

**FINDINGS AND RECOMMENDATIONS
REGARDING
THE PROPOSED ISSUANCE OF AN ENDANGERED SPECIES ACT
INCIDENTAL TAKE PERMIT
FOR THE
THURSTON COUNTY HABITAT CONSERVATION PLAN**

The U.S. Fish and Wildlife Service (Service) proposes to approve the Thurston County's (County) proposed Thurston County Habitat Conservation Plan (HCP), and to issue the associated Incidental Take Permit (ITP or permit) for a period of 30 years. The HCP covered species include three federally threatened subspecies of the Mazama pocket gopher (*Thomomys mazama*): the Olympia pocket gopher (*T. mazama pugetensis*), the Tenino pocket gopher (*T. mazama tumuli*), and the Yelm pocket gopher (*T. mazama yelmensis*); the federally endangered Taylor's checkerspot butterfly (*Euphydryas editha taylori*); the Oregon spotted frog (*Rana pretiosa*); and the Oregon vesper sparrow (*Pooecetes gramineus affinis*), which is under consideration for federal listing. The permit would provide authorization in accordance with the requirements of section 10(a)(1)(B) of the Endangered Species Act of 1973, as amended (16 USC § 1531-1544; ESA) for the take of covered species likely to result from HCP implementation.

This statement of findings and recommendations relies on and incorporates by reference the following documents: (1) the final HCP including its appendices (Thurston County, 2022), (2) the Service's Final Environmental Impact Statement (EIS; Service 2022a) addressing the proposed permit action pursuant to the requirements of the National Environmental Policy Act (NEPA; 42 USC § 4321 *et seq.*); (3) the Service's biological opinion (Service 2022b) addressing the proposed permit action pursuant to the requirements of section 7 of the ESA; and (4) the Service's record of decision completing the NEPA process (Service 2022c). The decision record for these findings and recommendations is on file at the Service's Washington Fish and Wildlife Office in Lacey, Washington.

I. Description of the Proposed Action

The Service proposes to issue a permit in accordance with our authority and responsibility under section 10(a)(1)(B) of the ESA for implementation of the proposed HCP. The County applied for a 30-year ITP to cover their proposed HCP administered by the Thurston County Community Planning and Economic Development Department. The HCP programmatically describes covered activities as actions associated with permits and approvals the County issues, and the County's own operation and maintenance activities. The proposed permit area is defined by the County's jurisdiction, which is approximately 412,000 acres and excludes incorporated cities, federal lands, and Tribal lands.

A summary of the covered species, covered activities, extent of covered activities, and the conservation program are provided in the following subsections. For additional detail on these and other HCP components, see the HCP and the Service's biological opinion.

The proposed ITP incorporates terms and conditions to ensure the HCP and its measures are implemented effectively and consistently, and to clarify a shared understanding of the HCP measures. These include, and are not limited to interpretation, covered activities, implementation, and reporting. The Service developed special terms and conditions to support durability of conservation lands in the face of potential foreclosures; accurate and complete documentation of covered activities; reporting on hydrological conditions for Oregon spotted frog habitats using available information, status of covered activities in the designated critical habitat for the Tenino pocket gopher and the Yelm pocket gopher, changes in jurisdiction, and relevant changes in regulations or authorities; and other administrative clarifications.

Covered Species

Covered species under the HCP would be the Olympia pocket gopher, the Tenino pocket gopher, the Yelm pocket gopher, the Oregon spotted frog, the Taylor's checkerspot butterfly, and the Oregon vesper sparrow.

The Olympia pocket gopher, the Tenino pocket gopher, the Yelm pocket gopher, and the Oregon spotted frog are each listed as threatened under the ESA. The Taylor's checkerspot butterfly is listed as endangered under the ESA. The Oregon vesper sparrow is under review for potential listing under the ESA.

Detailed descriptions of the covered species' biology, ecology, habitat, and designated critical habitat (if any) are provided in the HCP (Chapter 2 and Appendix B) and the biological opinion (sections 7-11 and Appendices B and D – G).

Covered Activities

Activities proposed to be covered are described in the HCP and below using 10 categories of actions related to private or public development and public facility maintenance. All covered activities would be conducted under the County's permits or oversight, and are described in the HCP (Chapter 3).

Covered activities would occur in the ranges of the covered species (HCP Figures 2.3 and 2.6). Similar actions occurring away from covered species habitat would not be modified by or covered by the HCP.

Minimization measures would be implemented with each covered activity. The HCP defines minimization measures as Best Management Practices (BMPs) and groups the measures by project category and affected species (HCP Appendix C). In permitting or carrying out individual projects, the County would require the relevant BMPs be implemented to the

maximum extent practicable. The County would monitor the implementation of covered activities and BMPs, and summarize this information as part of its annual reporting to the Service.

The HCP includes limits on the extent of each type of covered activities (Chapter 4). The HCP also includes measures to moderate the pace of covered activities, as needed, to ensure conservation effectiveness ahead of commensurate impacts on covered species (Sections 5.3 and 6.3).

Activities expressly not covered by the HCP include the development or operation of mines (e.g., oil, gas, or mineral extraction), forestry, and herbicide and pesticide applications.

Migratory birds are found in the HCP permit area. The Migratory Bird Treaty Act of 1918 (MBTA) (16 USC 703–713) applies to incidental take of migratory birds associated with the applicant's covered activities. With the exception of the Oregon vesper sparrow, which is a covered species in the HCP, the ITP would not authorize take of a migratory bird species. The Service has provided the applicant with written best practices for avoiding take of migratory birds in association with its covered activities. The applicant is advised to follow applicable MBTA regulations whenever take of migratory birds is unavoidable. The Service is available to consult on MBTA compliance matters upon the applicant's request.

The covered activities are summarized in the following subsections, followed by a summary of the extent of covered activities.

1. Residential Development

Residential development activities covered by the HCP (Section 3.1.1) include construction of homes built on site, installation of manufactured homes, and installation of supporting infrastructure. A development envelope is established in which, without limitation, all equipment operation, utilities, accessory buildings, landscaping, driveways, and staging areas are contained. The development activities would be entirely contained in the site-specific development envelope.

The equipment, construction sequence, and related sub-activities necessary for residential development are detailed in the HCP (Section 3.1.1). These sequences and equipment are relatively similar for other forms of construction, so please see Chapter 3 of the HCP for these details related to this or any of the following covered activities.

During plan development, the County reviewed trends related to population growth, economic development, and localized development to estimate expected residential development. The County anticipates residential development under the HCP would result in residential buildout increasing from 58 percent of current residential zoning capacity being built out at the time of the analysis up to 70 percent by the end of a 30-year permit term. The HCP does not prevent the

County from changes to current zoning. Residential developments are projected to impact portions of individual larger parcels, or the entire area of smaller individual parcels.

2. Added Accessory Structures

Construction of added accessory structures (HCP Section 3.1.2) would include new garden sheds, barns, garages, workshops, or other structures allowable under local code. This action involves the same sub-activities as residential development, and project sizes are contained within a small portion of an individual parcel.

Exceptions from take prohibitions under the 4(d) special rule for the Olympia, Tenino, and Yelm pocket gophers apply to certain accessory structures: construction and placement of fencing, garden plots, and/or play equipment; and construction and placement of dog kennels, carports, and/or storage sheds less than 120 square feet (79 FR 19791-19793). These actions are proposed as a covered activity under the HCP where they occur in the ranges of other covered species.

3. Septic Repair or Extension & Home Heating Oil Tank Removal

County-permitted installation, repair, and removal of septic systems and removal of heating oil tanks would be a covered activity. The activity is described further in the HCP at Section 3.1.3. These actions would occur during or separate from other construction activities, and project sizes are contained within a small portion of an individual parcel

4. Commercial and Industrial Development

Commercial and industrial development covered under the HCP (Section 3.1.4) would include construction of business facilities, offices, restaurants, barber/beauty shops, veterinary clinics and hospitals, laundry, dry cleaning, motels, greenhouses, service stations, car washes, automotive and mechanical sales, auction yards, community centers, recreational improvements, churches, libraries, museums, schools, and other public facilities in addition to facilities for research and development, factories, warehousing, wholesale, processing, storage, fabrication, printing, and other commercial or industrial uses. Commercial and industrial construction activities would include those methods generally described for residential development above, plus establishment of signs, parking lots, stormwater control, and other related facilities. Individual commercial and industrial developments are projected to encompass entire parcels or groups of parcels.

5. Public Service Facility Construction

The foreseeable public service facility construction is described in the HCP (Section 3.1.5) as a covered activity to construct schools and fire stations. These activities would be implemented similarly to commercial and industrial development. Additional or other public facilities built during the term of the requested permit would secure coverage under the category of commercial and industrial development.

Construction of limited new school facilities or refurbishment and expansion of existing facilities would be a covered activity. School sites typically range from 10-20 acres, and can be larger. School construction or refurbishment can include, but is not limited to, establishing buildings, walkways, out-buildings, parking lots, driveways, landscaping, and sports facilities.

Under existing regulations, new school building footprints are limited to 6,000 square feet on parcels 5 to 10 acres in size and 20,000 square feet on parcels larger than 10 acres. Typical coverage by school buildings alone is about one acre per site, plus sports fields, parking areas, and other accessory structures. Existing schools could expand under a County-issued special use permit.

Construction of new fire stations is projected at a number of known and yet-to-be identified locations in the proposed permit area. The size of fire stations and associated facilities varies widely by site. Facility size is approved by the County project-by-project through a special use permit.

6. Transportation Capital Projects

Covered activities for transportation construction projects are described in the HCP at Section 3.1.6. Covered activities would include capital improvement activities occurring outside the currently modified area (e.g., already built, compacted, or filled areas) of existing road, trail, or path prism and gravel shoulder. These projects would add new or wider bridges, culverts, roads, or road shoulder surfaces.

Thurston County Public Works staff used information from their ongoing work plans and their 20-year Capital Facilities Plan to identify the types of projects to occur during the proposed ITP term, not limited to approximately 32 transportation improvement projects that are already in partial planning stages (HCP Table 3.6).

7. Transportation Maintenance Projects and County Work in Rights-of-Way

Thurston County maintains existing roads, trails, and rights-of-way, as detailed in the HCP at Section 3.1.7. Thurston County maintains 1,035 miles (1,666 km) of County roadway and adjacent right-of-way. Within the County's owned and managed roads, 32 miles (52 km) are graveled, and the remainder are paved. A typical road cross section is shown in Figure 3.1 of the HCP.

Maintenance of existing paved or graveled road surface are not expected to have impacts to associated habitats. The County's ongoing maintenance of the land from the edge of road surfaces to the outer edge of the County's right-of-way is a proposed covered activity. The County conducts this work under the Regional Road Maintenance Guidelines (WSDOT 2018).

Transportation maintenance activities would be performed following the BMPs (Appendix C of the HCP) to the maximum extent practicable. BMPs may be limited where impractical due to urgent human health and safety considerations. Typical BMPs would include sediment control, managing side-cast materials, minimizing tracking of equipment in habitat areas, mechanical control of invasive species, project timing (e.g., implementing ditch maintenance work when water is absent), and staging area planning.

Transportation maintenance projects include the following actions, each of which is described further in the HCP:

- Vegetation maintenance.
- Open Drainage System Maintenance.
- Guardrail Maintenance.
- Sign Maintenance and Installation.
- Enclosed Drainage System Maintenance.
- Bridge Maintenance.
- Beaver Dam Management.
- Watercourse and Stream Maintenance.
- Emergency response
- Utility installation and maintenance.

8. Landfill and Solid Waste Management

Waste management activities that would be covered activities are detailed in the HCP at Section 3.1.8, and include expansion of two recycling centers, solid waste clean-up and remediation, and construction of two new facilities for solid waste collection (landfill or transfer station). New recycling and solid waste facilities are detailed specifically, rather than programmatically in the HCP.

9. Water Resources Management

Water resources management that would be covered activities are detailed in the HCP at Section 3.1.9, and include:

- Conveyance upgrades, which generally involve the replacement of stormwater pipes with newer and resized pipes.
- Installation or repair of runoff treatment facilities.
- Installation or repair of flow control facilities, such as infiltration facilities, detention ponds, and roadside bio-retention structures.
- Installation or repair of water or sewer lines, including construction of water treatment system and related water reservoir near existing sewage treatment plants (e.g., the sewage treatment plant in Grand Mound).
- Installation of groundwater wells and associated infrastructure.

10. County Parks, Trails, and Land Management

Management activities on parks and other County lands would be covered activities and are detailed in the HCP at Section 3.1.10. Management of county parks, trails, and lands, includes maintaining paved trails, constructing new trails, and implementing park improvements.

Trail maintenance includes work in trail rights-of-way, such as maintaining ditches, stormwater conveyance systems, and bridges. These activities are smaller in footprint, and otherwise similar to roadside right-of-way maintenance. Trail maintenance is often done with smaller equipment than road maintenance.

Park improvements may include expansion of parking areas, trail head facilities, or interpretive areas at County parks, and adding a new picnic shelter and educational area at Glacial Heritage Preserve.

11. Extent of Covered Activities

Chapter 4 of the HCP forecasts the expected extent of covered activities during the proposed permit term using the best available information. . The information provided here is a summary of the information provided in greater detail in the HCP. Activity extent was also analyzed in the Service's biological opinion at a variety of scales.

The HCP (Section 4.4) includes projections for the sizes of individual covered activities by category. The overall amount of development expected under the HCP is estimated based on Thurston Regional Planning Council data and projections, as described in Section 4.4 of the HCP. The County assumes that residential build out would occur to 70 percent of current residential zoning capacity over 30 years; in 2014, the County was at 58 percent. While percent of current zoning capacity is a useful metric for monitoring the amount of buildout from covered

activities, nothing in the HCP or this analysis would prevent the County from adjusting zoning through existing procedures.

The County also reviewed their own trends for other covered activities, such as road and infrastructure maintenance and parks management to estimate future activity amounts for non-construction covered activities.

Procedures for project-scale and program-scale monitoring (HCP Chapters 6 and 7) would ensure the proposed activity limits are not exceeded. The County would monitor the amount of activities as well as the impacts on each covered species. The HCP includes “functional-acre” values to quantify impacts on most covered species (actual acres of habitat are used for the Oregon spotted frog). Acres of covered activities, habitat acres impacted, and functional acres impacted would each be monitored under the HCP and each are considered here as limits on the covered activities during the permit term. See *Analysis of Effects* below or the Service’s biological opinion for additional discussion of extent of effects on covered species and functional-acre descriptions.

The maximum extent of each covered activity is summarized in Tables 1 and 2, and in the HCP (Tables 4.5 and 4.6). If fewer activities are conducted in the range of one covered species, the corresponding amount of activity may not be moved into the range of another covered species, however within the range of a covered species, the amount and extent of projected activities may shift among activity categories.

Table 1. Extent of covered activities in the ranges of Olympia, Tenino, and Yelm pocket gophers (including each Service Area for the Yelm pocket gopher), over the 30-year proposed permit term. Abbreviations: Olympia pocket gopher (OPG); Tenino pocket gopher (TPG); Yelm pocket gopher (YPG) in the northern service area (YPG N), in the eastern service area (YPG E), in the southern service area (YPG S); Mazama pocket gopher (MPG); acres (ac); functional acres (fx-acres)

Covered Activity	OPG		TPG		(YPG N)		(YPG E)		(YPG S)		YPG All		Subtotal (All MPG)	
	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected	Fx Acres
New Residential Development	654	306	216	101	2010	1054	1612	808	850	569	4472	2431	5342	2838
Added Accessory Structures	59	33	43	24	88	39	132	66	113	46	332	152	434	208
Septic Extension or Repair, Heating Oil Tank Decommission	31	17	23	13	46	21	70	35	60	25	176	81	230	110
Commercial/ Industrial	303	212	43	9	36	21	28	19	437	359	501	399	847	619
Public Service Facilities	11	5	1	1	12	3	4	2	106	100	122	105	134	111
Landfill/Solid Waste Management	2	1	1	1	3	1	4	2	45	28	52	31	55	32
Transportation Projects	33	18	12	7	97	44	25	12	92	38	214	94	258	118
Transportation Maintenance and Work in Right-of-Way	100	31	74	17	401	162	219	76	223	167	843	406	1017	453
Water Resources Management	17	9	12	7	25	11	38	19	33	14	96	44	126	60
County Parks, Trails, and Land Management	1	1	0	0	2	1	10	3	1	0	14	4	15	5
Total Acres Affected	1210		425		2720		2141		1960		6821		8456	
Total Fx Acres		632		178		1357		1043		1346		3747		4556

Table 2. Extent of covered activities in the ranges of the Taylor's checkerspot butterfly, the Oregon vesper sparrow, and the Oregon spotted frog over the 30-year proposed permit term. Abbreviations: Taylor's checkerspot butterfly (TCB), Oregon vesper sparrow (OVS), Oregon spotted frog (OSF), acres (ac), functional acres (fx-acres)

Covered Activity	TCB		OVS		OSF	Subtotal		Subtotal MPG (from Table 4.1)		Grand Total	
	Ac Affected	Fx Acres	Ac Affected	Fx Acres		Ac & Fx Ac	Ac Affected	Fx Acres	Ac Affected	Fx Acres	Ac Affected
New Residential Development	18	5	34	9	235	287	249	5342	2838	5629	3087
Added Accessory Structures	11	3	26	7	26	63	36	434	208	496	244
Septic Extension or Repair, Heating Oil Tank Decommission	6	2	14	4	42	62	48	230	110	291	158
Commercial/ Industrial	0	0	0	0	44	44	44	847	619	891	663
Public Service Facilities	3	1	8	2	0	11	3	134	111	146	114
Landfill/Solid Waste Management	1	0	3	1	1	6	2	55	32	60	35
Transportation Projects	6	2	0	0	127	134	129	258	118	391	247
Transportation Maintenance and Work in Right-of-Way	4	1	0	0	115	119	116	1017	453	1135	569
Water Resources Management	3	1	8	2	3	14	6	126	60	139	66
County Parks, Trails, and Land Management	2	2	0	0	25	27	27	15	5	42	32
Total Acres Affected	54		93		618	765		8456		9221	
Total Fx Acres		16		25	618		659		4556		5216

The impacts identified for each covered species in these tables are landscape-scale projection estimates that are not to be exceeded during the proposed permit term. During HCP implementation, the number of actual impacts from each Covered Activity will be assessed and tracked on a project-by-project basis, as described in HCP (Chapter 7).

Conservation Program

The HCP's conservation program is detailed in chapters 5-8 of the HCP and its appendices C – M. The conservation program has detailed biological goals and conservation objectives, minimization and mitigation measures, monitoring, adaptive management, remedial measures for changed circumstances, and funding. The County developed the conservation program with technical assistance from the Service and public stakeholder feedback to meet the ESA Section 10(a)(2)(B) permit issuance criteria, the needs of the species, and public input. The conservation program would complement existing local, state, and federal conservation actions in the County.

The conservation program includes minimization measures for covered activities in the ranges of each covered species (or groups of covered species). The HCP includes minimization measures for siting and locating activities, and conditions on construction or maintenance actions to avoid or reduce exposure of individuals of covered species. The County also included in the HCP additional voluntary measures for enhanced conservation opportunities by providing technical support and outreach to property managers maintaining additional suitable habitat for covered species.

For the Taylor's checkerspot butterfly, HCP conservation measures applied to construction activities would include the measures above, plus delay mowing until after the nectar species finished flowering and seed production, and avoid herbicide use for county maintenance actions in the habitat of the Taylor's checkerspot butterfly.

Conservation measures for transportation maintenance include the designation of "special management areas for Oregon spotted frog" along stretches of roadside rights-of-way that support Oregon spotted frog (including occupied habitat and hydrologically connected areas) to simplify routine implementation of best management practices. Under the HCP, the County would also implement conservation measures during beaver dam management and water/wastewater management activities located in the special management areas to avoid or minimize impacts to Oregon spotted frogs.

Each minimization measure (inclusive of standard BMPs, enhanced BMPs, and other applicable conservation measures) is designed to reduce the extent or intensity of impacts from covered activities on covered species. Minimization measures detailed in the HCP (Appendix C) would be applied to the maximum extent practicable on each project. Through individual project reviews by the County, such measures would become conditions of the County's permits or approvals for covered activities.

Central to the conservation program are mitigation measures to establish, protect, and manage a permanent network of conservation lands dedicated for the covered species and their habitats. The HCP identifies the priority places, tools, and processes to protect, restore and manage the habitats important to the survival and continued existence of covered species. Conservation lands would be prioritized for acquisition using criteria described in Section 5.4 of the HCP. Conservation lands criteria were developed in consideration of the conservation needs of the covered species. The amount, pace, and distribution of additions to the HCP’s conservation lands network are designed to fully offset the anticipated impacts of covered activities on covered species ahead of the impacts occurring. Conservation lands located in reserve priority areas for the Olympia, Tenino, and Yelm pocket gophers would be prioritized. Conservation would occur through protection of new reserves or working agricultural lands, and enhancement of habitat on existing reserves where management commitments for the covered species do not currently exist or can be enhanced. In all cases, the mitigation sites established through the HCP would be permanently managed and monitored with permanent funding secured in a non-wasting endowment.

The estimated acres of conservation lands to be dedicated for each covered species are described in the HCP (Table 7.7) and here (Table 3). At full HCP implementation, 3,469 acres of conservation for covered species would be permanently maintained. If fewer covered activities occur, or the mix of conservation lands varies among new reserves, working agricultural lands, or existing reserves compared to the projected proportions, the actual acres could vary. In any event, the acres dedicated to conservation would be commensurate with or in excess of the impacts resulting from covered activities. This offset would be measured in functional acres for the Olympia pocket gopher, the Tenino pocket gopher, the Yelm pocket gopher, the Taylor’s checkerspot, and the Oregon vesper sparrow, and in actual habitat acres for the Oregon spotted frog.

Table 3. Projected acres of Conservation Lands to be engaged/enrolled in the Conservation Program.

Projected Conservation Lands Engaged/Enrolled (Acres)									
	Yelm pocket gopher			Olympia pocket gopher	Tenino pocket gopher	Taylor’s checkerspot butterfly	Oregon Vesper sparrow	Oregon spotted frog	Total
	North	East	South						
New Reserves	744	400	516	346	73	0	0	618	2,698
Working Lands Easements	0	163	210	0	28	0	31	0	433

Enhanced Existing Preserves	0	130	168	0	0	40	0	0	339
TOTAL	744	693	895	346	101	40	31	618	3,469

The conservation program’s biological goal, conservation objectives, and minimization measures complement the HCP mitigation measures. The biological goal describes what the conservation program would accomplish by the end of the permit term. The conservation objectives serve as benchmarks by which to measure progress in achieving goals for each covered species. Minimization measures (i.e., BMPs detailed in HCP Appendix C) are specific measurable actions that would be implemented during covered activities. Along with the HCP’s mitigation measures, these are essential to meeting the conservation objectives and biological goal for each species.

The biological goal of the HCP is to “Maintain, in perpetuity, populations of each of the covered species within Thurston County, through strategic habitat acquisition, conservation, enhancement, and management in advance of unavoidable impacts to the covered species from the covered activities” (HCP Section 5.2)

Conservation objectives to meet the biological goal are:

1. Minimize direct and indirect impacts to the covered species through application of BMPs to the maximum extent practicable and outreach to the community;
2. Acquire, from willing sellers, new reserves to secure, stabilize, and expand species strongholds, while also contributing to covered species recovery. Habitat on each permanently protected parcel will be enhanced and funded for long-term management;
3. Secure permanent working lands easements, via conservation easements with willing landowners, to conserve, stabilize, and expand species distributions. Enrolled land must demonstrate land uses are compatible with the covered species. Habitat on each permanently protected parcel will be maintained with funding for long-term management; and
4. Enhance the habitat for covered species populations on existing preserves with current or historical populations of the covered species, through funding habitat restoration, enhancement, and long-term maintenance on existing protected reserves. This will increase the long-term habitat stability and conservation benefit of these lands and provide essential support for their covered species populations.

Conservation objective 1 represents avoidance and minimization measures for covered activities, summarized above.

The mitigation actions summarized above would protect, restore, and permanently manage habitat for the covered species to meet conservation objectives 2, 3, and 4. These measures would generate permanent conservation to fully offset the impacts from the covered activities on covered species. See *Analysis of Effects* below or the Service’s biological opinion for more information on how the mitigation would fully offset impacts of the taking.

The County’s intended outcome of the HCP’s conservation program is summarized in Table 4.10 of the HCP:

“The HCP will offset and mitigate for the impacts of the taking with a focus on permanently protecting, conserving, and maintaining well connected, occupied habitats. This will result in a net increase in habitat quality, occupancy, and stability. Higher functioning habitat will be delivered to offset losses of low quality and fragmented habitat elsewhere.”

Monitoring and Adaptive Management are described in Chapter 6 of the HCP. The purpose of monitoring and adaptive management is to confirm the following:

- (1) Thurston County is in compliance with the terms of the proposed ITP and HCP.
- (2) Progress is being made towards meeting the HCP’s biological goal and objectives.
- (3) The HCP’s Conservation Program is effective in minimizing and mitigating unavoidable impacts.
- (4) To identify when there is a need to make changes to improve the Conservation Program over the permit term.

The HCP includes adaptive management programs for the site-specific habitat management (HCP Section 6.3.2) as well as program-level adaptive management (HCP Section 6.3.1). Additionally, remedial measures for changed circumstances are detailed in the HCP (section 7.12). Collectively, the monitoring, adaptive management, and changed circumstances are designed to provide a comprehensive feedback program to ensure the covered activities, minimization measures, and mitigation measures are being implemented to fully offset the impacts of the taking on covered species that would result from the covered activities. To maintain conservation outcomes beyond the permit term, conservation easements or other enforceable instruments used to ensure permanence of the conservation network would also reflect these measures in perpetuity along with endowed funding.

II. Analysis of Effects

The effects of the requested permit action and impacts from HCP implementation are fully analyzed in the Service’s EIS (USFWS 2022a) and Biological Opinion (USFWS 2022b), which are incorporated herein by reference. The final HCP was evaluated in terms of the impacts likely

to occur to the covered species with its implementation; further information on the evaluation is available in the HCP (Chapters 4 and 5), in the EIS (Chapter 3), and in the Biological Opinion.

The Biological Opinion includes a finding that the combined effects of the HCP covered activities and conservation program will not jeopardize the covered species, or destroy or adversely modify any designated critical habitat, and thus will not appreciably reduce the likelihood of survival or recovery of the covered species in the wild. As described in detail below, we expect the HCP's conservation program would result in permanent conservation for each of the covered species that would fully offset the impacts of the taking on the covered species.

Olympia pocket gopher, Tenino pocket gopher, and Yelm pocket gopher

Implementation of the HCP covered activities by Thurston County would result in adverse effects to the Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher associated with each category of covered activities.

In developing the HCP, the County modeled the areas in which habitat for the Mazama pocket gopher could occur, and considered land cover to estimate the amount of habitat that may be present in the permit area for each covered species. The County conducted these analyses with the Service's technical assistance. By assuming that all covered activities occurring in covered species habitat would impact individuals, the HCP provides a streamlined approach to quantifying and offsetting impacts to covered species, without ongoing evaluations of species occupancy on project sites.

The HCP conservation program includes minimization and mitigation measures for the Olympia pocket gopher, Tenino pocket gopher, and Yelm pocket gopher. These measures and their effects are analyzed further in the Service's biological opinion and below in the finding regarding *minimize and mitigate to the maximum extent practicable*.

Where the covered activities occur on occupied habitat, they are reasonably certain to result in actual injury and death of individuals of each of these subspecies, as well as a significant impairment of essential behaviors, through permanent and temporary habitat loss, crushing of burrows and their inhabitants, habitat fragmentation, and the other effects of development that would occur later in time. The County (HCP Tables 4.5 and 4.9) and the Service (biological opinion section 9) anticipate that during implementation of covered activities, all individuals of

- Olympia pocket gophers associated with 1,210 acres (13 percent) of habitat in the permit area would be adversely affected.
- Tenino pocket gophers associated with 425 acres (6.3 percent) of habitat in the permit area would be adversely affected.

- Yelm pocket gophers associated with 6,821 acres (13 percent) of habitat in the permit area would be adversely affected.

These effects would occur incrementally over the requested 30-year ITP term at a pace that would not exceed the amount of mitigation achieved to date. Under the HCP's "stay ahead provision," the County would measure the impacts and mitigation for the Olympia, Tenino, and Yelm pocket gophers using functional-acre metrics. Habitat mitigation would be secured in advance of impacts occurring to the Covered Species. The County estimated the frequency and extent of covered activities to project impacts to each species.

To fully offset the impacts of the taking, the County would establish and permanently manage lands for the conservation of covered species, according to the terms of the HCP conservation program (Chapters 5-8 and Appendices D-M). Permanent habitat protection and management would maintain local populations of the Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher.

The County would acquire, or otherwise engage for permanent conservation, approximately 2,779 acres of habitat across the ranges of the three Mazama pocket gopher subspecies (HCP Table 7.7), including approximately:

- 346 acres of permanent conservation lands in the range of the Olympia pocket gopher.
- 101 acres of permanent conservation lands in the range of the Tenino pocket gopher.
- 2,332 acres of permanent conservation lands in the range of the Yelm pocket gopher.

The actual acres of mitigation established for these covered species could vary based on the actual amount of covered activities (not to exceed the amounts described above); the mix of new reserves, working agricultural lands, and existing preserves in the conservation lands network; and, in the case of the Yelm pocket gopher, the balance of conservation achieved in each service area. The HCP's functional-acre metrics provide objective standards for how to make these adjustments within the proposed conservation program.

Covered activities would be distributed throughout most portions of the county on lands which are not managed for the covered species. As a result, impacted habitat would typically be degraded and fragmented. Consistent with the Service's draft recovery plan for Mazama pocket gopher subspecies (Service 2021b), the HCP conservation program would prioritize conservation for the Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher on sites over 50 acres, in areas with evidence of covered species occupancy, and with higher quality habitat.

Considering all anticipated adverse effects and benefits from covered activities and the conservation program, the Service's biological opinion (section 13) concluded that permit

issuance for the HCP would not jeopardize the Olympia pocket gopher, the Tenino pocket gopher, or the Yelm pocket gopher.

Designated Critical Habitat for the Olympia pocket gopher, Tenino pocket gopher, and Yelm pocket gopher

Under the HCP, certain covered activities would occur in and impact the designated critical habitat for the Tenino pocket gopher and the designated critical habitat for the Yelm pocket gopher. There would be no impacts to the designated critical habitat for the Olympia pocket gopher.

The PCEs of designated critical habitat for the Tenino pocket gopher and the Yelm pocket gopher are related to (1) soils that support the burrowing habits of the Mazama pocket gopher, and (2) areas equal to or larger than 50 ac in size that provide for breeding, foraging, and dispersal activities (79 FR 19712-19757).

By fully implementing covered activities, the HCP would result in adverse impacts to each of the primary constituent elements (PCE) of designated critical habitat in up to

- 54.2 acres (14 percent) of the 400 acres of designated critical habitat for the Tenino pocket gopher.
- 42.7¹ acres (8 percent) of the 533 acres of designated critical habitat for the Yelm pocket gopher.

Minimization measures related to covered activities in the designated critical habitat would emphasize spatial planning (e.g., cluster developments). Clustering development or reducing numbers of housing units built minimizes the area in which the HCP would impact the PCE of designated critical habitat. These measures would also minimize habitat fragmentation throughout the critical habitat units. These measures are promoted under the County's Critical Area Ordinance (CAO) and the County would be required under the HCP to ensure all new subdivisions and development located in the designated critical habitat of the Tenino pocket gopher or the Yelm pocket gopher are managed to contain the impacts to the levels described above, as detailed in the HCP (Section 4.6).

At a pace that keeps ahead of impacts to covered species in their designated critical habitat, the County would provide permanent conservation located in the same unit of designated critical habitat as the covered activities. Considering the limited impacts and the assurance of within-unit conservation commitments to maintain the PCEs of designated critical habitat, the Service's

¹ See the Service's biological opinion (Service 2022b sections 9.2.4.4 and 9.2.4.5) for additional detail relating to an analysis in the HCP Section 4.6.1 that provides for construction of fractional homes, and how the Service analyzed this to consider entire homes.

biological opinion (section 13) concluded that permit issuance would not destroy or adversely modify the designated critical habitat for the Tenino pocket gopher or the Yelm pocket gopher.

Taylor's Checkerspot Butterfly

Implementation of the HCP covered activities by Thurston County would result in adverse effects to individuals of the Taylor's checkerspot butterfly where individual actions remove vegetation in or around established populations. With the exception of commercial and industrial development, each category of covered activities is expected to occur in the range of the Taylor's checkerspot butterfly (Table 2).

The Taylor's checkerspot butterfly is threatened by habitat loss through conversion and degradation of habitat, particularly from agricultural and urban development; successional changes to grassland habitat; military training; the spread of invasive plants; and other factors including low genetic diversity, small or isolated populations, low reproductive success, and declining population sizes. The distribution and overall abundance of Taylor's checkerspot butterflies has declined significantly rangewide.

The distribution of the species in the permit area is primarily limited to three managed-reintroduction sites. The condition of these populations remains tentative despite progress toward population establishment. We expect up to four populations may occur in Thurston County over the requested permit term, through active reintroduction.

The HCP conservation program includes minimization and mitigation measures for the Taylor's checkerspot butterfly. These measures and their effects are analyzed further in the Service's biological opinion and below in the finding regarding minimize and mitigate to the maximum extent practicable. In addition to the minimization measures common to all covered species, the HCP includes measures to avoid adverse impacts to individuals from herbicide applications, and to avoid and minimize adverse impacts to individuals from mowing associated with covered activities. These measures and their effects are analyzed further in the Service's biological opinion and below in the finding regarding minimize and mitigate to the maximum extent practicable.

The covered activities would negatively impact individuals of the Taylor's checkerspot butterfly on a maximum of 54 acres of the species habitat. Impacts from covered activities would be distributed on lands near established populations but without managed habitat. Taylor's checkerspot butterfly individuals may occur on these sites if they disperse from a nearby conservation site. Their survival is likely very low in these areas, especially compared to their improved survival on managed conservation sites. The loss of dispersing individuals and their progeny would not have population-level effects.

To fully offset unavoidable impacts on the Taylor's checkerspot butterfly, the County would enhance and permanently maintain 40 acres of habitat for the species at a site occupied by the species, or planned for its reintroduction. The habitat enhancement would meaningfully

contribute to the conservation of the species by expanding an occupied site or providing habitat for an additional reintroduction site. By providing a contiguous area of high-quality habitat that would be occupied by the Taylor's checkerspot butterfly, the HCP would fully offset the impacts of taking the few individuals dispersing to areas without managed habitat where covered activities occur.

Considering all anticipated adverse effects and benefits from the conservation program, the Service's biological opinion (section 16) concluded that permit issuance for the HCP would not jeopardize the Taylor's checkerspot butterfly.

Designated Critical Habitat for the Taylor's Checkerspot Butterfly

Under the HCP, two categories of covered activities would occur in and impact the designated critical habitat for the Taylor's checkerspot butterfly: residential development and transportation maintenance.

The PCEs of designated critical habitat for Taylor's checkerspot butterfly are: (1) patches of early seral, short-statured, perennial bunchgrass plant communities, (2) primary larval host plants, (3) adult nectar sources, and (4) aquatic features. By fully implementing covered activities, the HCP would result in adverse impacts to PCEs 1-3 in up to 25.1 acres across three subunits of Unit 1 of the designated critical habitat. The covered activities are anticipated to result in permanent habitat loss due to associated removal of vegetation (as described above), which affects the quality and quantity of PCEs in these subunits.

Monitoring and minimization measures related to covered activities would ensure no more than 25.1 acres are impacted by covered activities in the designated critical habitat for the Taylor's checkerspot butterfly.

Mitigation measures for the Taylor's checkerspot butterfly would be achieved through permanent enhancement of 40 acres of habitat at existing preserves. Mitigation actions are expected to improve the condition of the PCEs in Unit 1 if the mitigation is located in designated critical habitat, which is likely.

With 1,143 acres of designated critical habitat in Thurston County, and expected impacts to PCEs on no more than 25.1 acres over time, the function and conservation value of each subunit is expected to be maintained. In the Service's biological opinion, we concluded that in Unit 1, the proposed action would increase the quantity and improve the quality of the PCEs of designated critical habitat. Therefore, we anticipate the Service's biological opinion (Section 16) that ITP issuance would not destroy or adversely modify designated critical habitat for the Taylor's checkerspot butterfly.

Oregon spotted frog

Implementation of the HCP covered activities by Thurston County would result in adverse effects to individuals of the Oregon spotted frog associated from each category of covered activity, except public service facility improvement.

In developing the HCP, the County modeled the areas in which habitat for the Oregon spotted frog could occur (Oregon spotted frog habitat screen), and considered land cover and hydrology to estimate the amount of habitat that may be present in the permit area for the Oregon spotted frog. The County identified field methods to confirm presence of habitat on individual project sites within the habitat screen by reviewing land cover and hydrology, and established Special Management Areas where habitat is assumed present for infrastructure maintenance-related covered activities. By assuming that all covered activities occurring in covered species habitat would impact individuals, the HCP provides a streamlined approach to quantifying and offsetting impacts to covered species, without ongoing evaluations of species occupancy on project sites.

Permanent and temporary removal of habitat resulting from the covered activities would result in mortality ranging from a few to possibly hundreds of individual Oregon spotted frogs of all life stages, on up to 618 acres of the species habitat over the 30-year permit term. The County will monitor covered activities and will ensure no more than 618 acres of Oregon spotted frog habitat are impacted by covered activities.

Measures to minimize impacts to the Oregon spotted frog are detailed in Appendix C of the HCP and analyzed further in the Service's biological opinion. Minimization measures for covered activities related to development will complement the existing wetland protections under County CAO to avoid or minimize construction activities in habitat for the Oregon spotted frog. Other measures ensure transportation and water management activities maintain natural hydrology, building on existing regulations that prevent broader-scale impacts to water quality and quantity. The County developed the HCP minimization measures with the Service's technical assistance.

To fully offset impacts of the taking, the County would establish permanent conservation sites. Measures to mitigate unavoidable impacts of covered activities on the Oregon spotted frog would ensure habitat enhancement activities (e.g., mechanical and chemical vegetation control, vegetation and hydrological restoration, mowing, grazing, and monitoring of vegetation and habitat conditions) would be permanently maintained on 618 acres of new reserves. While the conservation sites for the Oregon spotted frog are all termed as "new reserves," agricultural practices may be used where appropriate to enhance or maintain desired habitat conditions. Conservation activities are anticipated to result in improvements to within- and between- site connectivity, habitat and hydrological functions, and to fully offset impacts of covered activities on the Oregon spotted frog.

Considering all anticipated adverse effects and benefits from the conservation program, the Service's biological opinion (section 14) concluded that permit issuance for the HCP would not jeopardize the Oregon spotted frog.

Designated Critical Habitat for the Oregon Spotted Frog

Under the HCP, two categories of covered activities would occur in and impact the designated critical habitat for the Oregon spotted frog: residential development and transportation maintenance projects.

There are approximately 4,773 acres and 7.5 linear miles of designated critical habitat in the proposed permit area, all of which is included in the HCP's habitat screen for the species. The PCEs of designated critical habitat for the Oregon spotted frog include: (1) nonbreeding, breeding, rearing, and overwintering habitat, (2) aquatic movement corridors, and (3) refugia habitat.

By fully implementing covered activities, the HCP would result in adverse impacts to each PCE of designated critical habitat in up to 76 acres of designated critical habitat, through habitat loss or disturbance. Monitoring measures would ensure no more than 76 acres of designated critical habitat for the Oregon spotted frog are impacted by covered activities.

Minimization measures related to covered activities in the designated critical habitat for the Oregon spotted frog would emphasize spatial planning to reduce the exposure of critical habitat to covered activities. Conditioning residential development and County infrastructure maintenance with BMPs described in Appendix C of the HCP would minimize the area in which the covered activities impact the PCEs of designated critical habitat. Wetland avoidance measures are promoted under the County's CAO and would be complemented by measures required under the HCP.

At a pace that keeps ahead of impacts to covered species in their designated critical habitat, the County would provide permanent conservation located in the same unit of designated critical habitat as the covered activities. Mitigation measures for the Oregon spotted frog would be achieved through permanent enhancement of 618 acres of habitat at existing preserves. Mitigation actions are expected to improve the condition of the PCEs in designated critical habitat for each mitigation site located in designated critical habitat.

Considering the limits on the area impacted and the assurance of within-unit conservation commitments to permanently maintain the PCEs of designated critical habitat, the Service's biological opinion (section 14) concluded that permit issuance would not destroy or adversely modify the designated critical habitat for the Oregon spotted frog.

Oregon vesper sparrow

Implementation of the HCP covered activities would result in limited adverse effects to individuals of the Oregon vesper sparrow where individual actions result in removal of habitat loss or disturbance in habitat for the species. With the exception of commercial and industrial development and County parks, trails, and land management, each category of covered activities is expected to occur in the range of the Oregon vesper sparrow (Table 2).

The Oregon vesper sparrow faces stressors including habitat loss, fragmentation, and degradation, as well as genetic and demographic factors associated with small population size. These factors are described in more detail in the Service's biological opinion (section 11). Habitat loss results from urbanization, loss of beneficial disturbance regimes, and intensive agricultural practices. Habitat within the action area is mostly degraded and fragmented except where already in a conservation status and managed for habitat persistence. Where larger patches could provide habitat, fire prevention favors shrub or tree invasion that degrades suitability for the Oregon vesper sparrow, and dedicated management could maintain favorable habitat conditions.

The distribution and overall abundance of the Oregon vesper sparrow has declined rangewide². The County, with technical assistance from the Service, estimated that 6,064 acres of Oregon vesper sparrow habitat may occur in the permit area, on sites over 20 acres in the vicinity of Tenalquot Prairie.

By fully implementing HCP covered activities, individuals of the Oregon vesper sparrow would be adversely affected on up to 93 acres of suitable habitat from habitat loss, crushing of nests, disruption of normal behaviors during the breeding season, and habitat fragmentation, impacting all life history stages. Monitoring measures would ensure that no more than 93 acres of habitat for the Oregon vesper sparrow are impacted by covered activities.

The HCP conservation program includes minimization and mitigation measures for the Oregon vesper sparrow. These measures and their effects are analyzed further in the Service's biological opinion and below in the finding regarding minimize and mitigate to the maximum extent practicable.

² Appendix B of the HCP explains the Oregon vesper sparrow is likely not occurring on three historically occupied sites, erroneously including the Olympia Regional Airport. The subspecies was documented to occur at the Olympia Regional Airport in 2013, and thorough surveys for the species do not regularly occur. While we find value in clarifying that the Oregon vesper sparrow likely does occur at the Olympia Regional Airport, we acknowledge it does not alter the analysis because the HCP otherwise reflects the best available information about the species distribution in the permit area. We provided this technical update to the County, and the County confirmed awareness of the typographical error.

Minimization measures described in Appendix C of the HCP, and analyzed in the Service's biological opinion, would be implemented to the maximum extent practicable. These measures would condition siting and location of covered activities, as well as construction site designs to reduce habitat loss and fragmentation from covered activities. Enhanced BMPs, also described in Appendix C of the HCP, would further promote habitat enhancement on private lands through outreach and voluntary collaboration.

To fully offset unavoidable impacts on the Oregon vesper sparrow, the County would enhance and permanently maintain 31 acres of habitat for the species on working agricultural lands protected under conservation easements. The Service determined in the biological opinion (Section 11) that these conservation lands are likely to have Oregon vesper sparrow occupancy and nesting during the permit term, and provide benefits in perpetuity for the species regardless of occupancy during the permit term. The Service also determined that approximately 563 acres of other conservation lands managed for the Yelm pocket gopher are also likely to benefit the Oregon vesper sparrow over time. Other lands in the HCP conservation network would also benefit the Oregon vesper sparrow if the species distribution improves.

In addition, by preserving and managing approximately 2,480 acres of new conservation lands for prairie characteristics, including 31 acres managed for high quality Oregon vesper sparrow habitat, all of which would otherwise continue to be degraded and fragmented, the HCP would fully offset the impacts of covered activities and have an overall positive contribution to the survival and recovery of the Oregon vesper sparrow. Therefore, permit issuance for the HCP would not appreciably reduce the likelihood of survival and recovery of the Oregon vesper sparrow by reducing the reproduction, numbers, or distribution of that species. The Service analyzed impacts to the Oregon vesper sparrow as though it were a listed species, and the County requested permit coverage for this covered species as though it were a listed species.

III. Public Involvement

The Service made diligent efforts to involve the public by making the applicant's HCP and the associated EIS available for review and comment. Ahead of HCP development, the Service published an initial Notice of Intent (NOI) to prepare a draft EIS for the HCP on March 20, 2013 (78 FR 17224). In response, USFWS and the County received 23 comment letters. The County further engaged public stakeholders through public workshops and information meetings during collaborative development of the HCP. The Service issued a new NOI on October 16, 2020 (85 FR 65861), in response to draft HCP submitted by Thurston County. The NOI opened a 30-day public scoping period through November 16, 2020. The Service received 19 comment letters during this scoping period, as well as a letter and a related email from the U.S. Environmental Protection Agency (EPA) on November 18, 2020, and December 17, 2020, respectively. During the 2020 scoping period, Thurston County concurrently accepted public scoping comments pursuant to the Washington State Environmental Policy Act (SEPA) through a collaborative effort with the Service and received five public comment letters. All comments were considered

in preparation of the draft EIS and are included in an appendix to the draft EIS, along with a summary of comments received.

The Service published a Notice of Availability (NOA) in the Federal Register on September 24, 2021 (86 FR 53111), announcing the availability of the draft EIS (Service 2021) and draft HCP for public review through November 8, 2021. The Service and the County cooperatively conducted two public information meetings during the draft EIS comment period. We received 32 comment letters in total. Nine comment letters were received through federal public comment procedures, and 23 comment letters were received by the County through SEPA. All 32 comment letters were reviewed in preparation of the final EIS. Of these, three were identical letters received by both the Service and the County. All substantive comments were considered and addressed in the final EIS, and are included as an appendix to the final EIS, which is incorporated by reference above.

The Service published an NOA in the Federal Register on May 13, 2022, announcing the availability of the final EIS and HCP (87 FR 29361-29364). The NOA described the proposed Federal action (i.e., issuance of an ITP) and the purpose and need for the action. During each comment period, copies of the documents were available for public inspection online through our website (<https://www.fws.gov/WaFWO>). Following publication of the NOA for the FEIS, the Service waited an additional 30 days to receive public comments. No comment letters were received.

IV. Incidental Take Permit Criteria—Analysis and Findings

Section 10(a)(2)(A) of the ESA specifically mandates that “no Permit may be issued by the Secretary authorizing any taking referred to in paragraph (1)(B) unless the Permittee therefore submits to the Secretary a conservation plan that specifies—(i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

Section 10(a)(2)(B) of the ESA mandates that the Secretary shall issue a permit if she finds:

“...after opportunity for public comment, with respect to a permit application with respect to a permit application and the related conservation plan that (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph

(A)(iv) will be met; and [s]he has received such other assurances as [s]he may require that the plan will be implemented...”

In accordance with 16 USC § 1539(a)(2)(B), the Service makes the following findings:

1. The taking will be incidental.

We determined that the covered activities described in the HCP, including residential development; added accessory structures; septic repair or extension; home heating oil tank removal; commercial and industrial development; public service facility construction (i.e., schools and fire stations); transportation capital projects; transportation maintenance and work in right-of-way; landfill and solid waste management; water resources management; county parks, trails, and land management; and conservation site acquisition and management are lawful activities. Any take resulting from engaging in these covered activities described in the HCP will be incidental to, and not the purpose of the covered activities. Therefore, we find that the taking of covered species that may occur as result of the implementation of covered activities will be incidental to otherwise lawful activities.

2. The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.

In the final Thurston County HCP, the Applicant committed to implement a variety of conservation measures intended to minimize and mitigate the impacts of incidental taking of the covered species that may result from the covered activities (HCP Chapter 5-8 and appendices C-M). Conservation measures to minimize adverse effects to the covered species and designated critical habitats under the HCP (Section 5.2 and Appendices C - G) include siting and locating activities, construction minimization, and voluntary measures to maintain and or enhance habitat values and functions for covered species outside of development envelopes. Conservation measures to mitigate unavoidable adverse effects to the covered species include protecting, enhancing, and maintaining new reserves; securing and maintaining conservation easements on working agricultural lands; and enhancing then maintaining existing preserves. Criteria to ensure the mitigation measures support the covered species are detailed in the HCP (Chapters 5 and 7, and Appendices H - M). These measures and their effects on covered species have been described in detail above in the Analysis of Effects section.

Olympia pocket gopher, Tenino pocket gopher, and Yelm pocket gopher

Implementation of the program of HCP covered activities in Thurston County is likely to take individuals of three subspecies of *Mazama* pocket gopher: the Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher during the course of residential development; added accessory structures; septic extension or repair and heating oil tank decommissioning; commercial and industrial development; public service facility development; landfill and solid waste management; transportation projects; transportation maintenance and work in rights-of-way; water resources management; and management of parks, trails, and county lands.

Under the HCP, conservation measures implemented with these activities include multiple approaches to siting and locating activities and conditions on construction to avoid or reduce exposure of individuals of these subspecies. These conservation measures would be applied during covered activities that occur in any prairie or grassland areas with soils suitable for the species in the area covered by the HCP. The covered area is defined by Thurston County's jurisdiction. Conservation measures reducing impacts to the three subspecies of Mazama pocket gopher will be used along with monitoring and management of covered activities to ensure impacts to the species from covered activities occur in no more than 1,210 acres (632 functional-acres) of habitat for Olympia pocket gopher, 425 acres (178 functional-acres) of habitat for the Tenino pocket gopher, and 6,821 acres (3,747 functional-acres) of habitat for the Yelm pocket gopher during the 30 year permit term.

The HCP conservation strategy includes mitigation to fully offset unavoidable impacts to the three subspecies of the Mazama pocket gopher by permanently protecting and managing habitat. Conservation for each subspecies of Mazama pocket gopher will result from permanently maintaining or enhancing habitat quality on permanent conservation sites.

For the Olympia pocket gopher, conservation sites will occur on new reserves.

For the Tenino pocket gopher, conservation sites will occur on new reserves and on working agricultural lands.

For the Yelm pocket gopher, conservation sites will occur on new reserves, working agricultural lands, and on existing reserves where such management commitments do not currently exist.

Conservation lands will be in areas that include current or recent historical populations of the species. Criteria for conservation lands require large blocks of habitat (50 acre minimum), and prioritize areas with more evidence of Mazama pocket gopher occupancy and higher quality habitat. Site-specific management practices designed to achieve HCP performance standards for the Mazama pocket gopher subspecies will be detailed in management plans and funded through non-wasting endowments (or a program-wide non-wasting endowment). Once habitat attributes are stabilized on working agricultural lands or restored on reserves, the sites would be managed in perpetuity. The County would secure a legally enforceable cooperative agreement with the landowner(s) that clearly provides rights to the County to permanently maintain the habitat quality. The HCP stay-ahead provision ensures the conservation lands are secured and functional for the species before the commensurate covered activities cause impacts to the species.

To quantify individual project-scale impacts to the Mazama pocket gopher subspecies (debits), the County assumes impacts occur wherever covered activities occur in potential habitat based on the mapped extent of habitat for the Mazama Pocket Gopher subspecies and current land cover (typically confirmed through available aerial imagery). The County will quantify the area of habitat impacted at each project site after working with project applicants to minimize the

overlap of a project area with habitat for covered species. The area of impacts for each project includes without limitation new buildings, landscaping, access routes, utilities, equipment operation areas, construction staging, and other related actions within the habitat of the covered species. The area of impacts is then adjusted by a habitat-value factor to calculate the debits as functional-acres (HCP Chapter 7 and Appendix H), which serve as a measure of the impacts of the taking. Conservation sites will be managed to fully offset the impacts of the taking (mitigation debits) by producing an equal number of functional-acre credits through habitat maintenance or enhancements on approximately:

- 346 acres of new reserves in the range of the Olympia pocket gopher.
- 73 acres of new reserves and 28 acres of conservation easements on working agricultural lands in the range of the Tenino pocket gopher.
- 744 acres of new reserves in the northern portion of the range of the Yelm pocket gopher.
- 400 acres of new reserves, 163 acres of conservation easements on working agricultural lands, and 130 acres of enhanced existing reserves in the eastern portion of the range of the Yelm pocket gopher.
- 516 acres of new reserves, 210 acres of conservation easements on working agricultural lands, and 168 acres of enhanced existing reserves in the southern portion of the range of the Yelm pocket gopher.

Using functional-acres as an index value that incorporates habitat quality, occupancy information, and landscape position to quantify relative level of impacts and conservation to the Mazama pocket gopher subspecies; the plan would provide conservation at a pace to remain ahead of the impacts on the subspecies. As a result, the above-listed amount of conservation would be provided if the covered activities are implemented to the full amount forecasted. If fewer activities are implemented under the HCP, the conservation would remain commensurate with the amount of activity. The mixture of conservation lands may vary among new reserves, working agricultural lands, and enhanced existing reserves according to the functional-acre metrics detailed in the HCP, so the mixture shown above is the projected outcome.

The HCP includes conservation measures for covered activities in designated critical habitat for the Tenino pocket gopher and the Yelm pocket gopher to avoid, minimize and mitigate impacts from covered activities. There is no designated critical habitat for the Olympia pocket gopher in the County's jurisdiction. Conservation measures related to the County's Critical Areas Ordinance promote spatial planning of developments (e.g, clustered development) in the designated critical habitats for Tenino pocket gopher and the Yelm pocket gopher to minimize fragmentation. In the case of mitigation for impacts to the Tenino pocket gopher or the Yelm pocket gopher in the subspecies' respective designated critical habitats, the County will require

mitigation via land dedication within the same unit of designated critical habitat (HCP Section 7.6.2). HCP conservation measures and monitoring will ensure that no more than 54.2 acres (14 percent) of the 400 acres of designated critical habitat for the Tenino pocket gopher, and no more than 42.7 acres (8 percent) of the 533 acres designated critical habitat for the Yelm pocket gopher will be impacted by covered activities. To implement the HCP in these units, the County may employ cluster development strategies or approve subdivision and development of fewer lots. It is the County's responsibility to ensure the covered activities are implemented to result in no more impacts than are proposed. However, we acknowledge where the County described a limit of 41.7 acres in the designated critical habitat for the Yelm pocket gopher, this was based in part on the projected construction of 22.3 houses in one unit and 16.7 houses in another unit. The Service analyzed this as 23 houses and 17 houses respectively, and determined the County's proposed level of impact in the designated critical habitat is accurately summarized as 42.7 acres.

The HCP conservation program, including minimization and mitigation measures, would fully offset impacts of the covered activities on Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher and expand the area of secure habitat they occupy in the plan area. The HCP conservation program would provide these subspecies with the suitable habitats needed to maintain or enhance survival and recovery. The stay-ahead provision ensures the conservation is sufficient in scale and timing to fully offset the impacts of the taking on the each covered subspecies of *Mazama* pocket gopher. Adaptive management ensures the conservation actions are effective and durable. Thus, the HCP would reduce the amount and extent of impacts to the maximum extent practicable and would fully offset unavoidable effects of the incidental take on the Olympia pocket gopher, the Tenino pocket gopher, and the Yelm pocket gopher.

Taylor's checkerspot butterfly

Implementation of the program of HCP covered activities in Thurston County is likely to take individual Taylor's checkerspot butterflies during the course of new residential development; added accessory structures; septic extension or repair and heating oil tank decommissioning; public service facility development; landfill and solid waste management; transportation projects; transportation maintenance and work in rights-of-way; water resources management; and management of parks, trails, and county lands.

Under the HCP, conservation measures implemented with these activities include multiple approaches to siting and locating activities away from habitat for the species and conditions on construction to avoid or reduce exposure of individual Taylor's checkerspot butterflies. Most of these conservation measures will be applied during covered activities that occur in any prairie or grassland areas covered by the HCP. An additional HCP conservation measure applied to construction activities in the range of the Taylor's checkerspot butterfly is to delay mowing until after the nectar species have finished flowering and seed production. The County will also avoid herbicide on County rights-of-way in the range of Taylor's checkerspot butterfly for covered activities. Conservation measures reducing impacts to the Taylor's checkerspot butterfly will be used with monitoring to ensure impacts to the species from covered activities occur in no more

than 54 acres (16 functional-acres) during the 30 year permit term. Because the sites where covered activities would occur are rarely occupied by individuals of the Taylor's checkerspot and are not managed to maintain habitat for the species, the impact of the covered activities across 54 acres of habitat on Taylor's checkerspot butterflies is expected to be minor and is quantified as 16 functional-acres.

The HCP conservation strategy includes mitigation to fully offset unavoidable impacts to the Taylor's checkerspot butterfly by permanently protecting and managing Taylor's checkerspot butterfly habitat. Conservation for the species will result from enhancing and permanently maintaining habitat quality on existing reserves where such management commitments do not currently exist. Existing reserves to be included in the conservation program will be in areas that include current or recent historical populations of the species. Criteria for conservation lands prioritize large blocks of habitat, and also recognize the value of stepping-stone habitats for the Taylor's checkerspot butterfly to connect other conservation lands. Prioritized criteria for selecting conservation lands ensure each site would be 50 acres or more, unless they are contiguous with additional habitat areas, are occupied by the species, or have at least five acres occupied by larval host plants. Site-specific management practices designed to achieve HCP performance standards for the Taylor's checkerspot butterfly will be detailed in management plans and funded through non-wasting endowments. Once habitat attributes are restored, the sites would be maintained in perpetuity. The County would secure a legally enforceable cooperative agreement with the landowner(s) that clearly provides rights to the County to permanently maintain the habitat quality. The HCP stay-ahead provision ensures the conservation lands are secured and functional for the species before the commensurate covered activities cause impacts to the species.

To quantify individual project-scale impacts to the Taylor's checkerspot butterfly (mitigation debits), the County assumes impacts occur wherever covered activities occur in potential habitat within the common dispersal distance of occupied sites. The area of impacts is adjusted by a habitat-value factor to calculate the functional-acre debits (HCP Chapter 7 and Appendix H). Conservation sites will be permanently managed to fully offset these debits by producing 16 functional-acre credits through habitat enhancements on 40 acres of existing reserves where such habitat commitments do not currently exist, as described in the HCP.

The HCP includes conservation measures applicable in designated critical habitat for the Taylor's checkerspot, as well as throughout the habitat of the Taylor's checkerspot butterfly, to avoid, minimize and mitigate impacts from covered activities. Conservation measures related to the siting of covered activities away from habitat, enhancement of vegetation adjacent to occupied areas, and outreach to improve community awareness of actions that benefit the species. For all impacts to the Taylor's checkerspot butterfly, the County's mitigation priorities include areas within the designated critical habitat for the Taylor's checkerspot butterfly in the Plan Area (HCP Section 5.4.3). HCP conservation measures and monitoring will ensure that no

more than 25.1 acres (two percent) of the 1,053 acres of designated critical habitat for the Taylor's checkerspot butterfly that occur in seven subunits in the Plan Area.

The HCP conservation program, including minimization and mitigation measures, will expand the area of secure habitat occupied by Taylor's checkerspot butterfly in the plan area. The HCP conservation program will provide the species with the suitable habitats needed to maintain or enhance survival and recovery. The stay-ahead provision will ensure the conservation is sufficient in scale and timing to fully offset the impacts of the taking on the Taylor's checkerspot butterfly. Adaptive management will ensure the conservation actions are effective and durable. Thus, the HCP will reduce the amount and extent of impacts to the maximum extent practicable and will fully offset unavoidable effects of the incidental take on the Taylor's checkerspot butterfly.

Oregon spotted frog

Implementation of the HCPs program of covered activities in Thurston County is likely to take individual Oregon spotted frogs during the course of residential development; added accessory structures; septic extension or repair and heating oil tank decommissioning; commercial and industrial development; landfill and solid waste management; transportation projects; transportation maintenance and work in rights-of-way; water resources management; and management of parks, trails, and county lands.

Under the HCP, conservation measures for covered activities include multiple approaches to siting and locating activities away from covered species habitat and conditions on construction to avoid or reduce exposure of Oregon spotted frogs where practicable. Conservation measures for transportation maintenance include the designation of "special management areas for Oregon spotted frog" along stretches of roadside rights-of-way that support Oregon spotted frog (including occupied habitat and hydrologically connected areas) to ensure implementation of best management practices. Under the HCP, the County will also implement conservation measures during beaver dam management and water/wastewater management activities located in the special management areas to avoid or minimize impacts to Oregon spotted frogs. Conservation measures reducing impacts to the Oregon spotted frog, monitoring and covered activity management will ensure impacts to Oregon spotted frogs from covered activities occur in no more than 618 acres during the 30 year permit term.

The HCP conservation strategy includes mitigation to fully offset unavoidable impacts to the Oregon spotted frog through the permanent protection and management of Oregon spotted frog habitat commensurate with the impacts to the species. Conservation for the Oregon spotted frog will occur on new reserves acquired from willing sellers. Development rights on new reserves would be extinguished through conservation easements. Management practices to enhance and maintain habitat for the Oregon spotted frog will be detailed in site-specific management plans and funded through non-wasting endowments. Once habitat attributes are restored, the sites would be managed in perpetuity. The HCP includes prioritized criteria for selecting

conservation lands for the Oregon spotted frogs that ensure each site would be a minimum of five acres or contiguous with adjacent habitat areas to address habitat fragmentation and stability. The HCP stay ahead provision ensures the conservation lands are secured and functional for the species ahead of the commensurate impacts from covered activities.

To quantify individual project-scale impacts (mitigation debits), the County assumes impacts will occur wherever covered activities are located in habitat for the Oregon spotted frog. Site-specific habitat delineation will use the Washington State Wetland Rating System for Western Washington for project areas in wetlands, or quantify the entire area of impacted habitat without wetland ratings for habitat extending landward of a qualified wetland. Conservation sites will be selected to offset these debits by producing habitat credits on up to 618 acres of Oregon spotted frog habitat as described in Chapter 7 of the HCP and Appendix H.

The HCP includes conservation measures applicable in designated critical habitat for the Oregon spotted frog to avoid, minimize and mitigate impacts from covered activities. Conservation measures related to the County's Critical Areas Ordinance promote avoidance of wetlands that characterize the designated critical habitats for the Oregon spotted frog. For all impacts to the Oregon spotted frog, the County will prioritize mitigation within the unit of designated critical habitat in the Plan Area (HCP Section 5.4.5). HCP conservation measures, monitoring and covered activity management will ensure that no more than 76 acres (1.6 percent) of the 4,773 acres of designated critical habitat for the Oregon spotted frog in the Plan Area are impacted by covered activities.

The HCP conservation program, including minimization and mitigation measures, will improve the stability of Oregon spotted frog habitat in the plan area. Site-specific physical habitat restoration, will provide the species with the suitable habitats needed to maintain or enhance survival and recovery. The stay-ahead provision will ensure the conservation is sufficient in scale and timing to fully offset the impacts of the taking on the Oregon spotted frog. Adaptive management will ensure the conservation actions are effective and durable. Thus, the HCP will reduce the amount and extent of impacts to the maximum extent practicable and will fully offset unavoidable effects of the incidental take on the Oregon spotted frog.

Oregon vesper sparrow

Implementation of the HCP's program of covered activities in Thurston County is likely to disturb or permanently impact individual Oregon vesper sparrows during the course of residential development; added accessory structures; septic extension or repair and heating oil tank decommissioning; public service facility development; landfill and solid waste management; and water resources management.

Under the HCP, conservation measures for covered activities include multiple approaches to siting and locating activities away from habitat for the species and conditions on construction to avoid or reduce exposure of Oregon vesper sparrow where practicable. Conservation measures

reducing impacts to the Oregon vesper sparrow, along with monitoring and covered activity management will ensure impacts to Oregon vesper sparrows from covered activities occur in no more than 93 acres during the 30 year permit term.

The HCP conservation strategy includes mitigation to fully offset unavoidable impacts to the Oregon vesper sparrow through the permanent protection and management of Oregon vesper sparrow habitat commensurate with the impacts to the species. Conservation for the Oregon vesper sparrow will occur on working agricultural lands permanently managed under conservation easements obtained from willing sellers. These conservation sites will be managed to maintain Oregon vesper sparrows as well as the Yelm pocket gopher. Development rights on the conservation lands would be permanently extinguished through conservation easements. Management practices to maintain habitat for the Oregon vesper sparrow will be detailed in site-specific management plans and permanently funded through non-wasting endowments. Suitable habitat attributes would be managed in perpetuity. The HCP includes prioritized criteria for selecting conservation lands for the Oregon vesper sparrow that ensure each site would be a minimum of 20 acres or contiguous with adjacent habitat areas to address habitat fragmentation and stability. The HCP stay ahead provision ensures the conservation lands are secured and functional for the species ahead of the commensurate impacts from covered activities.

To quantify individual project-scale impacts to the Oregon vesper sparrow (debits), the County will assume impacts occur wherever covered activities occur in potential habitat within the local range of the species. The area of impacts is adjusted by a habitat-value factor and a factor to account for proximity to known occupied areas to calculate the debits (HCP Chapter 7 and Appendix H). Conservation sites will be managed to offset these debits by producing up to 25 functional-acre credits by establishing permanent habitat management on up to 31 acres of working agricultural lands, as described in Chapter 7 of the HCP and Appendix H. Additional conservation lands in the HCP conservation network are also to benefit the Oregon vesper sparrow.

The HCP conservation program, including minimization and mitigation measures, will improve the stability of Oregon vesper sparrow habitat in the plan area. Site-specific physical habitat management practices, will provide the species with the suitable habitats managed consistent with the needs of this ground-nesting bird to maintain or enhance survival and recovery. The stay-ahead provision will ensure the conservation is sufficient in scale and timing to fully offset the impacts of the taking on the Oregon vesper sparrow. Adaptive management will ensure the conservation actions are effective and durable. Thus, the HCP will reduce the amount and extent of impacts to the maximum extent practicable and will fully offset unavoidable effects of the incidental take on the Oregon vesper sparrow.

Conclusion

The HCP describes biological goals and objectives, and establishes species-specific conservation measures for each category of covered activities. The conservation measures include measurable

targets and appropriate monitoring. Together with adaptive management focused on ensuring achievement of the biological goals, these measures will support HCP compliance and effectiveness over time.

An adaptive management plan identifies the procedures the County will follow to monitor, adjust, and improve the effectiveness of the conservation measures and the conservation site management in a manner that avoids and minimizes adverse effects to the covered species to the maximum extent practicable. The County included provisions for reasonably foreseeable changed circumstances (HCP chapters 7 and 8). The County's stay-ahead provision for HCP implementation ensures the mitigation is secured and functional before the County authorizes or carries out the commensurate level of covered activities. Together, the conservation site criteria, milestones for mitigation credit creation, and permanent funding assurances work with the adaptive management program and pacing of covered activities to ensure the impacts of the taking are fully offset at all times during and after HCP implementation. If, at any time, this cannot be maintained, additional covered activities impacting that covered species will not be authorized or carried out until the mitigation credits are generated through additional habitat acquisitions or enhancements. The HCP also ensures the effects of potential taking resulting from changed circumstances will be minimized and mitigated to the maximum extent practicable.

In summary, the Service finds that the minimization measures and the associated monitoring and adaptive management strategies described in the final HCP are likely to reduce the amount of incidental take of the covered species. The mitigation measures are likely to rectify, reduce and compensate for the impacts of unavoidable take by strategically reducing the extent of existing threats by permanently protecting and maintaining occupied habitat for the covered species. We find that the proposed mitigation in the HCP is commensurate with the effects of the level of take anticipated over the duration of the ITP and will fully offset anticipated impacts of the taking on the species due to measurable improvements in habitat quality and stability that align with the life history requirements of the species, especially when compared to current baseline.

For the reasons discussed above and in the Analysis of Effects section, we find that the conservation program in the HCP will fully offset the impact of the taking of the covered species, and thus will minimize and mitigate the impacts of the taking of the covered species to the maximum extent practicable.

3. The applicant will ensure that adequate funding for the plan will be provided

The County has permitting and legal authority for all proposed covered activities. The County conducts, authorizes, or permits individual activities detailed above to carry out the County's strategic development plan and comprehensive plan, as required under Washington State Growth Management Act. The County also operates County infrastructure, parks, and lands, as well as essential public services, such as public safety.

The HCP's covered activities and conservation measures will be implemented cooperatively by the County (e.g., employees and contractors), its permittees (e.g., developers), and its conservation partners (e.g., conservation land managers, land trusts). Each will have roles and responsibilities enforceable on and by the County, as specified in chapters 3 - 8 of the HCP, and detailed further in the appendices to the HCP. The County, as the proposed federal permittee, is ultimately responsible for ensuring and managing funding for HCP implementation and for perpetually funding the HCP mitigation. This does not relieve the parties implementing individual covered activities or the County's conservation partners from their obligations to comply with and fully implement the HCP.

In Chapter 8 of the HCP, the County forecasted the expected costs over time and described funding for implementing the HCP, including its perpetual commitments. Table 8.1 in the HCP summarizes the likely costs to implement the HCP, by categorizing costs under (1) Conservation Program administration, (2) Conservation Lands acquisition, (3) Conservation Lands initial habitat restoration and enhancement (active phases); and (4) Conservation Lands management and maintenance (long-term)." The forecasted costs also include monitoring, adaptive management, changed circumstances, and funding for all other HCP implementation commitments. The cost analysis is based on the County's best available information and represent expected costs in 2019 dollars. In addition to adjusting for inflation, the County ensures they will adjust fees for mitigation credits as needed to fully implement the HCP. Sections 8.4.3 and 8.4.4 of the HCP describe funding contingencies and additional funding sources.

According to the HCP, "Thurston County is fully committed to fund and implement the HCP in its entirety" and "Thurston County understands that failure to ensure adequate funding of the Conservation Program outlined in the HCP is grounds for full or partial suspension of the Incidental Take Permit" (HCP Chapter 8). The County is responsible for ensuring funding for the HCP, including without limitation, the permanent management and monitoring of the conservation lands network, according to schedules in the HCP (Section 7.8).

Funding to implement the Conservation Program will come from sources in two primary categories (HCP, Table 8.3): (1) mitigation fees and (2) local funding primarily from the County's Conservation Futures fund. The County will charge fees for each project implemented as a covered-activity. Individual County-permit applicants will pay mitigation fees to purchase credits to mitigate their project debits. Likewise, County departments will also pay fees to purchase mitigation credits to offset the project debits resulting from the County's own covered activities (e.g., transportation projects). Thurston County will require that mitigation fees are paid before any development activity is permitted, or for covered activities that do not require land use permits, fees must be paid before the Covered Activity is performed. Other local funding will include contributions from Conservation Futures (funded from property tax), and may include other partnerships or funds identified during the permit Term. The funding strategies in the HCP rely entirely on mitigation fees and the Conservation Futures tax revenue, while

allowing inclusion of other non-federal funds without depending on such other funds. The County's cost modeling and funding approach address contingency funding, particularly for land acquisition and habitat management (HCP Chapter 8).

Under the HCP's stay-ahead provision, covered activities are only able to proceed after securing the mitigation credits needed to offset impacts of the taking. This sequence requires the mitigation land to be secured, functional for the species, and its management is permanently funded, as described in HCP implementation procedures, prior to individual HCP covered activities occurring. As a result, individual covered activities are only able to proceed under the HCP after funding assurances are secured.

The measures to address changed circumstances and "no surprises" assurances and are described in the HCP (Sections 7.12 and 7.13). The County committed to an adaptive management process that will modify monitoring, conservation, mitigation, or management measures as needed to ensure biological goals are met. The conservation easements, and other enforceable agreements for conservation lands, established and funded under the HCP will require adaptive management on mitigation sites in perpetuity to ensure biological goals are maintained (HCP, Chapter 6 and 7). Unforeseen circumstances will be addressed through close coordination between the Service and the County (HCP Section 7.13).

The County demonstrated they have mechanisms and commitment to raise the funding necessary to implement the measures that they have committed to in the HCP. Based on the available information, these funding mechanisms meet ESA Section 10 funding assurance requirements. In view of the foregoing, we find that the County has provided sufficient assurances that it will provide adequate funding to implement the measures described in the HCP.

4. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

The legislative history of the ESA establishes the intent of Congress that this issuance criteria be based on a finding of "not likely to jeopardize" under Section 7(a)(2) (see 50 CFR 402.02). As a result, issuance of the permit has been reviewed by the Service under Section 7 of the ESA. Our biological opinion (Service 2022b) concluded that the issuance of the incidental take permit will not jeopardize the continued existence of the covered species in the wild, because the anticipated habitat losses for each covered species would be limited to the amounts proposed and the impacts of the taking on covered species would be fully offset by permanent conservation actions consistent with recovery actions, as described in findings above. The Service also concluded that no designated critical habitat is expected to be destroyed or adversely modified (Service 2022b).

The Service reached our non-jeopardy conclusion based on our finding that the covered species are likely to persist in the action area and rangewide with implementation of the proposed HCP and ITP, due in part to the HCP mitigation actions that are likely to fully offset the adverse

impacts of the HCP covered activities on the covered species in a manner that is consistent with addressing the survival and recovery needs of these species in the affected area.

The effects of the HCP covered activities would be restricted to small percentages (HCP Table 4.9) of the habitat in the permit area for each covered species. In addition, the proposed mitigation actions would increase the amount of prairie and wetland habitat that would be permanently managed to maintain favorable habitat conditions for covered species. Protecting and permanently managing habitat for the covered species in large units capable of sustaining larger numbers of the covered species than are likely to be lost from project sites where covered activities are implemented would maintain or improve the condition of the covered species in the permit area. The amount of mitigation provided would fully offset the impacts of the taking on covered species, and support priority recovery actions. As a result, the taking will not appreciably reduce the likelihood of the survival and recovery of the covered species in the wild.

5. Other measures required by the Director of the Service as necessary or appropriate for the purposes of the HCP, will be met.

The HCP incorporates all other elements determined by the Service to be necessary for approval of the HCP and issuance of the permit. The Service assisted the County in developing their HCP, commented on draft documents, participated in numerous meetings and conference calls, and worked closely with the County throughout the planning and document preparation phases of the proposal to ensure that the conservation needs of the covered species would be assured and that their survival and recovery would not be precluded by the covered activities. The HCP adequately incorporates our recommendations for minimization and mitigation of impacts, as well as steps to monitor the effects of the HCP and ensure success of the HCP conservation program. The County will submit annual reports to the Service throughout the term of the permit describing implementation of avoidance, monitoring, minimization, and mitigation measures as described in the HCP. Coordination measures have been designed to ensure that appropriate changes in conservation measures can be implemented if proposed measures prove ineffective (through adaptive management measures) or if changed circumstances occur over the duration of the permit.

As described above, the ITP incorporates certain terms and conditions to ensure the HCP and its measures are implemented effectively and consistently, and to clarify a shared understanding of the HCP measures. We find that the Conservation Strategy described in Chapters 5-8 of the HCP and its appendices is complete and no additional measures are required to implement the intent and purpose of the HCP or meet the issuance criteria of the associated ITP.

Considerations in this decision include: (1) that minimization measures are likely to reduce the amount of take of the covered species; and (2) that mitigation measures for the covered species will fully offset anticipated impacts of the taking on covered species and will complement other recovery opportunities.

6. The Service has received the necessary assurances that the HCP will be implemented.

The Service finds that, as described in the HCP, the County has committed to implementing the mitigation, monitoring, and reporting requirements. Any permit issued in this matter would only be effective when the mitigation measures have been carried out in accordance with the special conditions of the permit. Failure to perform the obligations outlined by the conditions of the permit shall be grounds for suspension or revocation of the permit. Upon receipt and acceptance of the permit, the County is bound to fully implement the provisions of the HCP.

V. General Criteria and Disqualifying Factors

The Service has no evidence that the requested permit should be denied on the basis of the criteria and conditions set forth in 50 CFR 13.21(b)-(c). The applicant has met the criteria for the issuance of the permit and there are no disqualifying factors that would prevent the permit from being issued under current regulations.

VI. Recommendation on Permit Issuance

Based on the foregoing findings with respect to the proposed action, I recommend approval of the issuance of permit number ESPER0043489 to Thurston County authorizing incidental taking of the threatened Olympia pocket gopher, Tenino pocket gopher, Yelm pocket gopher and Oregon spotted frog, as well as the endangered Taylor's checkerspot butterfly, and the non-listed Oregon vesper sparrow, in accordance with the HCP.

Nanette Seto,
Acting Deputy Regional Director,
Pacific Region 1,
U.S. Fish and Wildlife Service

Date

VII. References

- Thurston County. 2022. Thurston County Habitat Conservation Plan, Final. 183 pp + 13 appendices (total 380pp). Prepared by Thurston County Community Planning and Economic Development Department. Olympia, Washington. Received by the Service February 22, 2022, with administrative corrections on April 25, 2022 and retaining February 22, 2022 cover date.
- Service (U.S. Fish and Wildlife Service). 2021. Draft environmental impact statement for the Thurston County Habitat Conservation Plan. Prepared by Confluence Environmental Company. Seattle, Washington. Prepared for Thurston County and U.S. Fish and Wildlife Service. September, 2021. 170 pp. body (including tables and figures) + 7 appendices (total 646 pp including public comments).
- Service (U.S. Fish and Wildlife Service). 2021b. Draft recovery plan for four subspecies of Mazama pocket gopher (*Thomomys mazama glacialis*, *T. m. pugetensis*, *T. m. tumuli*, and *T. m. yelmensis*). Portland, Oregon. xi +33 pp.+ appendices. Cover date September, 2020. Publication Date June 29, 2021.
- Service (U.S. Fish and Wildlife Service). 2022a. Final environmental impact statement for the Thurston County Habitat Conservation Plan. Prepared by Confluence Environmental Company. Seattle, Washington. Prepared for Thurston County and U.S. Fish and Wildlife Service. March, 2022. 180 pp. body (including tables and figures) + 8 appendices (total 469 pp including public scoping comments).
- Service (U.S. Fish and Wildlife Service). 2022b. Biological Opinion for the Thurston County Habitat Conservation Plan. Prepared by U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office. Lacey, Washington. Document (# 2022-0011016). 154 p. + 7 appendices.
- Service (U.S. Fish and Wildlife Service). 2022c. Record of Decision for proposed issuance of an Endangered Species Act section 10(a)(1)(B) incidental take permit to Thurston County regarding implementation of the Thurston County Habitat Conservation Plan. Prepared by U.S. Fish and Wildlife Service, ES Program, Region 1. Portland, Oregon. 15 p. + 1 attachment.
- WSDOT (Washington Department of Transportation). 2018. Regional Road Maintenance Guidelines. <https://wsdot.wa.gov/construction-planning/protecting-environment/regional-roadside-maintenance>. (Accessed June 2018).