMC	City of Tumwater Municipal Code
TRPC	Thurston County Regional Planning Council
UGA	Urban Growth Area
USC	United States Code
USFWS	United States Fish and Wildlife Service
WAC	Washington Administrative Code
WA DOE	Washington State Department of Ecology
WDFW	Washington Department of Fish and Wildlife

EXECUTIVE SUMMARY

Kaufman Real Estate LLC, Kaufman Holdings Inc., and Liberty Leasing & Construction, Inc. (jointly referred to as the Applicants) own 13 properties (project development sites) encompassing approximately 204 acres in Thurston County, Washington. All of these sites are zoned for various industrial development uses, and the Applicants plan to develop each of these properties over the course of the next 20 years. The Applicants also own two properties totaling approximately 87.5 acres (conservation sites) currently zoned for light industrial or single family rural development that they propose to dedicate for the conservation of the listed species that may be impacted by proposed activities on the project development sites.

The Applicants are aware that these locations are within the range of and may be occupied by or provide habitat for species listed as threatened or endangered under the Endangered Species Act of 1973, as amended (ESA). All of the project development and the conservation sites are within the range of the endangered Taylor's checkerspot butterfly (*Euphydyas editha taylori*) and the threatened streaked horned lark (*Eremophila alpestris strigata*). Ten of the project development sites are within the range of the threatened Olympia subspecies of Mazama pocket gopher (*Thomomys mazama pugetensis*), and three are within the range of the threatened Yelm subspecies of Mazama pocket gopher (*Thomomys mazama yelmensis*). One of the conservation sites is within the range of the Olympia subspecies of Mazama pocket gopher, and the other is within the range of the Yelm subspecies.

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 of the ESA. 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 incidental take permit (ITP), as defined under Section 10 of the ESA, is required. Under Section 10 of the ESA, a habitat conservation plan (HCP) that meets statutory and U.S. Fish and Wildlife Service (USFWS) regulatory requirements is required to accompany an application for an incidental take permit.

The Applicants prepared and submitted an HCP as part of an application for an ITP to the USFWS under Section 10(a)(1)(B) of the ESA. 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" and its associated appendices and exhibits are hereby incorporated into this document by reference (Krippner 2015).

The National Environmental Policy Act (NEPA) (42 USC § 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 constitutes a Federal action subject to NEPA compliance. After considering the context and intensity of the proposed Federal action, the USFWS has prepared this environmental assessment (EA) to determine whether or not there are significant impacts associated with the

Federal action. This EA analyzes the direct, indirect, and cumulative effects of the proposed action and a range of reasonable alternatives.

Analyzed alternatives include:

- **Alternative 1 - No Action Alternative**. Under this alternative the USFWS would not issue the proposed ITP. All construction and development on the project development sites would be limited to areas where impacts to listed species could be avoided. This approach would concentrate development areas and reduce the total area that could be developed by approximately 50%. Because no impacts to listed species are expected under this alternative, no HCP would be needed and no ITP would be issued. This alternative would avoid impacts on a site-by-site basis, but not provide any coordinated long-term conservation benefit for the listed species.
- **Alternative 2 – The Proposed Action: Issuance of the Requested ITP**. Under this alternative, the USFWS would issue the requested 20-year ITP based on the Applicants' HCP. The HCP describes a coordinated conservation program incorporating a variety of short-term and long-term measures intended to benefit the listed species and their habitats, including perpetual management of two permanent conservation sites.
- **Alternative 3 – Individual Site by Site HCPs and ITPs**. The third alternative considers development of an HCP and issuance of an ITP for each of the sites when they are proposed for development. Avoidance, minimization, and mitigation measures would be developed for each individual project. Under this alternative, no coordinated mitigation measures or conservation program would be created. The USFWS would review and process the HCP and ITP applications and complete the required NEPA analyses for each separate project as they are submitted prior to site development.

Impacts to the human environment were determined to be similar for all of the alternatives, and no effects were found to be significant. The primary differences among the alternatives are economic impacts, effects to the listed species, and the benefits of the proposed conservation program.

- Alternative 1 provides no mitigation and no conservation program, because impacts to the listed species would be avoided. To achieve avoidance of impacts on all of the project development sites, construction and development would be limited to areas that do not provide habitat for any listed species. Avoidance of all possible listed species habitats on these sites would reduce the total amount of buildable area by approximately 50%, and therefore reduce potential economic opportunities of developing these sites.
- Alternative 2 provides a coordinated mitigation approach to address impacts on 13 project development sites and provides a conservation program that provides short-term and long-term conservation measures including approximately 87.5 acres of permanently protected habitat for the four listed species on two permanent conservation sites. This programmatic approach provides regulatory certainty and expedited processing for the Applicants because ESA compliance is addressed at one time for the four potentially impacted species on all 13 project development sites.
- Alternative 3 addresses mitigation for impacts to listed species on a site by site basis. The process of developing separate HCPs would impact project development timelines and expenses for the Applicants. Processing ITP and completing NEPA compliance requirements for each individual project would increase processing time and workload

for the USFWS. This alternative does not provide a coordinated conservation program for any of the Covered Species, and would result in separate mitigation actions for each of the project development sites.

This document has been updated from the version provided for public comment. The updates include:

- Cover and footer date changed to January 2016
- Addition of soils page number in the table of contents
- Revision to Table 1, clarifying Oregon Spotted Frog Habitat
- Addition of Appendix B. Public Comments Received.

1. INTRODUCTION

1.1 Background

Kaufman Real Estate LLC, Kaufman Holdings Inc., and Liberty Leasing & Construction, Inc. own fifteen properties totaling approximately 291.5 acres in various jurisdictions within Thurston County, Washington. The Applicants proposed to develop thirteen of the properties (project development sites) comprising approximately 204 acres. The Applicants are aware that the project development sites are within the range of and may be occupied by or provide habitat for species listed as threatened or endangered under the Endangered Species Act of 1973, as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.)(ESA). All of the project development sites are within the range of the endangered Taylor's checkerspot butterfly (*Euphydryas editha taylori*) and the threatened streaked horned lark (*Eremophila alpestris strigata*). Ten of the sites are within the range of the threatened Olympia subspecies of Mazama pocket gopher (*Thomomys mazama pugetensis*), and the other three are within the range of the threatened Yelm subspecies of Mazama pocket gopher (*Thomomys mazama yelmensis*). The Applicants propose to dedicate the two remaining sites (conservation sites), totaling approximately 87.5 acres, to ongoing habitat management and conservation of these listed species. Both of the conservation sites are within the range of the Taylor's checkerspot butterfly and the threatened streaked horned lark, and each of these sites is within the range of the Olympia or the Yelm subspecies of the Mazama pocket gopher.

Section 9 of the ESA prohibits "take" of species that are listed as endangered, and Section 4 provides the USFWS with the discretion to extend all or some of those protections deemed necessary and advisable to provide for the conservation of threatened species. "Take" is the attempt or action to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" such species (16 U.S.C. § 1532). The Applicants recognize that it may not be possible to completely avoid all impacts to these species or their habitats while engaging in development of and construction on these properties as proposed, and that those impacts could therefore result in "take".

Section 10 of the ESA provides exceptions to the section 9 take prohibitions. Section 10 (a)1(B) of the ESA authorizes the Service to permit non-Federal applicants, under certain terms and conditions, to take threatened and endangered species if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. 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 incidental take of a listed species, an ESA Section 10(a)(1)(B) incidental take permit (ITP) is required. Non-Federal landowners or entities that wish to apply for an ITP must submit a habitat conservation plan (HCP) that meets USFWS statutory and regulatory requirements.

Kaufman Real Estate LLC, Kaufman Holdings Inc., and Liberty Leasing & Construction, Inc. (jointly referred to as the Applicants) submitted an application for an ITP and 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" (Krippner 2015). The HCP and its associated appendices and exhibits are hereby incorporated into this document by reference.

The National Environmental Policy Act of 1969 (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 a major Federal action subject to NEPA compliance (40 CFR § 1508.18(b)).

This Environmental Assessment (EA) presents an analysis of the anticipated impacts of the proposed Federal action and a range of reasonable alternatives, including the "No Action" alternative. This document is intended to inform decision-makers and the public before decisions are made and before actions are taken. This EA was prepared using an interdisciplinary approach to address all aspects of the natural and human environment relevant to the potential impacts of the proposed Federal action including the direct, indirect, and cumulative impacts. This document was prepared in compliance with NEPA; the President's Council for Environmental Quality (CEQ) Regulations (40 CFR Section 1500 – 1508); and the Department of the Interior's Departmental Manual (DM) for NEPA compliance, Fish and Wildlife Service (516 DM 6, 30 AM 2-3, 550 FW 1-3, 505 FW 1-5).

1.2 Proposed Action

The proposed Federal action analyzed in this NEPA EA is the issuance of an ITP by the USFWS, based on the Applicants' commitment to implement 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 *T. mazama yelmensis*); in Thurston County, Washington".

1.3 Purpose of and Need for the Proposed Federal Action

The purpose of the proposed Federal action is to respond to the Applicants application for an Incidental Take Permit for the proposed Covered Species related to activities that have potential to result in take, pursuant to the ESA Section 10(a)(1)(B) and its implementing regulations and policies.

The need for the proposed Federal action is due to the likelihood that activities proposed by the Applicants on properties they own will result in take of Covered Species.

1.4 Project Description

The Applicants plan to develop or make the 13 project development sites available for construction and development over the course of the next 20 years. The individual project development sites and the two permanent conservation sites are fully described in the HCP and in HCP Appendices A and B. All of the project development sites are zoned for various industrial uses by Thurston County and the municipalities with regulatory jurisdiction. These sites could be developed for a variety of uses such as processing, fabrication, warehouse/storage space, or commercial operations that serve these industrial uses (Thurston County Code, Ch. 20.28).

Development at these locations will require site preparation including clearing, grading, and excavation activities. Infrastructure such as roads, utilities, storm water facilities, and parking areas will be constructed to facilitate the proposed commercial and industrial activities. Structures on the project development sites will be constructed in accordance with City of Tumwater, City of Tenino, or Thurston County, zoning and building requirements; including those intended to prevent noise, dirt, odor, vibration, and air and water pollution. Thurston County and the Cities of Tumwater end Tenino establish and require adequate traffic circulation, open space and landscaping standards to establish compatibility with surrounding residential, commercial or other development and offer protection from industrial blight (Tumwater Municipal Code Ch. 18.24, Tenino Municipal; Code Ch. 108.30, Thurston County Code, Ch. 20.28).

The Applicants have acknowledged that they will not be able to completely avoid impacts to listed species that are present now or that may occur on the project development sites over the next 20 years. In order to develop these sites in accordance with applicable Federal statutes and regulations, the Applicants developed an HCP and applied to the USFWS for an ITP. The HCP describes the planned development and construction activities that could result in take of listed species; and proposes a conservation program intended to avoid, or to minimize and mitigate unavoidable take.

The conservation program incorporates a combination of short term and long term (permanent) measures intended to reduce, rectify, or compensate for the impacts likely to result from unavoidable take of the listed species. Short term measures include commitments to restore or manage existing habitat areas on the project development sites until each of these sites is developed. Long term measures include the establishment of two permanent conservation sites (the 36 acre Leitner Prairie and the 51 acre Deschutes Corridor) and provision for the ongoing management of these sites for the benefit of the listed species. The Covered Activities and the Applicants' conservation program are more fully described in the sections dedicated to these topics in the HCP.

1.5 Regulatory Context

For a project or activity to be otherwise lawful, it must remain in compliance with all relevant Federal, State, and local laws, regulations, and ordinances.

National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA) as amended (42 USC § 4331 et seq.), requires that Federal agencies analyze and publicly disclose the social, economic and environmental effects associated with major Federal actions (42 USC § 4332). A major Federal action includes actions "with effects that may be major and which are potentially subject to Federal control and responsibility" (40 CFR § 1508.18). The issuance of an ITP under Section 10(a)(1)(B) of the ESA constitutes a major Federal action (40 CFR § 1508.18(b)). While NEPA does not mandate any particular result, it requires the agency to follow particular procedures in its decision-making process. The purpose of these procedures is to ensure that the agency has the best possible information to make an "intelligent, optimally beneficial decision" and to ensure that the public is fully apprised of any environmental risks that may be associated with the proposed action.

The USFWS determined that an environmental assessment (EA) is the appropriate level of review for this proposed action. An EA consists of a concise public document that includes:

- a brief discussion of the need for the proposed federal action;
- evidence and succinct analysis determining whether to prepare an environmental impact statement or a finding of no significant impact;
- brief discussions of required alternatives;
- brief discussions of the environmental impacts of the proposed action and alternatives; and
- a listing of agencies and persons consulted (40 CFR §1508.9).

Endangered Species Act

Section 9 of the ESA prohibits "take" of species that are listed as endangered, and Section 4 provides USFWS with the discretion to extend all or some of those protections deemed necessary and advisable to provide for the conservation of threatened species. Take includes harassment, harm, pursuit, hunting, shooting, wounding, killing, trapping, capturing, or collecting a listed species, or attempting to engage in any such conduct (16 USC §1538(19)). Harm is further defined in ESA implementing regulations as an act which actually kills or injures fish or wildlife, including significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding or sheltering (50 C.F.R. §17.3, and §222.102).

Non-federal entities can apply for "incidental take" authorization when a project or activity does not involve a federal action and the take is incidental to, and not the purpose of, an otherwise lawful activity (16 USC §1539(a)(1)(A-B)). Section 10 of the ESA and the USFWS implementing regulations define the circumstances under which an ITP can be issued.

Section 10(a)(2)(A)(i-iv) of the Act requires that an applicant must submit a conservation plan that specifies:

- The impact that will likely result from such taking; and,
- What steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; and,
- What alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and,
- Such other measures that the Service may require as being necessary or appropriate for purposes of the plan.

Section 10(a)(2)(B), provides that the Service shall issue an ITP if the USFWS finds, after opportunity for public comment, that:

- The taking will be incidental; and,
- The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; and,
- The applicant will ensure that adequate funding for the plan will be provided; and,

- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; the measures, if any, required by the Service as being necessary or appropriate for purposes of the plan will be met; and,
- The USFWS has received such other assurances as may be required that the plan will be implemented.

In 2000, the USFWS adopted policies intended to clarify certain HCP elements (65 FR 35242–35257). These policies became known as "The Five-Point Policy", and require that:

- An HCP include specific, measurable biological goals and objectives based on the best available scientific information; and,
- An HCP include an adaptive management provision; and,
- An HCP include a monitoring program to gauge the effectiveness of the plan in meeting the biological goals and objectives and the permittees compliance with the plan; and, The USFWS consider several factors to determine the appropriate duration of an ITP, including the duration of the covered activities and the expected effects on the covered species; and,
- The USFWS expand public participation.

The ESA provides "no surprises" assurances through the USFWS implementing regulations (50 CFR Part 17.22(b)(5), 17.32(b)(5)). These regulations assure applicants that if "unforeseen circumstances" arise, USFWS will not require the commitment of additional land, water or financial compensation or additional restrictions on the use of land, water, or other natural resources beyond what is required by the ITP and the associated HCP without the permittees' consent. The USFWS will honor these assurances as long as a permittee is implementing the terms and conditions of the HCP and the Permit.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), as amended (16 U.S.C. 703 et seq.) makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, as well as the nests, eggs, and feathers of migratory birds. USFWS policy (USDOI et al 1996) provides that an ESA Section 10 permit that covers listed migratory birds also serves as a Special Purpose Permit under MBTA (50 CFR §21.27).

National Historical Preservation Act

As required by Section 106 of the National Historic Preservation Act (NHPA) of 1966, the FWS has considered the effect of its issuance of the ITP on historic properties. Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register; including artifacts, records, and remains which are related to such district, site, building, structure, or object, 16 U.S.C. Section 470(w)(5).

The issuance of an incidental take permit pursuant to section 10(a)(1)(B) of the Endangered Species Act (ESA) of 1973, is an undertaking according to NHPA. However, as defined by the ESA, the ITP only authorizes take of species that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity" which are described in the applicant's HCP. The

ITP does not authorize, allow, or cause the otherwise lawful activities that may result in take and are described in the HCP.

The ITP, i.e. the undertaking, is limited to take of threatened and endangered species. Species do not meet the definition of historic properties. On this basis, issuance of the ITP is a NHPA Section 106 undertaking with no potential to cause effect on historic properties (36 CFR 800.3.1.a) and further Section 106 review is not required.

In conclusion, the otherwise lawful activities described by the HCP are not being authorized by the USFWS incidental take permit. Thus, the FWS has determined that the issuance of the incidental take permit is an undertaking that is of the type that has no potential to cause effects on historic properties (36CFR800.3.a.1). As such, no historic properties will be affected as a result of the issuance of an ITP and the FWS has no further obligation under Section 106.

If a specific covered activity in the HCP happens to be funded or implemented by the FWS, that activity will become an FWS Section 106 undertaking for which the FWS will exercise the Section 106 review and compliance process.

2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

2.1 Introduction

This EA analyzes and compares the environmental impacts of three alternatives, the "no action" alternative, the proposed Federal action of issuing the requested ITP, and an individual site-by-site permit alternative.

2.2 Alternatives Analyzed

Alternative 1 - No Action Alternative

Under this alternative the USFWS would not issue the requested ITP. Construction and development activities would proceed only in areas where impacts to listed species could be avoided. This "avoidance" approach would limit the total amount of buildable area to approximately 135.97 acres, or about 47% of the total 291.5 acre area of the properties (This is the area of developable acreage on the 13 development sites that is not likely to constitute habitat for any of the listed species. Approximately five acres of the Deschutes Corridor conservation site is not habitat, but these areas consist of slopes greater than 15%, and are therefore unlikely to be developed. The balance of that site and the entirety of the Leitner Prairie conservation site are habitat and would be avoided under this alternative.). Because no take of listed species would be expected under this alternative, no ITP would be needed, there would be no HCP, and no land would be dedicated to conservation of covered species. Take avoidance would be expected to continue as long as the listed species continued to persist on the sites.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The proposed action is the issuance of the requested 20-year ITP for four covered species based on the Applicants' HCP. The covered activities are land development and short–term conservation activities on 13 project development sites totaling approximately 204 acres and permanent conservation to benefit covered species on two sites totaling 87.5 acres. Under this alternative the Applicants would commit to actively manage habitat conditions to achieve

specific performance standards supporting persistence of the covered species on the 13 project development sites until construction is initiated on each site.

Under the proposed Alternative, the Applicants would be covered for incidental take occurring as a result of the construction and development actions listed as "covered activities" in the HCP. The ITP would provide for incidental take of Taylor's checkerspot butterfly (up to 6 acres of potential habitat) and streaked horned lark or impacts to their habitat (up to about 21 acres) where they may occur on the project development and the conservation sites. The ITP would provide incidental take coverage for the Olympia and Yelm subspecies of Mazama pocket gophers or their respective habitats where they may occur. In the case of the Olympia subspecies, approximately 86.3 acres of potential or occupied habitat are included in the proposed ITP (40.3 acres on the project development sites and 46 acres on the conservation site), and approximately 63.84 acres of potential or occupied habitat are covered for the Yelm subspecies (27.66 acres on the project sites and 36.18 acres on the conservation site).

Upon issuance of the requested ITP the Applicants will dedicate two permanent Conservation Sites totaling approximately 87.5 acres. Funding will be provided to provide ongoing management of these sites to achieve specific performance standards intended to restore, improve, or maintain long-term habitat suitability for each of the Covered Species for 100 years. Because management actions on the conservation sites would be implemented upon permit issuance, the beneficial effects to listed species would begin to be realized sooner than would be expected under alternatives 1 or 3. For Taylor's checkerspot butterfly, the conservation sites will be managed to provide 8.8 acres of larval host and nectaring plants within four years of permit issuance, which will double to more than 17 acres by year 10. The conservation sites will be managed to provide at least 17 acres of open flat areas with sparse low vegetation to support use by streaked horned larks within four years of per it issuance, with a total of at least 34 acres managed to that standard within 10 years. The Deschutes Corridor conservation site will provide 46 acres of habitat for the Olympia subspecies and the Leitner Prairie conservation site will provide 36 acres of habitat for the Yelm subspecies of Mazama pocket gopher. The conservation sites are located adjacent to or near other sites managed for the benefit of the listed species and could expand core conservation areas. Securing permanently managed priority conservation areas may contribute to recovery of these species as remaining occupied habitat patches throughout the ranges of these listed species are degraded or lost over time.

Alternative 2 is the Service's preferred alternative because it provides more efficient USFWS ITP processing and provides long-term certainty to the Applicants regarding their ESA compliance needs when developing the project sites.

Alternative 3 - Individual Site by Site HCPs and ITPs

Under this alternative the Applicants would develop a separate HCP and the Service would issue a separate permit covering incidental take of the four listed species, as applicable, for each individual project development site as they are proposed for development over the next 20 years. For the purposes of this analysis, we assume that the construction and development activities likely to occur on each of the project development sites under this Alternative are equivalent to those expected under the Proposed Action Alternative. Similarly, we assume for the purposes of this analysis that the amount of take authorized under the separate individual ITPs issued for the

project development sites under this Alternative is the same as that anticipated under the requested permit.

Because the Applicants would identify mitigation needs for each project as it was proposed for development over the next 20 years, they would not be expected to reserve the Deschutes Corridor location as a permanent conservation site. This location near the Olympia Regional Airport is currently zoned for commercial or light industrial development, has access to existing transportation infrastructure, and could be developed if resulting impacts to listed species were addressed. Approximately 46 acres of the site could be developed if an HCP meeting statutory criteria and describing site-specific avoidance, minimization and mitigation measures was completed and an ITP issued. The Applicants would identify and secure offsite mitigation for any incidental take that might occur on this site as with any other potential development location.

The Applicants have executed a conservation easement with the non-profit Capital Land Trust that prohibits future development on the Leitner Prairie site, so no future construction or development would be expected at that location. The Leitner Prairie site could serve as mitigation for impacts to Taylor's checkerspot butterfly, the streaked horned lark and the Yelm subspecies of Mazama pocket gopher for those project sites that might impact those species. For the purposes of this analysis, we assume that this location will not be developed, and will serve as a mitigation site to offset the Applicant's incidental impacts to these species under the separate HCPs and ITPs that would be developed for each project. Because only three of the project development sites are within the range of the Yelm subspecies of Mazama pocket gopher, the remaining sites would need to identify other mitigation locations or purchase mitigation credits from a conservation bank (if one becomes available). A total of fourteen separate HCPs would be prepared and ITPs issued under this alternative.

Avoidance, minimization, and mitigation measures would be developed on a project-by-project basis for the thirteen project sites and the Deschutes Corridor site when they are proposed for development. No immediate short-term conservation measures would be realized on project development sites because the Applicants would not manage existing habitat where it currently exists on the project development sites. Existing habitat would be expected to degrade over time as encroaching woody and non-native vegetation continues to invade and reduce habitat suitability on these sites.

3. AFFECTED ENVIRONMENT

The affected environment includes the human environment within the geographic scope of the area analyzed. An analysis of the human environment includes both the natural and physical environment and the relationship of people with that environment (40CFR §1058.14). The boundaries of Thurston County make up the geographic scope of the analysis, because it includes the Permit area described in the Applicants' HCP and the ranges of the Taylor's checkerspot butterfly, the portion of the migratory South Puget Sound population of the streaked horned lark, and the two listed Mazama pocket gopher subspecies that may be affected by the Covered Activities (see HCP Figure 1). Effects analyzed include ecological (such as climate, geology, surface and groundwater, topography, soils, surface and groundwater, vegetation, wetlands streams and shorelines, wildlife), aesthetic (noise), historic and cultural resources, economic

(land use, public services, transportation, utilities), social (environmental justice), or health (air quality), whether direct, indirect, or cumulative (40CFR §1058.8).

3.1 Ecological

3.1.1 Climate

Thurston County is located 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 2015).

3.1.2 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.

Glacial drift is the finely ground remains of rocks that were crushed by glaciation. Drift contains large amounts of silt, providing an impervious layer in parts of Thurston County. Areas of glacial drift prevent the downward migration of groundwater (Crawford and Hall 1997). Glacial till soils consist of unsorted gravel, sand, silt, and clay. Till ranges from moderately well drained soils to nearly impervious soils, depending on the amount of silt found in the till. Glacial outwash soils are comprised of highly erodible unconsolidated sand and gravel that tend to have little water holding capacity (permeable soils).

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.

3.1.3 Surface and Groundwater

The surface and groundwater of Thurston County has also been shaped by glaciation. The Vashon glacier and previous glaciation events gouged out drainages that make up many of the today's lake beds and river channels. Glacial scour created kettle depressions and lakes, and meltwater from the receding glacier filled many of these features.

Areas of glacial drift and glacial till typically have a confining bed that holds and or confines ground water. Areas of glacial outwash are well drained and do not hold groundwater well. Because glacial outwash is so well drained, the prairie habitat found in those areas often experience drought conditions during the summer months.

Typical water quality issues in Thurston County include; intrusion of seawater through highly permeable soils (glacial outwash), perched water tables (glacial drift and till), high nitrate and phosphate levels from agricultural activities (fertilizers, pesticides, barnyard waste), and high nitrates from septic systems (Drost et al 1998).

3.1.4 Topography

Thurston County topography can be generally described as a glacial plain at the southern extent of the Puget Sound Basin surrounded by rolling hills and mountains to the west (the Black Hills), south (the Michigan Hills), and east (the ridges and foothills of the Cascades). Elevation ranges from sea level to County's highest point of Quiemuth Peak at 2922 feet above mean sea level. All the development and conservation sites range between 175 to 220 feet above mean sea level. The project development and conservation sites are located near the Olympia Regional Airport, and south of Olympia along the Interstate 5 (I-5) Corridor. All of the properties in the Permit Area are generally flat (0-3% slope), with some small areas of somewhat greater slopes (of up to 15% slope).

3.1.5 Soils

Though the Natural Resources Conservation Service (NRCS) lists over 100 soil types and sub-types in Thurston County, the project development and conservation sites contain a small number of primarily glacial outwash soil types. These sites include Alderwood gravelly sandy loam, Cagey loamy sand, Everett very gravelly sandy loam, Indianola loamy sand, Nisqually loamy fine sand, Norma silt loam, Spana gravelly loam, Spanaway gravelly sandy loam, and Yelm fine sandy loam soils (USDA NRCS 2015). Soil types are described for each individual Permit Area property in Appendix B of the HCP.

3.1.6 Vegetation

These sites consist of areas that were likely formerly prairies that have degraded over time to their current condition as moderately to severely degraded grasslands. Also of note are two threatened plant species found in Thurston County, golden paintbrush (*Castilleja levisecta*) and water howellia (*Howellia aquatilis*).

The associations of bunch grasses, forbs, sedges, mosses and lichens typical of Puget Sound prairie vegetation developed during a period of relatively dry climate conditions about 4,000 years ago (Crawford and Hall 1997). Native Americans relied on the food and medicinal value of many of these prairie plants and maintained prairie ecosystems by applying periodic low intensity fire. This management encouraged the growth of forbs and bunch grasses and prevented the establishment of trees and shrubs.

As the regional climate became warmer and wetter and the practice of burning the prairies ceased native prairies began transitioning to forest cover types. Elimination of periodic burning also allowed non-native invasive plants to thrive and compete with native prairie vegetation (Alverson, 2014). By the early 2000's, only about 8% of the original prairie continued to support grassland vegetation and about 2-3% was dominated by native prairie vegetation (Stinson 2005). Scot's broom (*Cytisus scoparius*) has successfully invaded many of the prairie sites and aggressively out-competes many native plant species. Other nonnative species invading Puget Sound prairies include perennial grasses such as colonial bentgrass (*Agrostis*

tenuis), common velvetgrass (*Holcus lanatus*), and Kentucky bluegrass (*Poapratensis*); perennial forbs such as hairy catsear (*Hypochaeris radicata*), common St. Johns-wort (*Hypericum perforatum*), buckhorn plantain (*Plantago lanceolata*), and oxeye-daisy (*Chrysanthemum leucanthemum*); and annual forbs including sheep sorrel (*Rumex acetosella*) and teesdalia (*Teesdalia nudicaulis*) (Chappell and Crawford 1997).

Remnant native prairies in the region are represented by the Idaho fescue-white-topped aster community type (Chappell and Crawford). Typical plants on these intact prairie communities include Idaho fescue *(Festuca idahoensis*), forbs including common camas (*Camassia quamash*), sedges such as long-stolon sedge (*Carex inops*), and sparsely scattered shrubs such as kinnikinnick (*Arctostaphylos uva-ursi*).

Golden paintbrush was listed as threatened under the ESA on June 11, 1997 (62 FR 31740). The species is known from upland prairies, grasslands, and coastal bluffs (USFWS 2015). Most of the existing wild populations known to exist in Washington today occur on Whidbey and San Juan Islands. A Thurston County population exists on the Rocky Prairie Natural Area Preserve. Though the project development and conservation sites are within the presumed historical range of the species, Golden paintbrush is not known to occur on any of these sites. No critical habitat was designated for this species.

Water howellia was listed as threatened under the ESA on July 14, 1994 (59 FR 35860), and could occur in Thurston County. The species is found in wetlands of the Puget Trough lowlands bordered by Douglas-fir dominated forests in nearby Pierce County. Confirmed water howellia occurrences reportedly include associations with Oregon ash (USFWS 2015). The species has not been found on any of the project development or conservation sites. Because there are no wetlands with Oregon ash plant communities on these sites, occurrence of this species is considered unlikely. No critical habitat was designated for this species.

3.1.7 Wetlands, Streams and Shorelines

Two sites include wetlands, streams, or shorelines that could be affected by the proposed Federal action. A small emergent wetland exists within an existing five acre permanent set aside at the Tumwater Commerce Place project development site. The Deschutes Corridor conservation site is adjacent to the Deschutes River, and riparian vegetation is located near the waterway.

3.1.8 Fish and Wildlife

The highly varied topography, soils, and vegetation communities in Thurston County support a wide range of fish and wildlife. Because the effects of the proposed Federal action will be realized at the project development and conservation sites, the description of fish and wildlife resources will focus primarily on species likely to occur at these locations. Threatened and endangered species that occur within Thurston County are also briefly described.

Table 1. Species Status and Critical Habitat

Species	Listing Status	Critical Habitat	Likelihood to be affected by the proposed Federal action
Taylor's checkerspot butterfly	Endangered	Designated 10-03-2013 (78 FR 61505)	• Occupancy has not been verified on any of the project development and conservation sites • Small size and cryptic nature of some life stages can make detection difficult • Suitable habitat may be present on the project development and conservation sites
Oregon spotted frog	Threatened	Proposed 08-29-2013 (78 FR 53537)	• Species is only known in Thurston County from suitable habitats associated with the Black River watershed • None of the project development or conservation sites within this watershed contain suitable habitat for this species
Bull trout	Threatened	Revised 10-18-2010 (75 FR 63898)	• Very limited occurrence expected in Thurston County • The project development and conservation sites are all upland prairie areas with little to no wetlands or chance to disturb bull trout or impact stream water quality important to this species
Yellow-billed cuckoo	Threatened	Designated 08-15-2014 (79 FR 48547)	• Not confirmed to be breeding in the state • Requires large blocks of hardwood-dominated riparian habitat for nesting • Suitable habitat is not found on the project development or conservation sites
Northern spotted owl	Threatened	Revised 12-04-2012 (77 FR 71875)	• Requires old-growth forest habitat types for nesting • Suitable habitat is not found on the project development or conservation sites
Marbled murrelet	Threatened	Revised 10-05-2011 (76 FR 61599)	• Requires old-growth forest habitat types for nesting • Suitable habitat is not found on the project development or conservation sites
Streaked horned lark	Threatened	Designated 10-03-2013 (78 FR 61505)	• Occupancy has not been verified on any of the project development and conservation sites • Species is known to use foraging sites near breeding areas • Suitable foraging habitat may be present on some of the project development and conservation sites
Olympia ssp. of Mazama pocket gopher	Threatened	Designated 04-09-2014 (79 FR 19711)	• Occupancy has been verified on several of the project development sites • Suitable habitat is present on several of the project development and conservation sites
Tenino ssp. of Mazama pocket gopher	Threatened	Designated 04-09-2014 (79 FR 19711)	• None of the project development and conservation sites are within the range of this subspecies
Yelm ssp. of Mazama pocket gopher	Threatened	Designated 04-09-2014 (79 FR 19711)	• Occupancy has been verified on one of the project development sites and one of the conservation sites • Suitable habitat is present on several of the project development and conservation sites

Fisher	Candidate		• The only fishers confirmed in the state at this time are the result of WDFW reintroduction efforts in the Olympic Mts. • Require conifer forest habitat types for denning and reproduction • Suitable habitat is not found on the project development or conservation sites

Common wildlife species in the vicinity of project development and conservation sites include Pacific treefrog *(Pseudacris regilla*), red-tailed hawk (*Buteo jamaicensis*), American robin (*Turdus migratorius*), song sparrow (*Melospiza melodia*), black-capped chickadee (*Poecile atricapilla*), dark-eyed junco *(Junco hyemalis*), house finch (*Carpodacus mexicanus*), deer mouse *(Peromyscus maniculatus*), vole (Microtus spp.), mole (*Scapanus spp*.), mountain beaver (*Aplodontia rufa*), raccoon (*Procyon lotor*), Viriginia opossum (*Didelphis virginiana*), coyote (*Canis latrans*), and black-tailed deer (*Odocoileus hemionus columbianus*).

Threatened and endangered species that could occur in Thurston County include the Taylor's checkerspot butterfly, Oregon spotted frog (*Rana pretiosa*), bull trout (*Salvelinus confluentus*), yellow-billed cuckoo (*Coccyzusamericanus*), Northern spotted owl (*Strix occidentalis caurina*), marbled murrelet (*Brachyramphus marmoratus*), streaked horned lark, and the Olympic, Tenino, and Yelm subspecies of the Mazama pocket gopher. The fisher *(Martes pennanti*) is currently considered a candidate to be listed as threatened or endangered.

Of the species with Federal listing status that may occur in Thurston County, only the Taylor's checkerspot butterfly, streaked horned lark, and the Olympia and Yelm subspecies of the Mazama pocket gopher or their habitats are likely to occur on any of the project development or conservation sites. Table 1 lists each species with its respective Federal listing status, whether critical habitat was designated for the species, and a short description of the likelihood that the species will be affected by the proposed Federal action.

Taylor's checkerspot butterfly

Taylor's checkerspot butterfly was listed as endangered under the ESA on October 3, 2013 (78 FR 61451-61503). Excerpted from the listing rule:

"*Taylor's checkerspot butterflies are medium-sized, colorfully marked butterflies with a checkerboard pattern on the upper (dorsal) side of the wings (Pyle 2002, p. 310). They are orange with black and yellowish (or white) spot bands, giving a checkered appearance (Pyle 1981, Pyle 2002).*

Taylor's checkerspot butterflies were historically known to occur in British Columbia, Washington, and Oregon, and distribution at the time of listing had been reduced from over 80 locations range wide to 14.

Taylor's checkerspot butterflies occupy open habitat dominated by grassland vegetation throughout their range. In Washington, Taylor's checkerspot butterflies inhabit glacial outwash prairies in the south Puget Sound region; shallow-soil balds (a bald is a small opening on slopes in a treeless area, dominated by herbaceous vegetation) (Chappell 2006).

Taylor's checkerspot butterflies face threats from loss of habitat due to conversion of native grasslands to agriculture, and permanent loss when prairies are developed for residential or commercial purposes. Taylor's checkerspot butterflies also face threats from changes in vegetation structure and composition of native grassland dominated plant communities. Changes to vegetation structure and composition can occur through conversion to agriculture, through natural succession processes, and invasion by nonnative species (Agee 1993, Chappell and Kagan 2001). In addition to the loss of grasslands from development, conversion to agriculture, and other uses, as well as plant succession, these plant communities are faced with degradation due to invasion of the grassland habitat that remains by native conifers and nonnative pasture grasses, shrubs, and forbs. As grasslands have been converted, the availability of Taylor's checkerspot butterfly larval host plants and adult nectar plants has declined.''

An overview of the status of the species is provided in the HCP.

Streaked horned lark

The streaked horned lark was listed as threatened under the ESA on October 3, 2013 (78 FR 61451-61503). From the listing rule:

"The streaked horned lark is endemic to the Pacific Northwest (British Columbia, Washington, and Oregon; Altman 2011) and is a subspecies of the wide-ranging horned lark (Eremophila alpestris). Horned larks are small, ground-dwelling birds, approximately 16–20 centimeters (6–8 inches) in length (Beason 1995). Horned larks forage on the ground in low vegetation or on bare ground (Beason 1995); adults feed mainly on grass and weed seeds, but feed insects to their young (Beason 1995).

The streaked horned lark's breeding range historically extended from southern British Columbia, Canada, south through the Puget lowlands and outer coast of Washington, along the lower Columbia River, through the Willamette Valley, the Oregon coast and into the Umpqua and Rogue River Valleys of southwestern Oregon. Over a century ago, the streaked horned lark was described as a common summer resident in the prairies of the Puget Sound region in Washington (Bowles 1898, Altman 2011). Larks were considered common in the early 1950s ''in the prairie country south of Tacoma'' and had been observed on the tide flats south of Seattle (Jewett et al. 1953). By the mid-1990s, only a few scattered breeding populations existed on the south Puget Sound on remnant prairies and near airports (Altman 2011).

The streaked horned lark population decline in the south Puget Sound of Washington indicates that the observed range contraction for this subspecies may be continuing, and the subspecies may disappear from that region in the near future. There are many other ongoing threats to the streaked horned lark's habitat throughout its range, including: (1) Conversion to agriculture and industry; (2) loss of natural disturbance processes such as fire and flooding; (3) encroachment of woody vegetation; (4) invasion of coastal areas by nonnative beach grasses; and (5) incompatible management practices. The continued loss and degradation of streaked horned lark habitat may result in smaller, more isolated habitats available to the subspecies, which could further depress the range wide population or reduce the geographic distribution of the streaked horned lark."

An overview of the status of the species is provided in the HCP.

Olympia and Yelm subspecies of the Mazama pocket gopher

On April 9, 2014, USFWS listed the Olympia, and Yelm subspecies of Mazama pocket gopher as threatened under the ESA (79FR 19760-19796). From the listing rule:

"Pocket gophers are generalist herbivores and their diet includes a wide variety of plant material, including leafy vegetation, succulent roots, shoots, and tubers. In natural settings pocket gophers play a key ecological role by aerating soils, enriching soils with nutrients, activating the seed bank, and stimulating plant growth, though they can be considered pests in agricultural systems. In prairie and meadow ecosystems, pocket gopher activity is important in maintaining species richness and diversity.

The Washington prairie ecosystem upon which the four Thurston/Pierce subspecies of the Mazama pocket gopher primarily depend has been reduced by an estimated 90 to 95 percent over the past 150 years, with less than 10 percent of the native prairie remaining in the south Puget Sound region today. Due to loss and degradation of gopher habitat from ongoing and future residential and commercial development, encroachment of shrubs and trees into their prairie habitats, and negative impacts from both current and future military training (for Roy Prairie and Yelm subspecies), we conclude that the threats to the habitat of the four Thurston/Pierce subspecies of the Mazama pocket gopher are significant."

An overview of the status of the species is provided in the HCP.

3.2 Aesthetic

3.2.1 Noise

The project development sites are located in urban, suburban, or rural settings generally containing a mix of commercial, industrial, or residential uses. All of the sites have been zoned in accordance with State, County, and local regulations and ordinances for industrial, light industrial, or planned industrial uses. The Washington Administrative Code (WAC) establishes maximum permissible sound level limits based on land use zoning of noise source(s) and receiving properties (WAC Chapter 173-60). Municipalities may have additional municipal codes or ordinances that address noise issues. The City of Tumwater, for example, identifies sources of noise that are considered unnecessary or a nuisance (City of Tumwater Municipal Code (TMC) Chapter 8.08), and allows "clearly audible" noise associated with construction activities between the hours of 7:00 a.m. and 8:00 p.m. on weekdays, and between 9:00 a.m. and 8:00 p.m. on Saturdays (TMC Chapter 8.08.030(g)). The City of Tumwater incorporates WAC Chapter 173-60 standards as Environmental Performance Standards that would be applied to noise levels associated with ongoing operations (TMC Chapter 18.400.030).

Several of the development sites and the Deschutes conservation site are close to the Olympia Regional Airport (Figure 1). The airport is a noise source in the project area. Additionally, many of the properties are located in industrial zoned areas which typically have a higher noise level. Therefore the background noise level for the sites is variable and may be particularly loud for the sites adjacent to the Olympia Regional Airport.

3.3 Cultural Resources

The Washington State Department of Archaeology and Historic Preservation's (DAHP) Washington Information System for Architecture and Archaeological Records Data (WISAARD) provides an inventory of structures in Washington greater than 50 years old. A review of WISAARD determined that two sites that could be affected by the proposed action contain structures included on the DAHP inventory. Structures listed on the historical inventory are not necessarily candidates for the NRHP, but may be eligible. The Wichman/McClellan project development site includes a warehouse constructed in 1959, and the Deschutes Corridor conservation site includes the former location of a home constructed in 1925 but demolished in 1985. A 1916 historic trail marker is located south of the site, but is not within the boundaries of the property (Appendix A WISAARD Maps). None of these structures are listed on the NRHP.

3.4 Economic

3.4.1 Socioeconomics

The population of Thurston County increased by approximately 17.8% from 207,355 in 2000 to 252,264 by 2010 (US Census Bureau 2010). The Thurston County Regional Planning Council (TRPC) projects a population increase of 46.9% to 370,589 over 2010 population levels by the end of the proposed 20-year ITP (TRPC 2015).

Public administration, educational services, and health care and social assistance are the largest employment sectors in Thurston County (US Census Bureau 2013). The reported unemployment rate was 8.8 percent for the community of Grand Mound, 10.9 percent in the city of Tenino, 4.5 percent in the city of Tumwater, and 5.8 percent in Thurston County. By comparison, Washington state's unemployment rate was 6.0 percent and 6.2 percent was reported for the United States as a whole (US Census Bureau 2013). Median household income and poverty rate information are provided in the section addressing Environmental Justice issues.

3.4.2 Land Use

Thurston County is approximately 774 square miles in size (476,160 acres); of which about 722 square miles is land area (462,080 acres) and 52 square miles (33,280 acres) are water (US Census Bureau 2013). The County's largest cities and towns are Bucoda, Lacey, Olympia (the County seat and Washington state capitol), Rainier, Tenino, Tumwater, and Yelm. Land uses in the County are comprised a checkerboard of rural and urban uses including agricultural production, wetlands, open space, residential development, industrial, institutional, and commercial areas. All of the project sites are zoned by Thurston County for various densities of industrial and commercial developments, and are generally located in areas with similar uses.

3.5 Social

3.5.1 Environmental Justice

The US Environmental Protection Agency's (EPA) Office of Environmental Justice defines environmental justice as:

> "*The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that*

> *no group of people, including racial, ethnic, or socioeconomic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies.''*

The concept of environmental justice is rooted in the Civil Rights Act of 1964, which prohibited discrimination in Federally-assisted programs, and in Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations," issued February 11, 1994. Executive order 12898 was intended to ensure that Federal actions and policies do not result in disproportionately high adverse effects on minority or low-income populations. Environmental justice issues are mandated and regulated at the Federal level, and compliance with NEPA requires analysis of environmental justice effects.

An analysis of environmental justice issues addresses demographics, including population and race/ethnicity; and measures of social and economic well-being, including median household income and poverty rates. Table 2 summarizes these demographic and socioeconomic data for the community of Grand Mound, the City of Tumwater, and Thurston County. This data is also presented for the State of Washington and for the United States as a whole to provide context for the local data.

Table 2. 2010 Population

Population by Ethnic and Racial Groups (2010)								
	2010 Population	**Race**						**Ethnicity**
		White	**Black**	**AIAN**	**Asian**	**Native Hawaiian or OPI**	**Some Other Race**	**Hispanic or Latino[1]**
Grand Mound	2,981	2,438	21	63	33	6	248	480
		81.8%	0.07%	2.1%	1.1%	0.2%	8.3%	16.1%
Tenino	1,695	1,538	3	4	21	5	35	125
		90.7%	0.2%	0.0%	1.2%	0.3%	2.1%	7.4%
Tumwater	17,371	14,769	301	201	841	90	272	1,069
		85.0%	1.7%	1.2%	4.8%	0.5%	1.6%	6.2%
Thurston County	252,264	207,856	6,752	3,515	13,037	1,961	5,648	17,787
		82.4%	2.7%	1.4%	5.2%	0.8%	2.2%	7.1%
Washington	6,724,540	5,196,362	240,042	103,869	481,067	40,475	349,799	755,790
		77.3%	3.6%	1.5%	7.2%	0.6%	5.2%	11.2%
USA	308,745,538	223,553,265	38,929,319	2,932,248	14,674,252	540,013	19,107,368	50,477,594
		72.4%	12.6%	0.9%	4.8%	0.2%	6.2%	16.3%

[1] These may belong to any race.

The predominant racial group in Thurston County is White (Caucasian), comprising roughly 82.4 percent of the countywide population in 2010. The next largest racial group in the county is Asians, making up 5.2 percent of total population. The relative percentages of Black, Asian, Native Hawaiian or Other Pacific Islanders (OPI) are lower for Grand Mound, Tenino, and Tumwater than for the County as a whole. American Indian and Alaska Natives (AIAN),

Hispanic and Latino, and those reporting as Some Other Race represent a greater proportion of the population in Grand Mound than in either Tumwater or Thurston County.

Median household incomes are similar for the communities most closely associated with the project development sites and Thurston County as a whole. Recent Census data reports median household income in Grand Mound was $60,049, Tenino was $50,952, Tumwater was $63,527, and Thurston County was $63,388. Median household income in the state of Washington was reportedly $59,478, and in the United States was $53,046 (US Census Bureau 2013).

Poverty rates represent the percentage of an area's total population living at or below the poverty threshold established by the US Census Bureau. Based on 2010 Census data, the poverty rate was 21.5 percent in Grand Mound, 15.1 percent in Tenino, 10.6 percent in Tumwater, and 11.7 percent in Thurston County. The poverty rate in the state of Washington was 13.4 percent and in the United States was 15.4 percent (US Census Bureau 2013).

3.6 Health

3.6.1 Air Quality

The Washington State Department of Ecology (WA DOE) and the EPA monitor air pollutants and may designate regions as being in "attainment" or "nonattainment" with respect to National Ambient Air Quality Standards (NAAQS) for certain pollutants. In the 1980's, Thurston County air quality exceeded the EPA 24-hour standard for particulate matter of ten microns or less (PM_{10}) and was classified as a "nonattainment area". Subsequent efforts to improve air quality succeeded in meeting the standard by 1991.

Nonattainment areas that improve air quality and meet NAAQS requirements can request re-designation as being in attainment. Re-designation requires development of an EPA-approved Maintenance State Implementation Plan (SIP) and compliance with NAAQS requirements for a 20-year period. Thurston County created an EPA-approved SIP and was designated a PM_{10} air quality maintenance area for PM_{10} in 2000. The SIP for a second 10-year period was approved by the EPA on October 3, 2013 (78 FR 47259).

Motor vehicles are the largest contributors of air pollutants in the area. Vehicle-associated pollutants include carbon monoxide, sulfur oxides and nitrogen dioxide from combustion, and fine particles from combustion and tire wear.

4. ENVIRONMENTAL CONSEQUENCES

Development and construction on the project development sites in accordance with applicable Federal, State, and local statutes, regulations, codes and ordinances is expected to occur regardless of which of the analyzed alternatives is selected.

The environmental consequences of some of the alternatives are expected to be the same or similar regardless of which alternative is selected. In some cases, the resulting consequences are a matter of intensity or degree of an anticipated environmental effect, rather than a question of whether such an effect will occur.

4.1 Ecological

4.1.1 Climate

The effects of lawful construction and development of up to approximately 250 acres scattered across numerous sites throughout Thurston County are not expected to result in measurable direct or indirect impacts to climate in the study area.

4.1.2 Geology

No surface or subsurface mining or other activities that would be expected to affect the geology of the area are anticipated under any other alternatives.

4.1.3 Surface and Groundwater

Alternative 1 – No Action Alternative

The anticipated development and construction on the project development sites would be expected to result in some short-term and localized impacts to storm water runoff and infiltration, though they would be expected to be smaller in scale than expected under alternatives 2 or 3. Avoidance of listed species and their habitats on the project sites would limit development and construction to less than half (about 47%) of the area that could be subject to these activities under the proposed action, and would therefore be expected to result in about half of the total storm water impacts expected under the proposed alternative. These effects would be expected to be most pronounced while construction activities are underway, and to be managed with construction Best Management Practices (BMPs) to maintain compliance with applicable local and state regulations. These effects are expected to be short-term because construction-related impacts would be expected to end as these activities are completed.

Ongoing use and maintenance of the constructed facilities would be expected to result in some storm water runoff from newly created impervious or hardened surfaces, though these effects would also be expected to reflect the limited scope of development. About half of the total storm water and runoff effects would be anticipated under this alternative as expected under the proposed alternative. Because state and local regulations prescribe BMPs and the use of physical controls such as settling and infiltration structures to maintain water quality within specified standards based on the total area of disturbance and the type of proposed use on each site, the impacts to surface and groundwater resources would not be expected to exceed regulatory thresholds or to be considered significant.

Impacts to infiltration through permeable soil types due to the construction of impervious or hardened surfaces would occur, though avoidance of habitat for listed species would result in reduced impacts to soil infiltration capacities when compared to the proposed action.

Under this alternative, the Applicants would avoid all impacts to listed species and would not set aside the two permanent conservation sites for the benefit of these species. Because listed species are known to occur on these sites, construction and development would not occur at these locations, and no resulting groundwater or surface water impacts would be anticipated at these locations.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP
The anticipated development and construction on the project development sites would result in short-term and localized impacts to storm water runoff at a scale reflecting the larger development envelope expected under this alternative. These effects would be expected to be most pronounced while construction activities are underway, and to be managed with BMPs in compliance with applicable local and state regulations. These effects are expected to be short-term because construction-related impacts would be expected to end as these activities are completed.

Ongoing use and maintenance of the constructed facilities would be expected to result in some storm water runoff from the newly created surfaces. State and local BMPs and physical controls based on the total area of disturbance and use on each site would be expected to maintain water quality within specified standards. Infiltration through permeable soil types on the project development sites would be reduced in direct proportion to the amount of constructed impervious or hardened surfaces that reduce their groundwater recharge capacity.

Under the proposed action alternative, the Deschutes Corridor and Leitner Prairie conservation sites would be permanently maintained in an open space and undeveloped condition, so no hardened or impervious surfaces that could contribute to storm water runoff or that would affect groundwater infiltration capacity would be created at these locations.

Alternative 3 - Individual Site by Site HCPs and ITPs
The consequences to surface and groundwater resources are expected to be similar though somewhat greater under alternative 3 to those anticipated under the proposed action alternative. Because the Deschutes Corridor conservation site would be subject to development under this alternative, an additional amount of construction-related and ongoing operational storm-water and infiltration effects resulting from the construction and development of up to 46 additional acres would be expected.

4.1.4 Topography

Alternative 1 - No Action Alternative
Each of the project development sites will be subjected to clearing, grading, and excavation activities associated with development and construction activities in areas that could avoid impacts to listed species. Most of the project development sites are flat (0-3% slopes), though some sites include small areas with somewhat greater slopes (of up to 15%). Development and construction activities may alter topography of the project development sites somewhat, though most projects are likely to be constructed on flat or mostly flat areas that may result in little overall topographical change. Of the three alternatives considered, the no action alternative would result in the least impact to topography because avoidance of listed species and their habitats would limit development to less than half of the area impacted under alternatives 2 and 3.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP
Though effects of clearing, grading, and excavation would be expected to reflect the larger relative size of the overall development proposed under the proposed action alternative when compared to alternative 1, most of the project development sites have relatively little

topographical relief. The proposed construction and development related activities are therefore not expected to have a significant impact to the topography of the area.

Alternative 3 - Individual Site by Site HCPs and ITPs
Effects under alternative 3 would be expected to be similar but somewhat greater than those expected under the proposed alternative due to the development of up to 46 acres at the Deschutes Corridor site.

4.1.5 Soils

Alternative 1 - No Action Alternative
Under the no action alternative, grading and excavation would occur on the portions of the site where impacts to listed species could be avoided. Some areas of topsoil may be removed or redistributed in the course of site preparation and development. Some soils on the project development sites will be covered with impervious surfaces such as asphalt, concrete, and built structures. Topsoil from the site or from other locations may be placed onsite for landscaping purposes once construction activities are complete. Less soil disturbance and impervious cover would be expected under this alternative due to the approximately 47% smaller overall area subject to these activities when compared to alternative 2. No ground disturbing activities or soil disturbance would be expected to occur on the areas that provide habitat for listed species on the project and the conservation sites, so no impacts to soils would be expected in those areas under this alternative.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP
The effects to soils under the proposed action would reflect the grading and excavation associated with the proposed development of the 13 project development sites described in the HCP. Soil stockpiling, removal, redistribution, and addition of soils for landscaping would be expected to occur within the development and construction areas. Under this alternative the two conservation sites would be maintained in an undeveloped state and would therefore not experience soil disturbing activities beyond minor disturbances related to the management of those sites as habitat preserves.

Alternative 3 - Individual Site by Site HCPs and ITPs
Soils on the project development sites will be exposed to the same grading, excavation, removal, and redistribution described previously. Resulting impacts to soil resources under this alternative would be expected to be similar to those described for alternative 2. Because the Deschutes Corridor site would be subject to development and construction, an additional 46 acres of soil impacts would be anticipated under this alternative.

4.1.6 Vegetation

Alternative 1 - No Action Alternative
Most of the existing vegetation on the project development sites, with the exception of the habitats for listed species that would be avoided, within existing storm water facilities, habitat set-asides, or areas subject to other regulations and ordinances (such as municipal tree protection ordinances); would be subject to clearing or removal during site preparation and construction activities as each of these sites is developed.

Development and construction in these areas would result in conversion of existing vegetation to impervious or hardened surfaces or landscaped areas. The total area subjected to clearing and vegetation removal would be less than half (approximately 47%) of the total expected under alternative 2 due to the avoidance measures anticipated under this alternative.

Because there is no HCP or conservation program associated with this alternative the Applicants would not control invasive species, restore or maintain native plants, or manage any of the properties to support plants that support listed species such as Taylor's checkerspot butterfly or Mazama pocket gophers on the project development or conservation sites. The habitat areas that are avoided and remain on the project sites after development is complete would be expected to continue to be invaded by invasive plants. These species would continue to compete with the remaining native prairie plants over time, thereby contributing to the shift towards woody shrub and forest vegetation and the decline of habitat for listed species in the area.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

Effects of the proposed action include vegetation management including regular mowing and other actions to control woody and invasive species on the project development sites until such time as they are developed. As development occurs on these sites, vegetation would be impacted by the various proposed construction activities. Most of the existing vegetation on the project development sites would be removed during site preparation when these sites are developed. Construction in these areas would then result in conversion of existing vegetation to impervious or hardened surfaces or landscaped areas.

The removal of the existing degraded grasslands, encroaching native and non-native woody vegetation, and invasive species on the project development sites would not be expected to have a significant impact to the vegetation communities in the study area. No functioning intact prairie plant communities are known from the project development sites, though some individual plants representative of these communities may be present. The loss of these remnant individual plants where they may persist within a matrix of invaded non-native grasslands would not constitute a significant impact to the vegetation communities of the study area.

The conservation program proposed in the Applicants' HCP would require that the two permanent conservation sites will be managed to restore and maintain habitat for Taylor's checkerspot butterfly and Mazama pocket gophers. Taylor's checkerspot requires a specific suite of larval host and nectaring plants, such as narrowleaf plantain, harsh paintbrush, sea blush, blue-eyed Mary, and dwarf owl-clover, common camas, nine-leaved lomatium, deltoid balsamroot, spring gold, wholeleaf saxifrage, and seablush. High-quality habitat for Mazama pocket gophers includes vegetation composed of forbs such as clover, lupines, dandelions, false dandelions, and camas. The conservation program establishes specific performance standards to achieve these goals. The conservation program also incorporates specific invasive plant management goals for the project development sites until such time as these are developed, and long-term invasive species management goals for the permanent conservation sites. These management actions are expected to reduce the impacts of invasive species and increase the distribution and abundance of prairie plant species in the study area.

Alternative 3 - Individual Site by Site HCPs and ITPs

The Applicants would not manage invasive species or maintain habitat on the project development or the Deschutes Corridor site until these sites are developed. Habitat where it exists today would be expected to continue to be invaded and to degrade over time until these sites are developed. When development and construction begins on these sites, most all of the vegetation would be removed and currently vegetated areas would be converted to impervious or hardened surfaces or landscaped areas. The total area of vegetation under this alternative is greater than that expected under the proposed action because about 46 acres of the Deschutes Corridor site could be subject to development.

4.1.7 Wetlands, Streams and Shorelines

Alternative 1 - No Action Alternative

Most of the project development and conservation sites are upland locations that do not have wetlands, streams or shorelines that could be affected by actions that would be implemented under alternative 1. A small emergent wetland exists at the Tumwater Commerce Place project development site. This wetland would not be expected to be affected by development or construction at this location because it is located within an existing set-aside area established by the Applicants. The Deschutes Corridor site contains some areas of riparian vegetation and river frontage along the Deschutes River. Because this site will be avoided under this alternative, no development or construction activity that could impact these areas would occur and no effects to these resources would be expected.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The wetland area within the habitat set-aside area at the Tumwater Commerce Place development site would not be affected by development and construction. Under the proposed action the Deschutes Corridor site would be permanently managed as a habitat mitigation site, so no development or construction activity that could affect wetlands or streams would be expected to occur.

Alternative 3 - Individual Site by Site HCPs and ITPs

No impacts would be expected to affect the wetland within the habitat set-aside area at the Tumwater Commerce Place development site under alternative 3. The Deschutes corridor site, however, would be subject to development under this alternative. Existing state and local regulations and ordinances prescribe setbacks that would apply to any development and construction activities that would be proposed for this site. Though development and construction could occur on this site, impacts to wetlands or streams would be expected to be maintained within regulatory thresholds through required setbacks and construction BMPs.

4.1.6 Fish and Wildlife

Alternative 1 - No Action Alternative

Common wildlife species found on the project sites would be affected as each of these areas are developed and construction is initiated under alternative 1. The removal of vegetation will eliminate nesting, perching, roosting, and cover areas for a range of common wildlife species such as Pacific treefrogs, red-tailed hawks, American robins, song sparrows, black-capped chickadees, dark-eyed juncos, house finches, deer mice, voles, moles, mountain beavers, raccoons, Virginia opossums, coyotes, and black-tailed deer. Some loss of feeding resources could also be expected, whether directly through the removal of browsed or grazed plant

materials, or by removing the habitat for species preyed upon by other wildlife. Because impacts to listed species and their habitats would be avoided under this alternative, the approximately 135.97 acre (about 47% smaller) overall development would be expected to generate equivalently lower impacts to non-listed wildlife species and their habitats than would be expected under the larger development anticipated under the proposed action.

Threatened and Endangered Species

Because no take of listed species is anticipated under this alternative, no HCP would be developed and no ITP would be pursued by the Applicants. The Applicants would not implement the proposed conservation program and would not provide any ongoing habitat management for the listed species either before development begins or after construction is complete. The Applicants would not manage the Leitner Prairie and Deschutes Corridor sites to support listed species. Alternative 1 represents a "hands off" approach that avoids short-term impacts to listed species but does not reduce habitat fragmentation or contribute to recovery. Because the Applicants would not commit to manage occupied or potential habitat for the benefit of the species under this alternative, ongoing habitat degradation and loss due to continued invasive and woody species encroachment would be expected. Avoidance of the migratory populations of streaked horned larks and their habitats under Alternative 3 would make permitting under MBTA unnecessary.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The proposed action would also result in impacts to wildlife, including listed species, but the anticipated effects under this alternative are expected to generate long-term benefits for listed species. Because the development area under the proposed action is larger (up to approximately 204 acres) than that described under alternative 1, the greater loss of habitat for common wildlife species would also be affected. Common wildlife species in the area are not expected to suffer measurable or significant impacts doe to the loss of this amount of habitat in Thurston County.

Threatened and Endangered Species

The coordinated conservation program described in the Applicants' HCP would provide a number of short-term and long-term measures intended to restore or maintain habitat for Taylor's checkerspot butterfly, streaked horned larks, and the Olympia and Yelm subspecies of Mazama pocket gophers. The proposed action would provide ITP coverage for a 20-year term, during which any or all of the project sites could be developed. When these sites are developed it is assumed that all individuals of the listed species and their habitats at these locations will be taken. The HCP proposes a conservation program that includes short-term conservation measures that will restore and maintain habitat conditions on the project sites until such time as these sites are developed. This action will allow individuals of the listed species that may be present on or that may transit across these sites to utilize viable habitat areas over time. Because the Applicants do not expect these project sites to be developed immediately upon issuance of the requested permit, this approach ensures that the sites will be able to support the various listed species on each site where they may be present for as long as possible.

The conservation program also provides for the establishment and ongoing management of two permanent conservation sites for the benefit of the listed species. The approximately 36.18-acre Leitner Prairie conservation site will be managed to support the Taylor's checkerspot butterfly

and the Yelm subspecies of the Mazama pocket gopher. The approximately 51.32-acre Deschutes Corridor conservation site will be managed for the benefit of the Taylor's checkerspot butterfly, the streaked horned lark, and the Olympia subspecies of the Mazama pocket gopher. The requested ITP would serve as a Special Use Permit under the MBTA for impacts to migratory populations of the streaked horned lark under the proposed alternative. Specific habitat management performance standards are proposed in the Site Management Plans incorporated into the HCP and described in Appendices C and D.

The combination of short-term habitat management measures on the project sites and dedication of approximately 87.5 acres on two permanently managed sites dedicated to the conservation of the listed species are proposed to compensate for the loss of occupied and potential habitat of varying quality for the listed species where they may occur on the development sites. Though some take of listed species is expected to occur due to the loss of individuals or the poor to moderate quality habitat where they exist, the context and intensity of the effects resulting from the proposed federal action when considered together with the proposed offsetting compensatory measures results in a finding that these effects are not considered significant.

Alternative 3 - Individual Site by Site HCPs and ITPs

Impacts to wildlife under alternative 3 would be expected to be similar to those anticipated under the proposed action. Common wildlife species would be affected as the 13 project sites and the Deschutes Corridor site are developed. Under this alternative, approximately 250 acres would be subject to development and construction (approximately 204 acres expected under the proposed action plus the additional 46 acres of developable acreage at Deschutes Corridor). The somewhat larger development area under alternative 3 would generate greater relative impacts to common wildlife species that occupy or use these lands when these sites are developed.

Threatened and Endangered Species

The Applicants would develop an HCP and apply for an ITP for each of the individual project sites and the Deschutes Corridor site when proposed activities would result in take of listed species at the time each site is proposed for development. Impacts to listed species would be considered on a project-by-project basis, and avoidance, minimization and mitigation measures would be developed separately for each project. Projects could include on-site habitat set-asides, or the Applicants would pursue offsite compensatory mitigation for each separate development. No coordinated conservation plan that provided for all of the impacts across the projects would be implemented.

The Leitner Prairie conservation site would provide some mitigation for impacts to Taylor's checkerspot butterfly and the streaked horned lark, though the smaller size of this 36.18 acre single parcel would provide less overall conservation benefit for these species than the two managed conservation sites (totaling 87.5 acres) proposed under alternative 2. Mitigation for the three project sites within the range of the Yelm subspecies of Mazama pocket gopher could be accommodated at this site. Additional mitigation for Taylor's checkerspot butterfly, the streaked horned lark, and the Olympia subspecies of Mazama pocket gopher would be identified in each of the individual HCPs created as each of the projects sites are proposed for development. Mitigation for impacts resulting from development of these sites could be acquired from conservation banks (if any are available), through acquisition of additional habitat parcels, or by

participating in the proposed Thurston County regional HCP currently in development (for those projects within the jurisdiction of and therefore able to participate in that proposed plan). Individual ITPs that cover incidental take of migratory streaked horned larks on the development sites would serve as Special Use Permits under MBTA under this alternative.

4.2 Aesthetic

4.2.1 Noise

Alternative 1 - No Action Alternative

Site preparation and construction activities during the development of the project sites would be expected to generate temporarily increased noise levels while development activities were underway. These increases in noise would result from a range of sources including the use of heavy equipment and activities such as site clearing, grading, paving, material delivery and assembly. Construction sounds would cease once the development activities at each project site are completed.

All of the project sites are zoned for industrial or commercial activity, and the ongoing use and maintenance of the constructed facilities would also be expected to generate some increase in noise. Sound associated with vehicular traffic would be expected, though until the specific types of enterprises proposed for these sites is known, there is no way to determine the expected amount of increased operational or traffic noise.

Because avoidance of listed species and their habitats would result in smaller overall development proposals, reduced areas of elevated noise would be expected under this alternative. The total developable area of approximately 47% of the project development sites could therefore be expected to generate about half of the construction and ongoing operational noise as the proposed action.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The sources and types of noise expected under this alternative are the same as those previously described, though the larger area subject to development would result in an equivalently greater amount of noise. The Leitner Prairie and Deschutes Corridor conservation sites would be managed for the benefit of the species and little additional noise would be expected to be generated at those sites beyond that associated with occasional mowing or other habitat management actions.

Alternative 3 - Individual Site by Site HCPs and ITPs

Noise impacts under alternative 3 are expected to be similar to those described under alternative 2. The additional development of the Deschutes Corridor site would be expected to generate additional noise impacts as this site is constructed and operations and maintenance of the site begins.

4.3 Cultural Resources

Alternative 1 - No Action Alternative

Development of the Wichman/McClellan site under Alternative 1 could result in the removal or

demolition of the 1959 warehouse located on the site. The warehouse is on the WA Department of Archaeology and Historic Preservation (DAHP) inventory because it is over 50 years old; however, there is no record of it being evaluated for eligibility to NRHP (See Appendix A). Since this structure is only slightly more than 50 years old, we anticipate it has a low probability of representing important cultural resources. Development of the site would require the Applicants to obtain permits and adhere to all applicable regulations pertaining to protection of any cultural resources present. It is anticipated that any cultural resource values associated with the warehouse would be appropriately evaluated and addressed in accordance with relevant regulations prior to authorization of any development.

The Deschutes Corridor site includes the location of the Gaston House. The structure was built by the son of an early pioneer, and was demolished in 1985. A 1916 historic trail marker is located south of, but not within the boundaries of, the property. Though these features have not been recommended for the NRHP (See Appendix A) they could be considered locally important cultural sites. However, no impacts to these cultural resources are anticipated from any activities within the Deschutes Corridor site because the house was demolished almost 30 years ago, and the trail marker is not within the property. Therefore no significant impacts to cultural resources are anticipated under the No Action Alternative.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The effects of the proposed alternative are expected to be similar to those previously described. Development of the Wichman/McClellan property would require the Applicants to obtain permits and adhere to all applicable regulations pertaining to protection of any cultural resources present. It is anticipated that any cultural resource values associated with the 1959 warehouse would be appropriately evaluated and addressed in accordance with relevant regulations prior to authorization of any development. As in the No Action alternative, no cultural resource impacts would be expected at the Deschutes Corridor site.

Alternative 3 - Individual Site by Site HCPs and ITPs

The Applicants could choose to develop HCPs and apply for ITPs for each of the individual project sites including those where proposed activities could result in effects to the cultural resources on the Wichman/McClellan and the Deschutes Corridor sites. Development of these sites would require the Applicants to obtain permits and adhere to all applicable regulations pertaining to protection of any cultural resources present. The effects of alternative 3, therefore, would be expected to be similar to those previously described under alternatives 1 and 2.

4.4 Economic

4.4.1 Socioeconomic

Alternative 1 - No Action Alternative

Development of each of the project sites would generate short-term employment in the

construction and building trades. Each project will require workers to complete the various site preparation, clearing, grading, excavation, paving, materials delivery, and construction tasks. Upon completion of the construction operations, each of the resulting commercial or industrial operations would generate employment opportunities that could generate long-term economic benefits for the local area.

Because avoidance of all impacts to species and their habitats on the project development sites would result in approximately half the buildable area when compared to the proposed action, the short and long-term socioeconomic impacts would be expected to generate equivalent impacts to the local area as would be expected under alternative 2.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The effects of the proposed alternative are expected to be similar to those described for alternative 1, though the result of a programmatic ITP that covers all 13 development sites would include facilitating growth and development of these sites. Socioeconomic effects including short and long term impacts under the proposed alternative would be expected to approximately double the effects expected under the no action alternative due to the larger developable area.

Alternative 3 - Individual Site by Site HCPs and ITPs

The effects of alternative 3 are expected to be similar to those described under the proposed action, though the lack of a single ITP that facilitates development on all 13 of the development sites would require development of a separate HCP and application for an ITP for each site. The time to develop and process each of these separate documents and complete the required NEPA analysis could slow the pace and increase the cost of potential development for these sites. These cost and time inputs would be expected to slow the short and long term socioeconomic effects expected under this alternative.

4.4.2 Land Use

All of the project development sites are zoned for industrial or light industrial development and they are all located in areas with similar surrounding uses. None of the alternatives are expected to impact existing or proposed land uses in the study area.

4.4.3 Transportation

Alternative 1 - No Action Alternative

Transportation needs will be impacted by the no action alternative during the development and construction phase and during ongoing operations and maintenance of the resulting commercial and industrial developments. Development of the project locations will require access for site

preparation and construction activities. Transportation needs for both heavy equipment and the construction trade workers will be required at each site. Upon completion of construction, the regular use and maintenance of the industrial or commercial businesses will determine the amount and type of transportation needs at each location.
The transportation impacts generated under the avoidance alternative are expected to be somewhat smaller than anticipated under option 1 or 2 due to the smaller relative size of projects (due to the approximately 47% smaller total developable acreage) on the development sites resulting from measures to avoid impacts to listed species.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP
The impacts to transportation for the proposed alternative are expected to be similar to though greater than those anticipated under the no action alternative due to the larger area that will be subject to construction and ongoing operations and maintenance.

Alternative 3 - Individual Site by Site HCPs and ITPs
Transportation impacts under alternative 3 are expected to be similar to those described under alternative 2, though the development of the Deschutes Corridor site would be expected to generate additional construction traffic impacts and ongoing operational transportation impacts once the constructed facilities are occupied.

4.5 Social

Environmental Justice

Alternative 1 - No Action Alternative
Alternative 1 is not expected to generate environmental justice impacts because none of the project development or conservation sites are located in economically disadvantaged or minority communities that would be disproportionately impacted by this proposal. The resulting economic impacts expected under alternative 1 would reflect the relative size of the developable area under the avoidance approach, and would generate about half of the short-term (workers associated with the construction activities on the development sites) and long-term (employees at the resulting commercial and industrial sites) employment opportunities as expected under the proposed alternative.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP
The proposed alternative would not be expected to generate any environmental justice impacts, and would generate additional short-term and long-term employment opportunities due to the larger developable area proposed in the Applicants' HCP.

Alternative 3 - Individual Site by Site HCPs and ITPs
No environmental justice concerns are expected under alternative 3, and the additional development of the Deschutes Corridor site would generate some additional short-term and long-term economic impacts in the local area.

4.6 Health

Air Quality

Alternative 1 - No Action Alternative

Development activities can temporarily impact air quality in the vicinity of construction projects. Fine particulate matter related to heavy equipment operations; dust associated with clearing, grading or excavation activities; and odors from paving or roof sealing activities would be generated during construction activities. These effects are usually short-term, but can be problematic for at-risk groups such as children with asthma. These impacts are expected to end once site development and construction activities are complete. Operations and maintenance of the resulting commercial and industrial facilities would be expected to generate some additional traffic that would increase vehicle-associated airborne pollutants.

The effects of the avoidance alternative are expected to generate about half of the air quality impacts expected under the other alternatives due to the smaller size of the developable area on project sites where avoidance measures would reduce buildable area.

Alternative 2 – The Proposed Action: Issuance of the Requested ITP

The effects under the proposed action are expected to be similar to but greater than the effects anticipated under the no action alternative due to the additional acreage that could be developed in accordance with the HCP upon issuance of the requested permit. State and local regulations and ordinances addressing air quality impacts would be expected to maintain potential pollutants within required thresholds. The effects of development compliant with applicable state and local regulations of up to approximately 204 acres located on 13 separate sites over the course of 20 years are not expected to result in significant air quality impacts.

Alternative 3 - Individual Site by Site HCPs and ITPs

Air quality effects under alternative 3 would be expected to be similar to those expected under the proposed action alternative, but would reflect the additional air quality impacts expected from the construction, operations and management of the 46 acres of developable area at the Deschutes Corridor site.

5. LIST OF PREPARERS

This document was prepared under the guidance of the US Fish and Wildlife Service by the following SCJ Alliance staff members:

Jean Carr, LEED AP BD+C	Principal: M.S. Public Administration, B.S. Environmental Policy & Assessment, with more than 25 years of experience leading a planning and environmental documentation efforts. Prepared numerous Environmental Classification Summaries and Environmental Assessments. Has coordinated the work of large consultant teams involved in the preparation of special environmental studies such as cultural resources assessments, noise analysis, and wetland and wildlife studies.
Theresa Turpin, AICP	Senior Planner: B.A. in Mathematics, with more than 20 years of experience in planning, preparation of NEPA/SEPA environmental documentation, biological assessments, wetland and land use reports, public involvement and facilitation, strategic planning and environmental permitting.
Molly Linville	Environmental Planner / Wildlife Biologist: B.S. wildlife biology, former USFWS biologist. Twelve years of experience in habitat management/restoration, wildlife mark-recapture studies, wetland delineation and mitigation projects, environmental assessments, environmental impact statements, biological assessments, habitat plans, public involvement, inter-agency habitat projects, NEPA/SEPA, and Shoreline Master Plan projects.

6. LITERATURE CITED

Alverson, E. April 2005. Preserving prairies and savannas in a sea of forest, a conservation challenge in the Pacific Northwest. http://cascadiaprairieoak.org/wp-content/uploads/2014/01/Plant-Talk-40_Alverson.pdf. Web site accessed February 2015.

Barnes, V. G. 1973. Pocket gophers and reforestation in the Pacific Northwest: a problem analysis. Special Scientific Report–Wildlife No. 155. U.S. Department of the Interior, Fish and Wildlife Service Bureau of Sport Fisheries and Wildlife. Washington, D.C. http://babel.hathitrust.org/cgi/pt?id=mdp.39015086548370;view=1up;seq=7. Web site accessed February 2015.

Chappell, C. and R. Crawford. 1997. Native vegetation of the south Puget Sound prairie landscape. Natural Heritage Program, Washington Department of Natural Resources, Olympia, Washington. 18 pages.

Crawford, R. C. and H. Hall. 1997. Changes in the south Puget prairie landscape. Natural Heritage Program, Washington Department of Natural Resources, Olympia, Washington. 5 pages.

Dalquest, W. W. and V. B. Scheffer. 1944. Distribution and variation in pocket gophers, *Thomomys talpoides*, in the state of Washington II. The American Naturalist. Volume 78, pages 423 to 450.

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. US Geological Survey – Department of the Interior, Water_resources Investigations Report 92-4109. Tacoma, Washington. 235 pages.

Fimbel, C. 2004. A report on habitat enhancement for rare butterflies on Fort Lewis prairies. The Nature Conservancy, Washington. 69 pages.

Knudsen, C. J. 2003. The Thomomys Mazama pocket gopher in Washington prairies: a contemporary view for management. Master's thesis at The Evergreen State College. 95 pages.

Krippner, L. 2015. In prep. Draft 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. 86 pages.

Page, N., P. Lilley, J. Heron, and N. Kroeker. 2009. Distribution and habitat characteristics of Taylor's checkerspot on Denman Island and adjacent areas of Vancouver Island (2008). Report prepared for B.C. Ministry of Environment and Parks Canada Agency by Raincoast Appllied Ecology. v + 32 pages.

Pearson, S.F. and B. Altman. 2005. Range-wide streaked horned lark (*Eremophila alpestris strigata*) assessment and preliminary conservation strategy. Washington Department of Fish and Wildlife, Olympia, Washington. 25 pages.

South Sound Prairies. The role of fire on the south Puget Sound prairies. http://www.southsoundprairies.org/prescribed-fire/. Web site accessed February 2015.

Stinson, D. W. 2005. Status report for the Mazama pocket gopher, streaked horned lark, and Taylor's checkerspot butterfly. Washington Department of Fish and Wildlife, Wildlife Program, Olympia, Washington. 146 pages.

Stinson, D. W. 2013. Draft Mazama pocket gopher status update and Washington State recovery plan. Washington Department of Fish and Wildlife, Olympia, Washington. vi + 91 pages.

Thurston County Planning Council. 2015. Thurston County population forecast. Available at http://www.trpc.org/446/Thurston-County-Population-Forecast. Web site accessed June 5, 2015.

U.S. Census Bureau. 2010 Census. DP-1: demographic profile data. Available at http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml. Web site accessed June 5, 2015.

U.S. Census Bureau. 2009-2013 5-year American community survey. DP03: selected economic characteristics. Available at http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml. Web site accessed June 5, 2015.

USDA NRCS web soil survey: http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Web site accessed February 2015.

U.S. Department of the Interior, Fish and Wildlife Service; and U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. 1996. Habitat conservation planning and incidental take permit processing handbook. 306 pages.

USFWS Environmental Conservation Online System: Mazama pocket gopher. http://ecos.fws.gov/speciesProfile/profile/speciesProfile?spcode=A0IE. Web site accessed February 2015.

USFWS Environmental Conservation Online System: streaked horned lark. http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B0B3. Web site accessed February 2015.

USFWS Environmental Conservation Online System: Taylor's checkerspot butterfly. http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=I0T6. Web site accessed February 2015.

USFWS Glossary (Midwest region). http://www.fws.gov/midwest/endangered/glossary/index.html. Web site accessed April 2015.

WDFW. Streaked horn lark status update. 2012. 2012 Annual Report. Pages 69 to 73.

WDFW PHS (Washington Department of Fish and Wildlife, Priority Habitat and Species) data. 2015. Interactive web based map. http://apps.wdfw.wa.gov/phsontheweb/. Web site accessed February 13, 2015.

Western Regional Climate Center database. http://www.wrcc.dri.edu/climatedata/climsum/. Database accessed January 2015.

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. Volume 70, No. 2. Pages 93-98.

Appendix A

Washington Information System for Architectural and Archaeological Records Data (WISAARD) Table for the Kaufman Properties

Permit Area

Washington Department of Archaeology and Historic Preservation (DAHP)
Washington Information System for Architectural and Archaeological Records Data (WISAARD)

Covered Property	WISAARD
Kaufman Industrial Park	No Historic Property Inventory (HPI) or Historic Register Properties on the site. No Registered Properties shown within one mile.
79th Avenue Business Park	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Liberty Leasing/Trails End Industrial Park	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Deschutes Industrial Park	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Tumwater Commerce Place	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Tilley Road (City of Tumwater)	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
88th Avenue Subdivision	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
I-5 Commerce	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Lathrop Industrial Park	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Grand Mound	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Sargent Road	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.
Union Mills	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.

Wichman/McClellan	One HPI on site, a 1959 warehouse (HPI shows buildings over 50 yrs old). Per the inventory by Artifacts Consulting, they were unable to determine a National Register recommendation and no additional documentation is available on the web site. The Wichman/McClellan site is close to but should not impact the Tenino Downtown Historic District, which is a Historic Register District.
Deschutes Corridor Mitigation Site	There is a 1916 historic trail marker (HPI) just south of the site. In 1985 the site was not recommended for National Register. The HPI is site number 34-179 and has an existing report. The trail marker is a stone slab, in honor of George Washington Bush who came to the area to find a settlement north of the Columbia River. If the marker is still there, mitigation activities will not impact the marker. The HPI shows the site of the demolished Gaston House, at the north area of the property in 1985, the site was not recommended for the National Register. The site number is 34-318. The house was built by the son of George Washington Bush an early pioneer in Thurston County. Mitigation activities should not impact the site.
Leitner Prairie Mitigation Site	No HPI or Historic Register Properties on the site. No Registered Properties shown within one mile.

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations

Title: Kaufman Properties

Description: Parcels 57190001000, 38400000104

347.5 1042.5 2085 3475

0 695 1390 2780 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations

Title: Kaufman Properties

Description: Parcels 12712230301, 12712230302,12712230303,12712230304

278.5 835.5 1671 2785

0 557 1114 2228 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations

Title: Kaufman Properties

Description: Parcels 31100000101, 44160001000, 44160001100,44160001200,44160001300,44160001500,44160001600,44160001700,44160100000

425 1275 2550 4250
0 850 1700 3400 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations

Title: Kaufman Properties

Description: Parcels 80630000001,80630000002,80630000003,80630000100,80630000200,80630000300,80630000400,80630000500,80630000600,80630000700,80630000800,80630000900,80630001000,80630001100,80630001200

425 1275 2550 4250
0 850 1700 3400 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations

Title: Kaufman Properties

Description: Parcels 12714310400, 12714310300

380.5 1141.5 2283 3805

0 761 1522 3044 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

Preserve the Past, Shape the Future

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

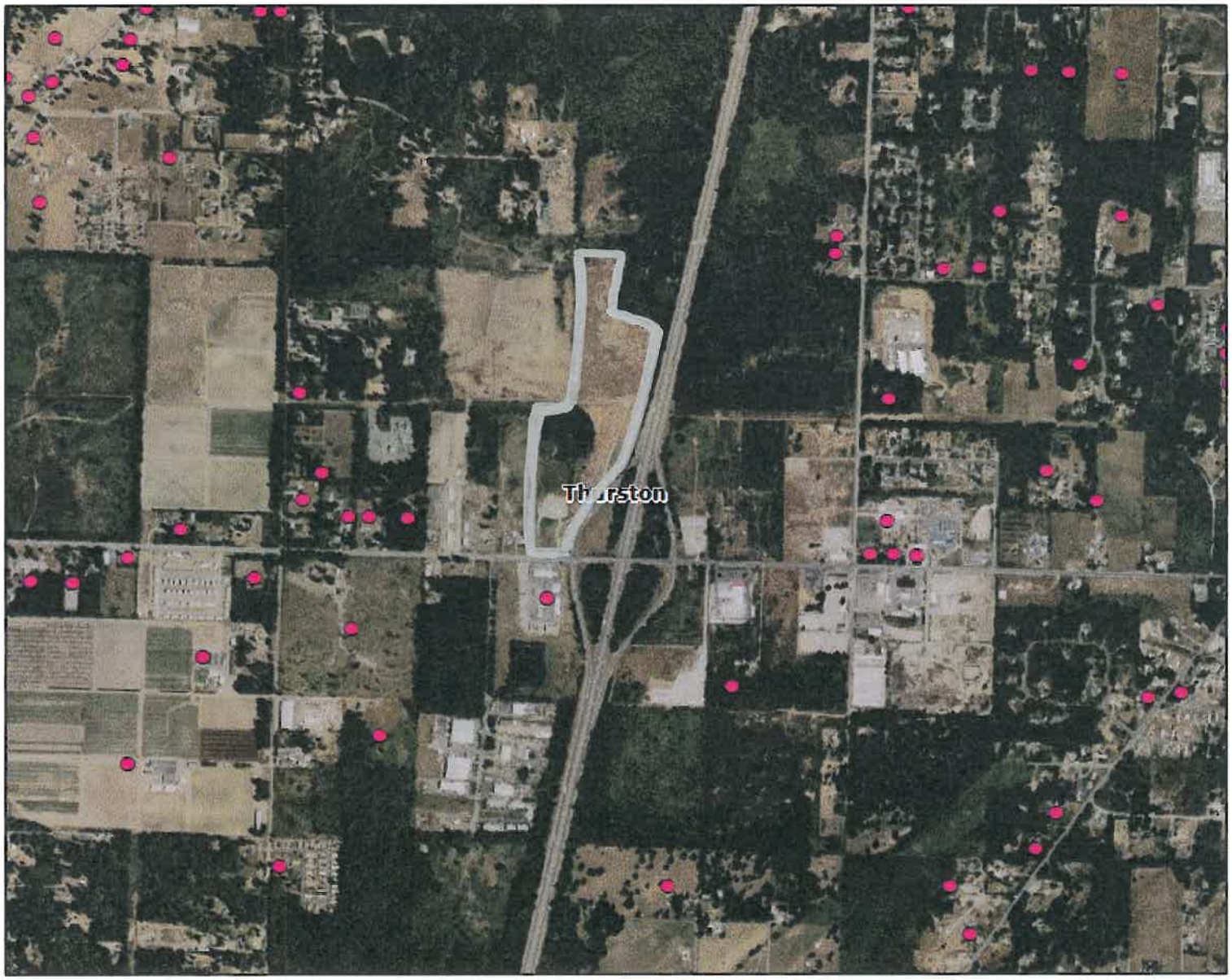
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 12714310400, 12714310300

690.5 2071.5 4143 6905

0 1381 2762 5524 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

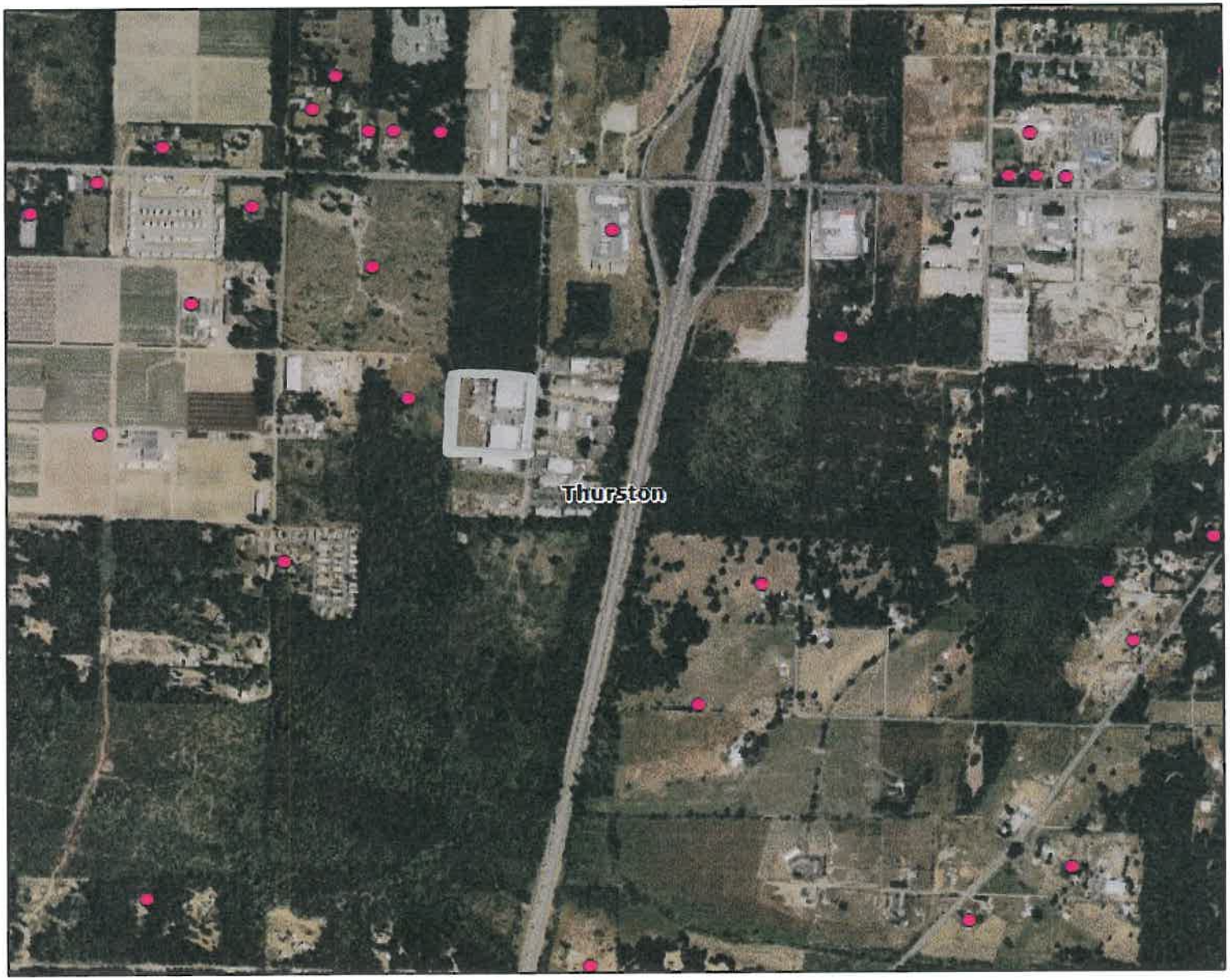
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 58610000300, 58610000100

560.5 1681.5 3363 5605

0 1121 2242 4484 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

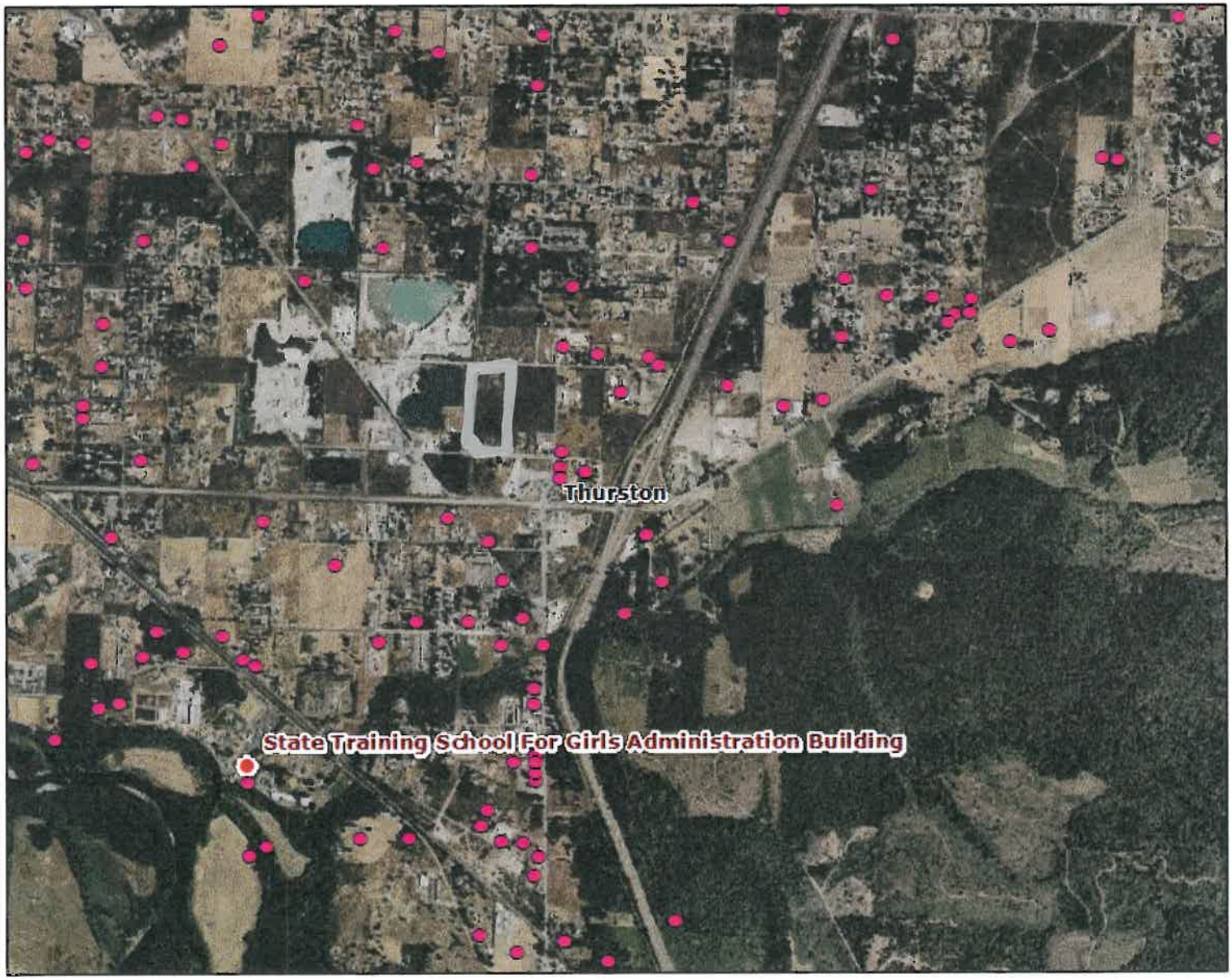
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 55700600000, 55701100000

1096 3288 6576 10960
0 2192 4384 8768 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

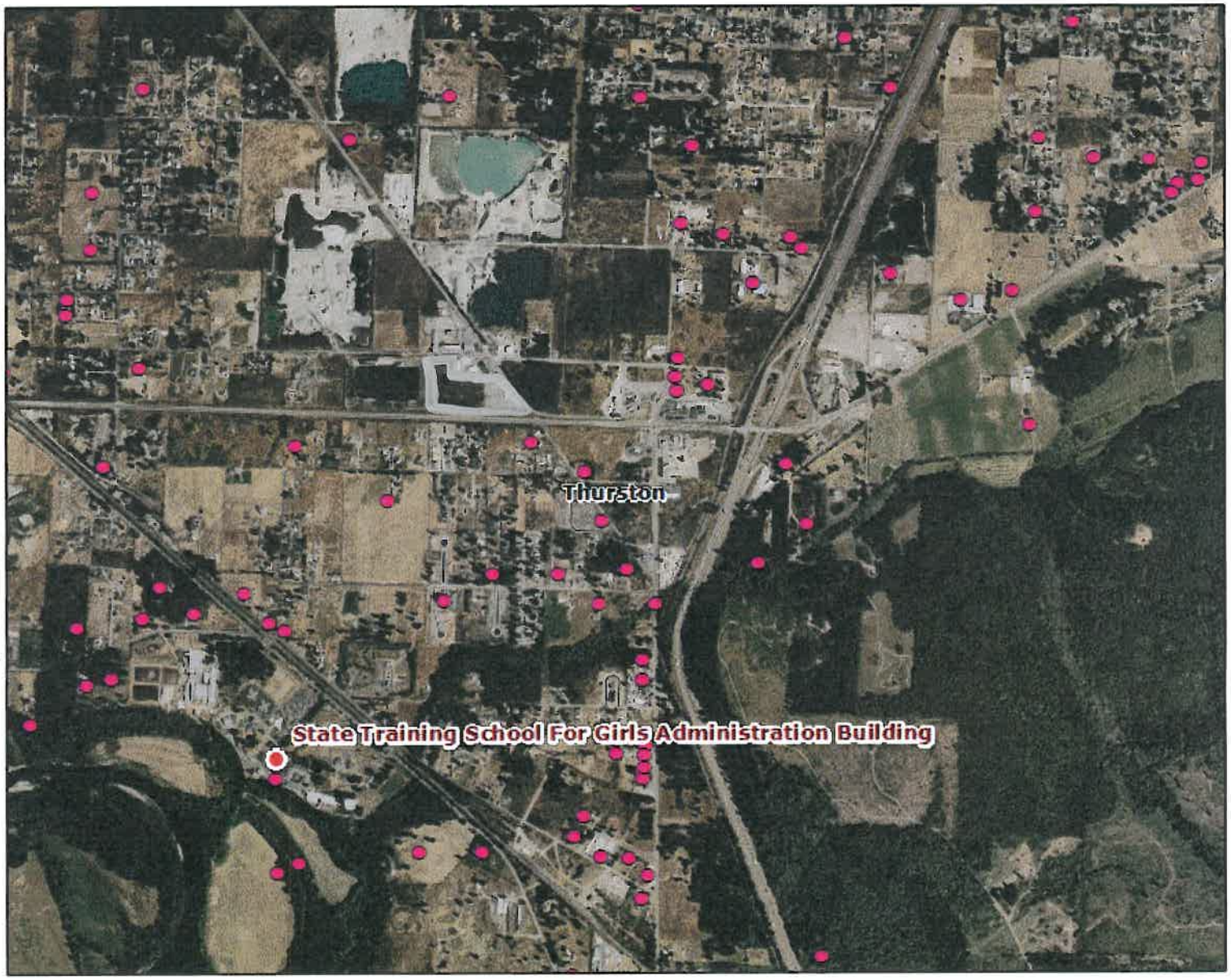
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 55802600000, 55802400000

857 2571 5142 8570
0 1714 3428 6856 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

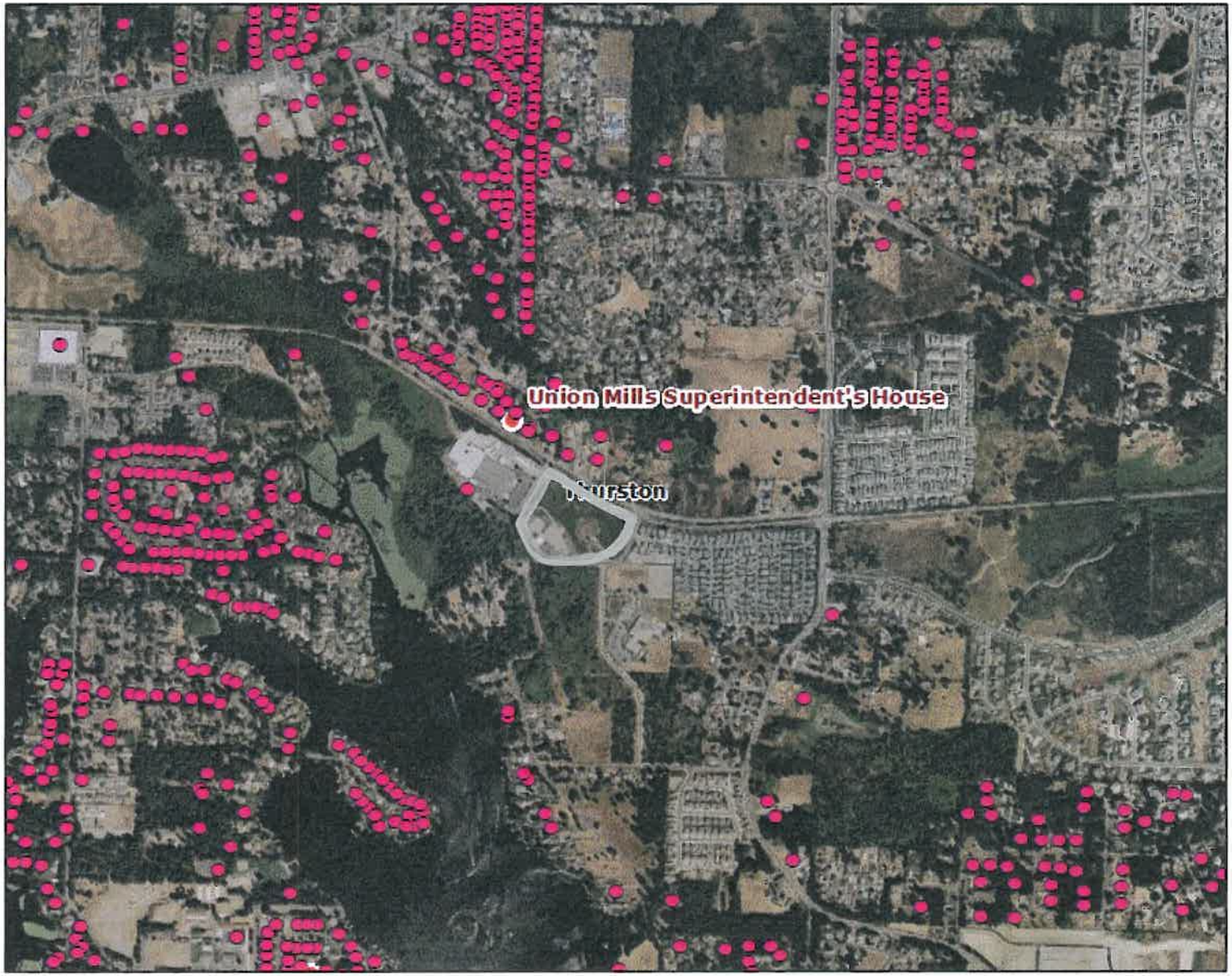
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 76100004602, 76100004603

672.5 2017.5 4035 6725
0 1345 2690 5380 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

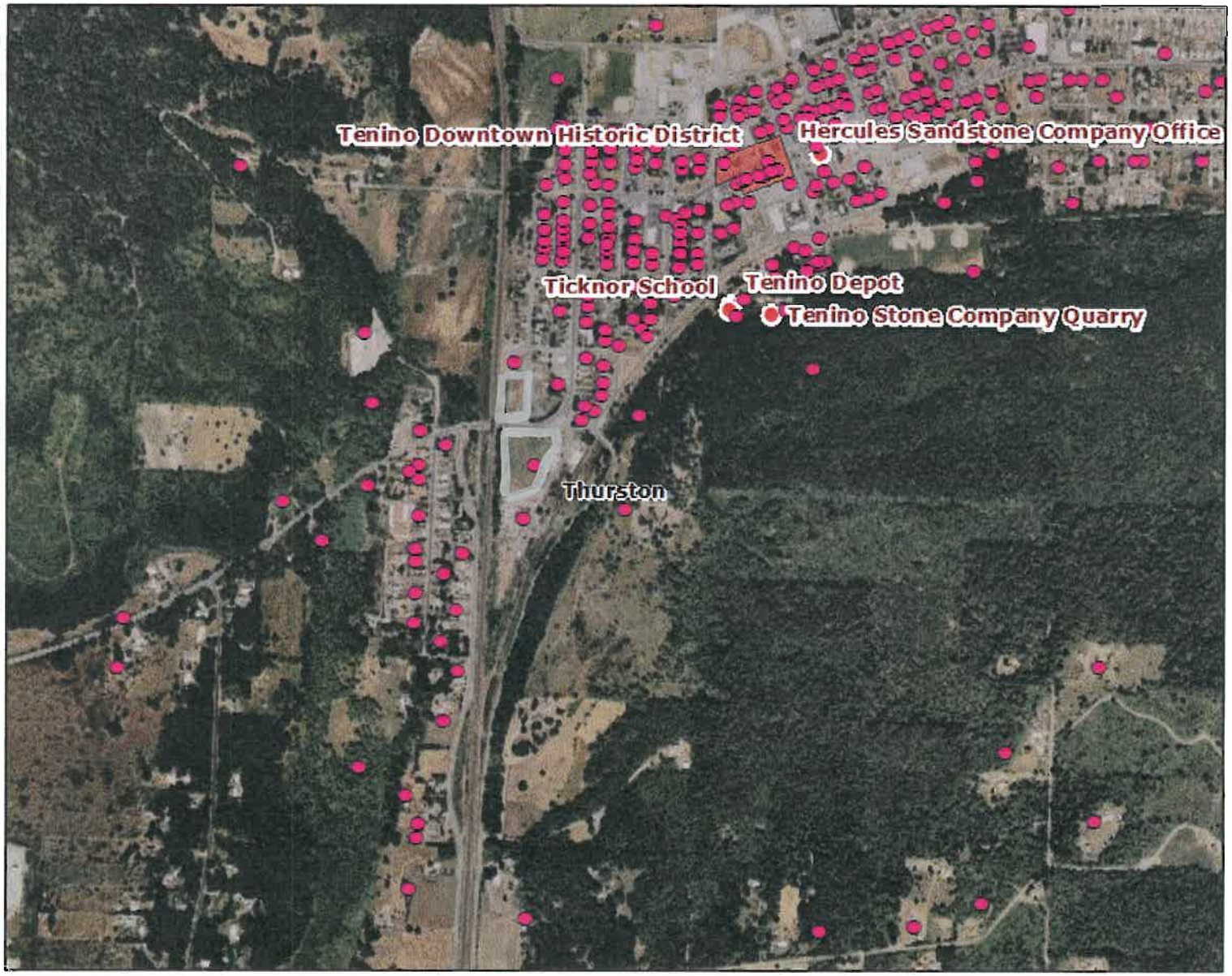
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 74903700300, 74904500100

549 1647 3294 5490
0 1098 2196 4392 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

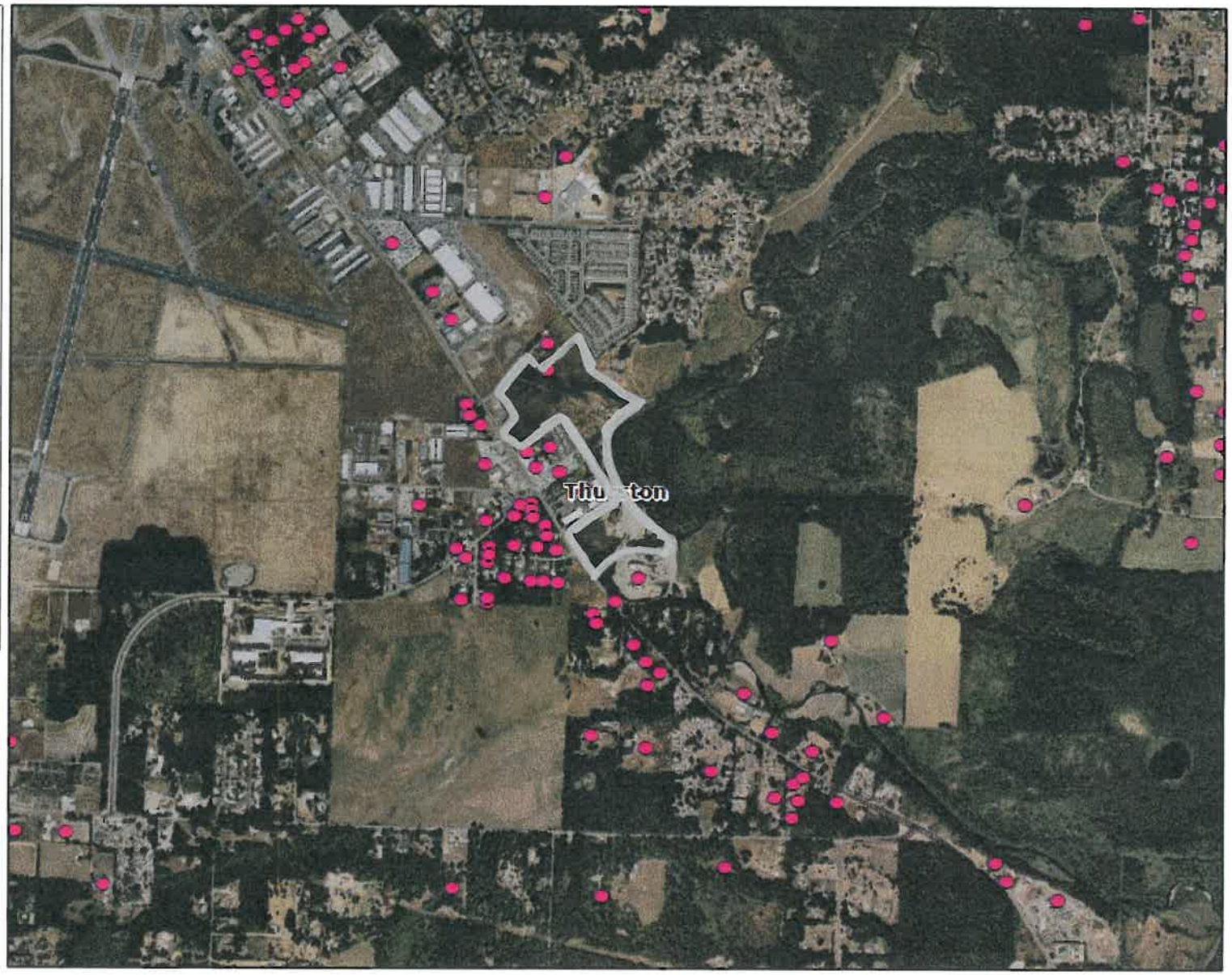
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcel 12713220100

865.5 2596.5 5193 8655

0 1731 3462 6924 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

Protect the Past, Shape the Future

LEGEND

Register Properties (Points)

Register Properties (Lines)

Register Properties (Polygons)

Heritage Barns

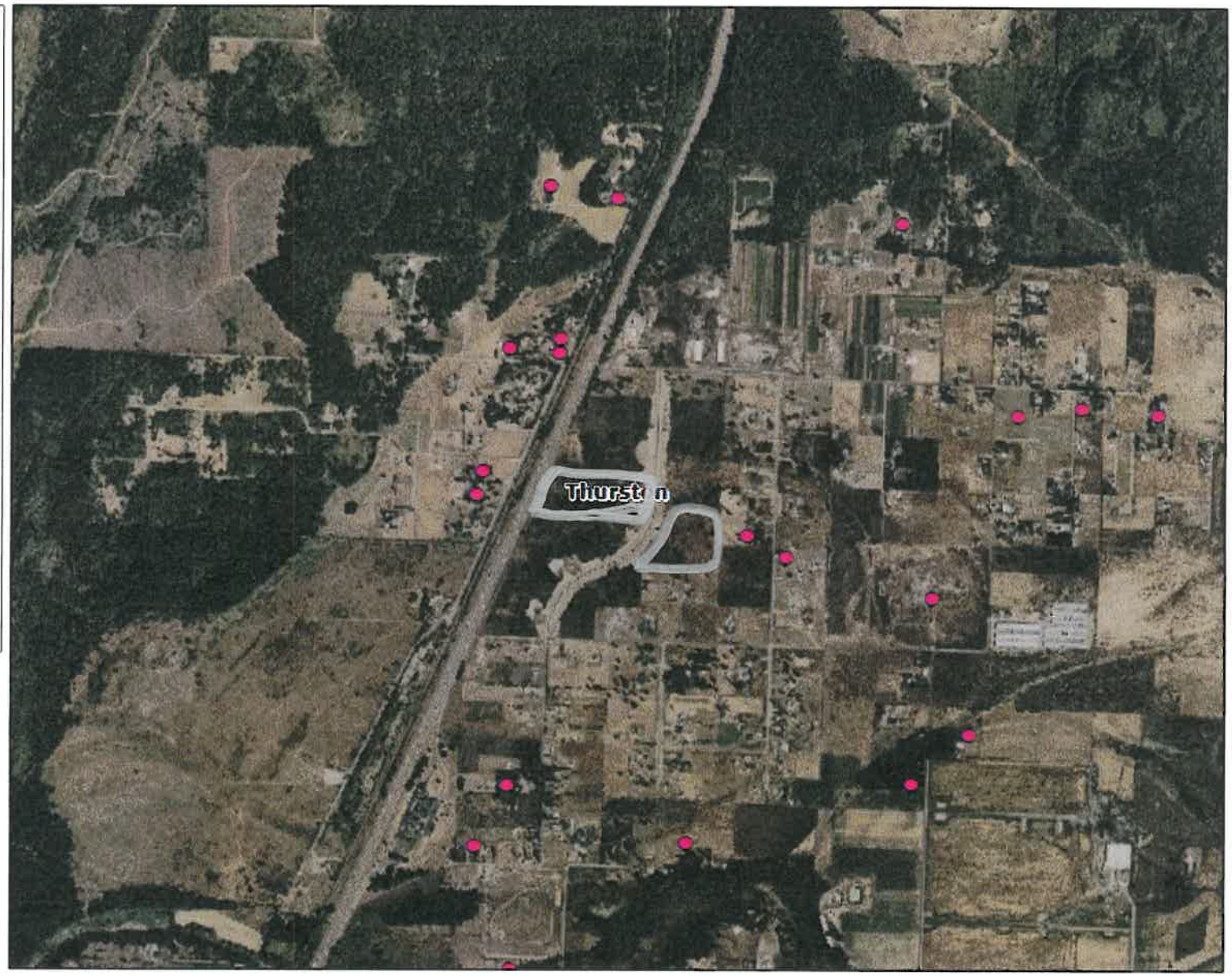
Register Districts

County Boundaries

World Imagery

World Street Map

HPI Locations



Title: Kaufman Properties

Description: Parcels 09200011008, 12630110600

923 2769 5538 9230

0 1846 3692 7384 Feet

NAD83 State Plane Washington South (HARN)

DISCLAIMER: This map is for reference purposes only. All distances and locations are approximate.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

Appendix B

Public Comments Received

The following response was the only comment received during the 60 day NEPA public comment and review period announced in the *Federal Register* on October 21, 2015 (80 FR 63830). The comment period was open from October 21, 2015 through December 21, 2015.

The comment was received on the www.regulations.gov website, and is provided here in its entirety.

On October 21, 2015, commenter "jean publeee" wrote:

"deny this permit application to Thurston real estate holdings. these real estate developers care nothing at all for any life on earth, just how to put money in their pockets by destruction. millions of people carefully crafted laws and put them into place to protect animals and birds and those laws shold be strictly enforced, not subject to being massacred for the lates rich person who comes around to kill animals. I also strongly object to the word "taking" because hwat this development plan does is kill. it doesn't "take". it kills animals animals are very selective about where they choose for a home. they cannot live just anywere and go tot he nearest upermarket. they have to carefully consider, home, food sources, and trying to prote ct their own lives and those of their babies. this idea that you can just mitigate and push them into some other spot does not work at all ever. its fakery taken to the utmost. by rich men. fws is currently uner the direction of a wildlife killer named dan ashe,who goes out to murder animals so clearly this agency is mismanaged by such a person. we need a person in charge who cares about animal life since it is part of the fabric of ecology. obviously political pull put this wildlife ekiller into head of this agency which now care nothing for wildlife lives. deny this awful, massacreting permit which is completely there for money and greed and which seeks to massacre the carefully crafted laws the population of this country put into effect and others are trying to change for thei rown enrichment. this comment is for the public record."