

South of the Sound Community Farm Land Trust

Priority Conservation Areas
INITIAL STUDY

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Prepared for:

South of the Sound Community Farm Land Trust

Olympia, Washington

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*Acknowledging the farmers of the South Puget Sound Region
for all that you do to contribute to a local foods system.*

Acknowledging mentors, friends, and family.

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Background

Regions all over the United States are experiencing the loss of productive farmland to development. In Washington State, Thurston County has experienced a loss of farmland due to a growing population. Washington State University Extension (2017) estimates that, since the mid-1950's, Thurston County has lost over 75 percent of its working agricultural lands. In recent years, the total acreage of active farmland has dropped drastically – by almost half between 2002 and 2007, from 74,420 acres to 38,718 acres, which may indicate a (Washington State University Thurston County Extension, 2017).

In the fifteen-year timespan between 2000 and 2015, Thurston County permanently lost approximately 6,500 acres of farmland to development (Thurston Regional Planning Council, 2017). Similar trends are replicated on the national level, as documented by American Farmland Trust (AFT) (2017).

Farmland loss was identified as a public concern TRPC's Sustainable Thurston comprehensive planning initiative that began in 2011. In 2016, Thurston Regional Planning Council (TRPC) set priorities for achieving the target of "No Net Loss" of farmland in the County (Thurston Regional Planning Council, 2017). These priorities included exploring tools and strategies for farmland conservation. Farmland acquisition by a land trust or conservation agency through fee simple purchase or agricultural conservation easement has been identified as a strategy in the programs and policies of the No Net Loss target for Thurston County farmland

(Thurston Regional Planning Council, 2017).

South of the Sound Community Farm Land Trust was formed to meet farmland conservation needs in Thurston County almost two decades ago. Based in Olympia, Washington, SSCFLT is a small non-profit organization with the mission of conserving farmland in the South Puget Sound Region of Washington State. SSCFLT incorporated in 1998 to address the rapid loss of farmland to urban development in Thurston County.

Today the organization is made up of an eleven-member working Board of Directors and two staff members, and has an inventory of two farm properties totaling over 100 acres, with an additional acquisition currently underway. SSCFLT has adopted the following mission statement to describe the group's work: "Promoting vibrant local food and farming systems through community supported farmland preservation strategies, educational outreach, and partnerships that increase opportunities for farms and farmers to flourish," (South of the Sound Community Farm Land Trust, 2017).

The farmland trust pursues conservation through the fee simple purchase of farms and the purchase of property development rights with an agricultural conservation easement (ACE), and is poised to directly contribute to meeting the farmland No Net Loss target set by the Thurston Regional Planning Council.

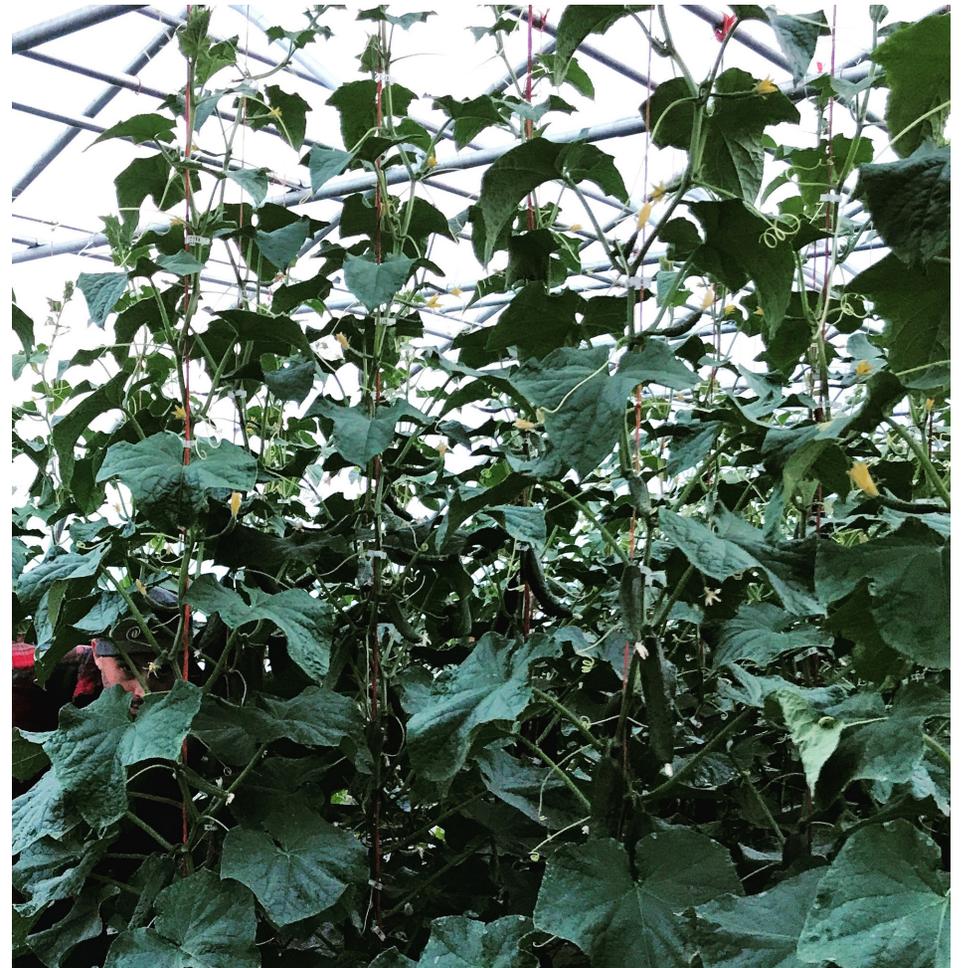
After many years of commitment to the local issue, SSCFLT has recently realized the goal of permanently saving farmland in Thurston County through property acquisition, due in large part to funding opportunities provided by the County's Conservation Futures grant program. In 1995, the Washington State Legislature enacted RCW 84.23.240 to provide county governments the ability to protect open space and natural resources through adoption of a Conservation Futures program. The program has since been established in 13 counties in Washington.

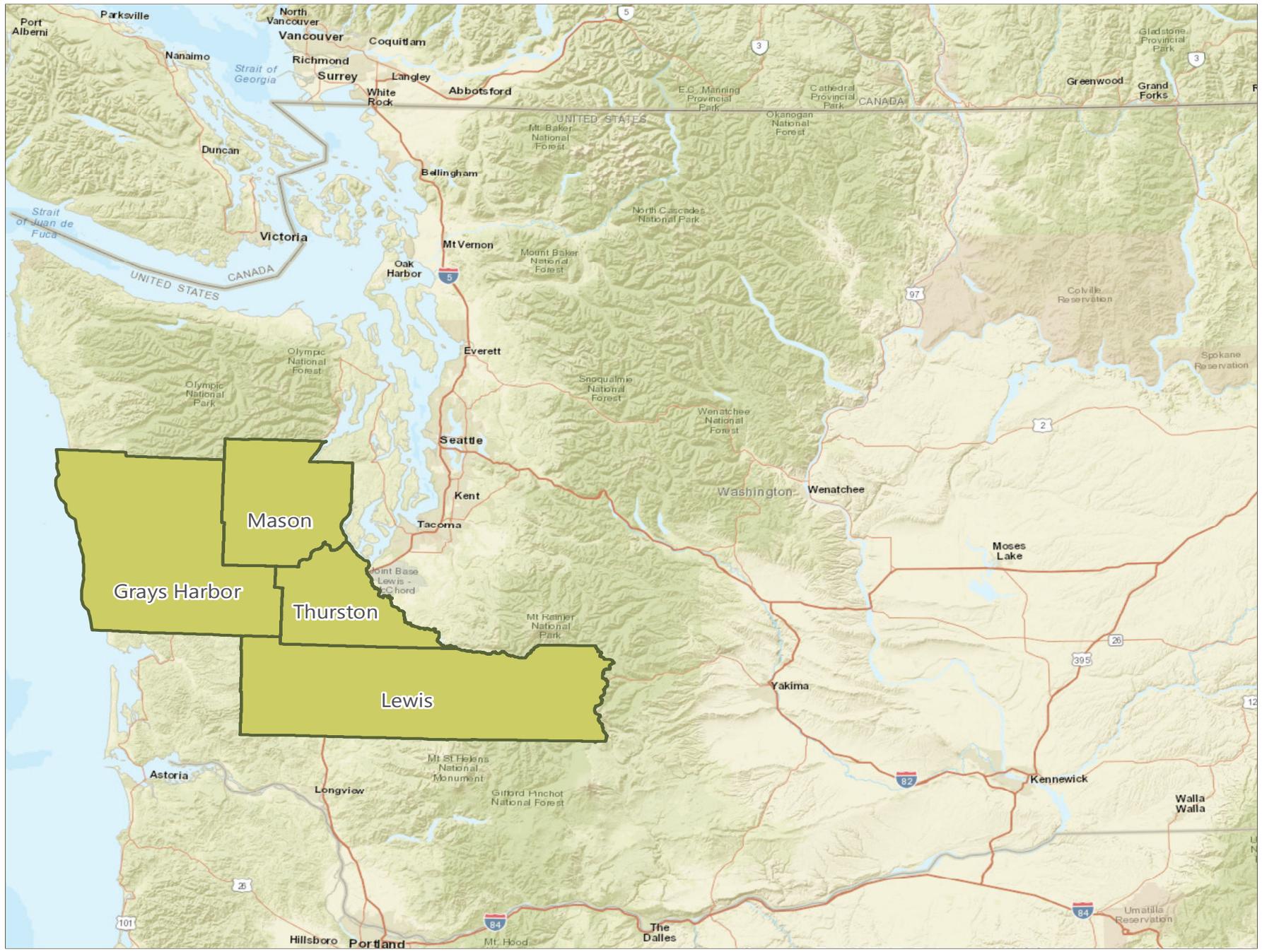
Conservation Futures is a property tax levied to acquire land and development rights to protect, restore, and maintain open space, timberlands, wetlands, habitat areas, culturally significant sites, and agricultural lands within the county where the tax is collected (Thurston County, 2017). By awarding grant funding of over \$1 million dollars directly to SSCFLT, Conservation Futures in Thurston County has played a fundamental role in making possible the organization's farm acquisitions up to this point.



To date, SSCFLT has focused acquisition efforts in Thurston County due to the pattern of extensive local farmland conversion and the opportunities for funding associated with the Conservation Futures program. However, the farmland trust maintains a commitment to addressing the risk of farmland loss in the greater South Puget Sound Region. Broadly, SSCFLT’s area of interest encompasses four counties: Thurston, Mason, Lewis, and Gray Harbor, as shown in the map opposite. Together these counties total 6,485 square miles and collectively produce agricultural goods with a market value of more than \$325 million (United State Department of Agriculture, 2012).

County	Size (sq. miles)	Population ¹	Number of Farms	Market Value of Crops and Livestock	Agricultural Specialization
Grays Harbor	2,224	71,122	557	\$31 million	<ul style="list-style-type: none"> • Nursery/greenhouse • Aquaculture • Milk
Lewis	2,436	75,882	1,647	\$132 million	<ul style="list-style-type: none"> • Fryers • Milk • Christmas trees
Mason	1,051	61,023	377	\$41 million	<ul style="list-style-type: none"> • Aquaculture • Cattle • Christmas trees
Thurston	774	269,536	1,336	\$122 million	<ul style="list-style-type: none"> • Nursery/greenhouse • Poultry • Milk





Initial Study Approach

The initial study project will help to guide the SSCFLT's future planning, decision-making, and outreach strategies related to farmland conservation.

How will spatial analysis be used to identify priority conservation areas?

Geographic Information Systems (GIS) store, categorize, manage, and display characteristics about land. Each piece of data is tied to a specific location on Earth. For the Priority Conservation Areas Initial Study, conservation criteria data is overlaid on a map of parcels of the four counties of interest: Grays Harbor, Lewis, Mason, and Thurston.

Each conservation characteristic will be assigned a weight, depending on its significance to the mission of SSCFLT. Parcels that contain conservation criteria will be given a total score based on the sum of values of present characteristics. Once scores have been assigned to all parcels, the spatial analysis produces maps displaying parcels ranked by score - higher scores will be indicative of those parcels with higher conservation value.

Parcel selection: a parcel receives a score whether the criteria occurs in whole or in part. For example, if a portion of the property contains prime soils, the whole parcel will be weighted for the occurrence of prime soils. In the instance that a parcel contains more than one conservation element, the criteria with the highest score is counted.

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Methodology

South of the Sound Community Farm Land Trust identifies three (3) categories of concern for evaluating potential acquisitions.

Agricultural Values

Environmental Values

Community Values and Priorities

Based on SSCFLT’s mission and conservation literature, this initial study developed a scoring method at the parcel-level with which to evaluate priority conservation areas in the areas of interest as identified by SSCFLT Board of Directors: Grays Harbor, Lewis, Mason, and Thurston Counties.

The criteria included here are based on available data, and are not exhaustive; however, they do provide a solid foundation for evaluation of priority conservation areas in the South Puget Sound Region, including Grays Harbor, Lewis, Mason, and Thurston Counties.

Agricultural Values

- Soil Type
- Parcel Size
- Development Threat

Environmental Values

- Critical Habitat
- Grasslands and Oak Woodlands
- Rare Plants and High Quality Ecosystems
- Salmon-bearing Streams
- Connectivity

Community Values and Priorities

- Heritage Barns
- Adjacent to Scenic Highway
- Adjacent to Public Trail
- Crop Productivity and Local Food Production

Weighting and Scoring

Selecting and scoring conservation criteria is a subjective and values-based process in which opinions will vary between both individuals and organizations. Scoring within the three groups of conservation categories, Agricultural Values, Conservation Values, and Community Values and Priorities, has been performed as follows:

Agricultural Values	
Soil Type	0 - 6
Prime Farmland	6
Farmland of Statewide Importance	4
Prime Farmland if drained	4
Prime Farmland if drained and either protected from flooding or not frequently flooded during the growing season	4
Prime Farmland if irrigated	4
Prime Farmland if irrigated and drained	4
Prime Farmland if irrigated and either protected from flooding or not frequently flooded during the growing season	4
Prime Farmland if protected from flooding or not frequently flooded during the growing season	4
Not Prime Farmland	0
Parcel Size	0 - 3
50 Acres or More	3
10 to 49.99 Acres	2
1 to 9.99 Acres	1
Less than 1 Acre	0
Development Threat (Parcel Distance from Urban Growth Boundary - UGB)	0 - 4
Within UGB, Adjacent to Within 0.1 Miles of UGB	4
0.1 to 2.9 Miles	3
3 to 6.9 Miles	2
More than 7 Miles	1
Other	0
Agricultural Values Score Range Potential	0 - 13

Environmental Values	
Habitat	0 - 14
Oregon Spotted Frog	2
Mazama Pocket Gopher	2
Marbled Murrelet	2
Northern Spotted Owl	2
Streaked Horned Lark	2
Western Snowy Plover	2
Yellow-billed Cuckoo	2
Natural Heritage	0 - 4
Native Grasslands and Oak Woodlands	2
Rare Plants and High Quality Ecosystems	2
Salmon-bearing Streams	0 - 2
Bull Trout/Dolly Vardon Known Stream	2
Other Salmon-bearing Stream	1
Connectivity	0 - 1
Adjacent to Public Lands or Tribal Lands	1
Environmental Values Score Range Potential	0 - 21

Community Values and Priorities	
Historical Significance	0 - 2
Heritage Barn	2
Landscape Significance	0 - 2
Adjacent to Scenic Highway	1
Adjacent to Public Trail	1
Crop Productivity and Local Food Production	0 - 4
Market Crops	4
Other Food Crops (including: Berry, Cereal Grain, Orchard, Shellfish, and Vegetable Crops)	3
Hay/Silage	2
Other (including: Commercial Tree, Flower Bulb, Green Manure, "Herb," Nursery, Seed, Pasture, Turfgrass, Vineyard, and Other)	1
Community Values Score Range Potential	0 - 8



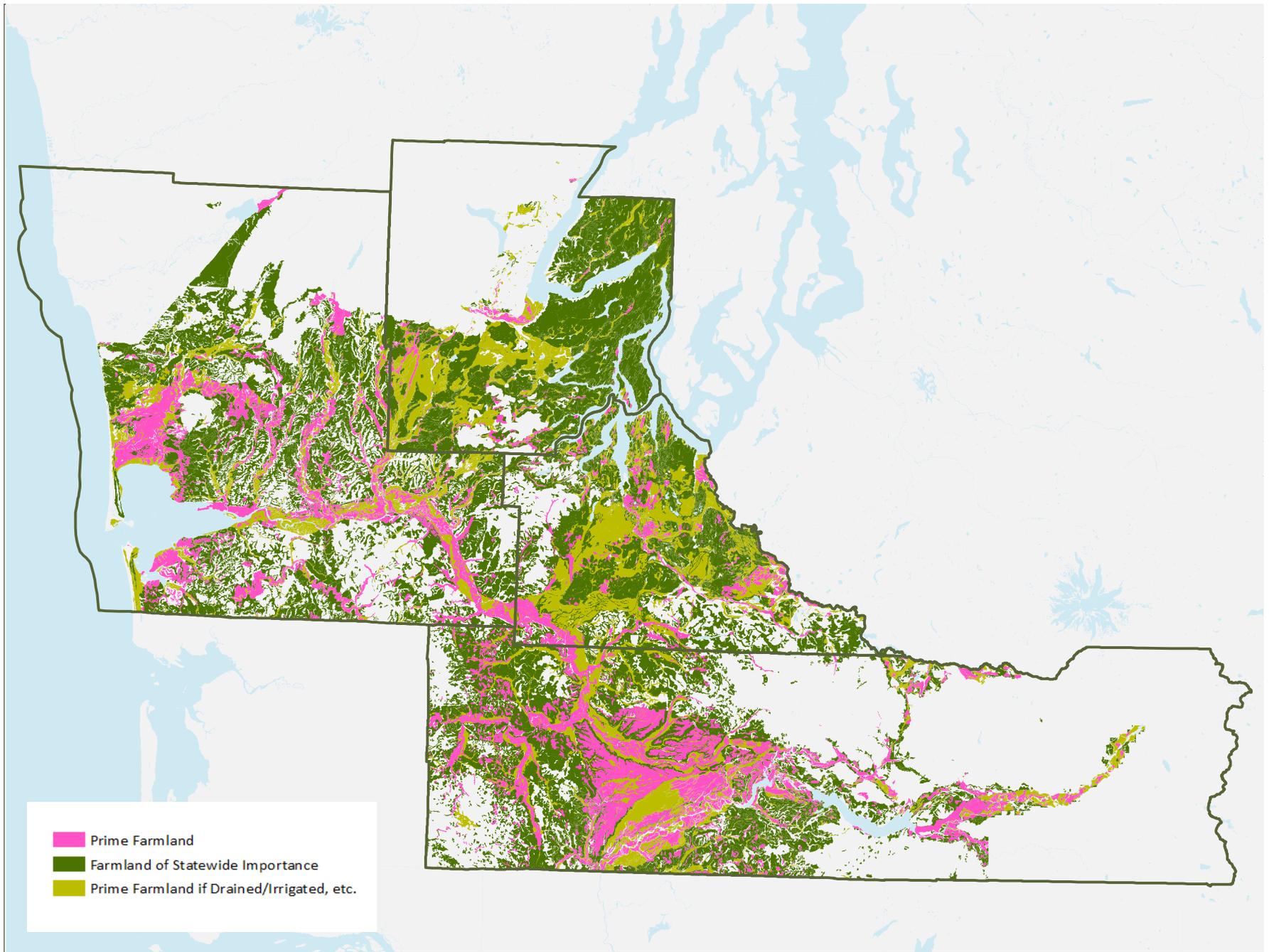
Soil Type

Soil types found in the Study Area are classified into one of nine (9) groups groups, based on agricultural viability. The groups include:

- Prime Farmland
- Prime Farmland, if...
 - Drained
 - Drained and either protected from flooding or not frequently flooded during the growing season
 - Irrigated
 - Irrigated and drained
 - Irrigated and either protected from flooding or not frequently flooded during the growing season
 - Protected from flooding or not frequently flooded during the growing season
- Farmland of Statewide Importance
- Not Prime Farmland

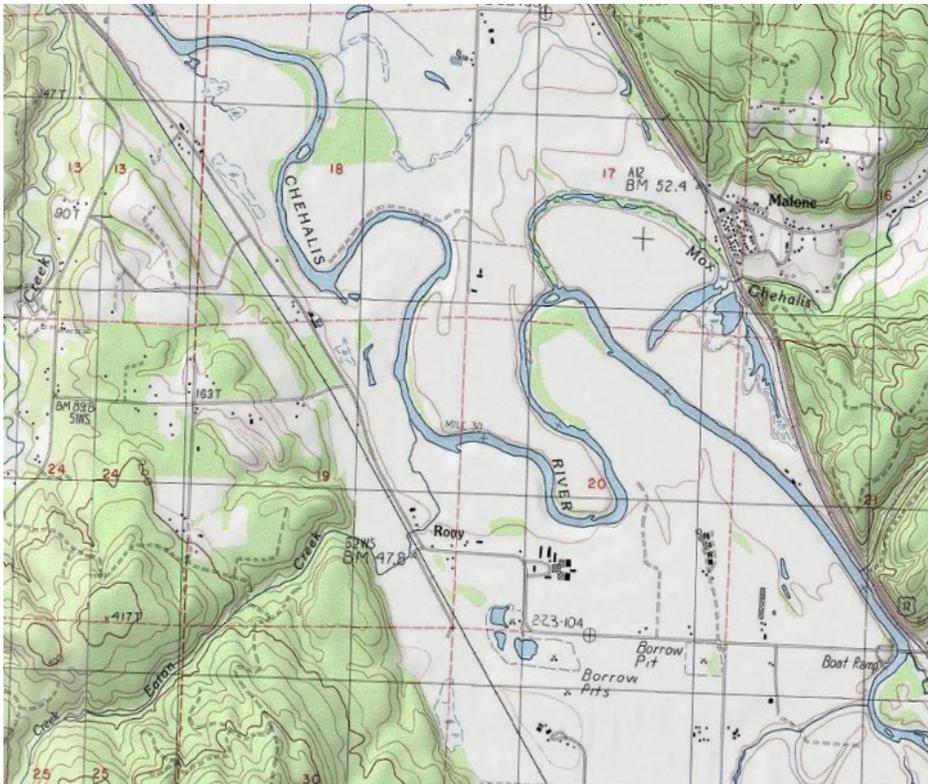
Prime Farmland is found throughout the Study Area, as shown in the map to the right.

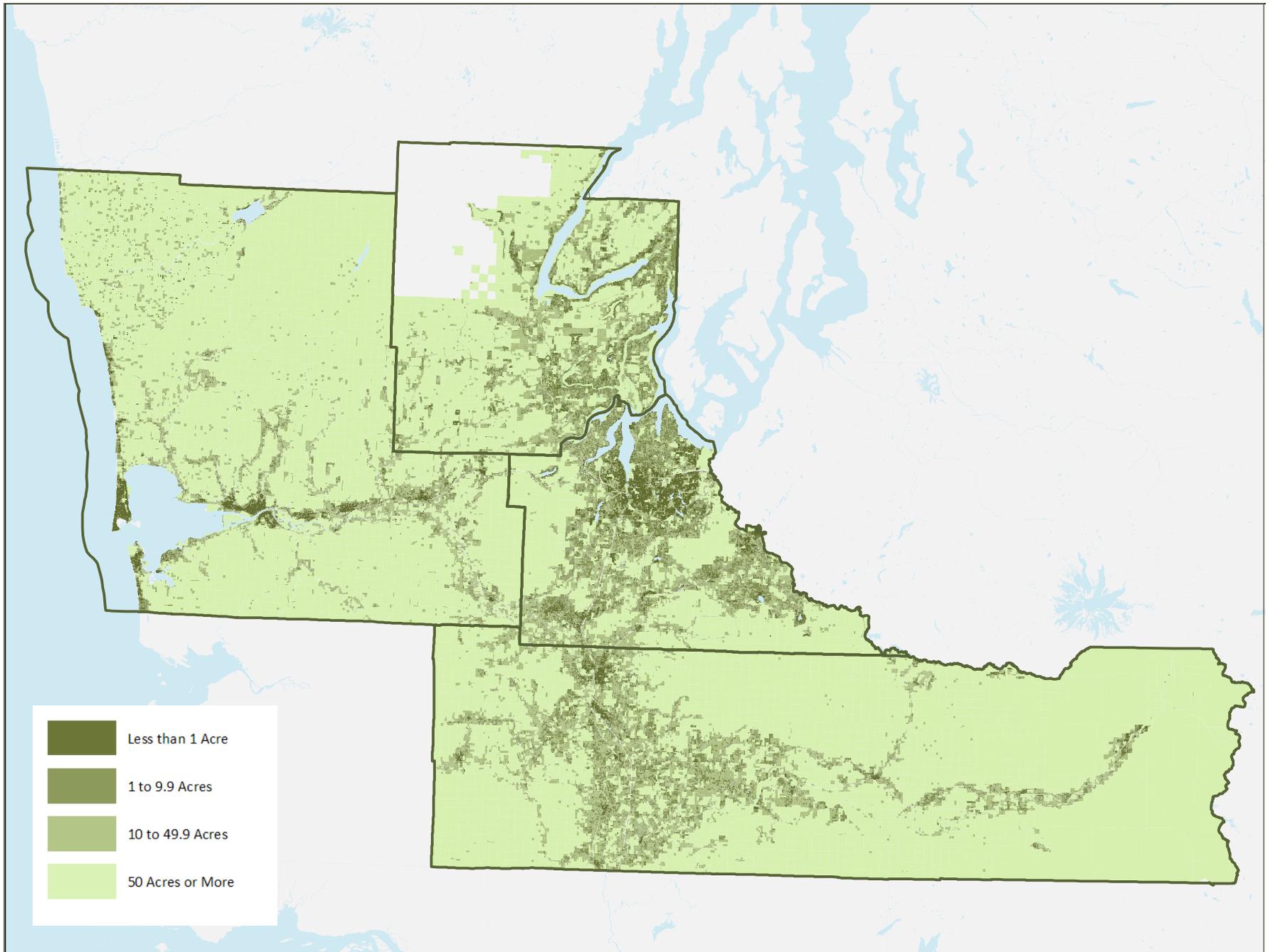




Parcel Size

The conservation literature points to the benefits of larger parcel sizes in maintaining the working landscape and wildlife habitat. For this reason, parcels were given weight according to size in acreage, with parcels over 50 acres receiving the highest score.





Development Threat

The threat of farmland loss is greatest within and adjacent to Urban Growth Boundaries, based on land use laws that encourage development within Urban Growth Boundaries, to be followed by successive planned growth outward, as needed.

The following Urban Growth Areas are found within the Study Area.

Grays Harbor County

- Aberdeen
- Cosmopolis
- Elma
- Hoquiam
- McCleary
- Montesano
- Oakville
- Ocean Shores
- Westport

Lewis County

- Centralia
- Chehalis
- Morton
- Mossyrock
- Napavine
- Pe Ell

- Toledo
- Vader
- Winlock

Mason County

- Allyn (unincorporated)
- Belfair (unincorporated)
- Shelton

Thurston County

- Bucoda
- Grandmound (unincorporated)
- Lacey
- Olympia
- Rainier
- Tenino
- Tumwater
- Yelm



Combined Critical Habitat

Habitat plays an important role in the initial study scenarios and the weight given to parcels due to the presence of critical habitat is based on the aggregate of habitat for separate species. In other words, a parcel will be given an accumulative score for the total incidences of critical habitat on that property. A static weight for the presence of critical habitat would fail to recognize the full conservation value of the land.

Species include one (1) amphibian, one (1) mammal, and five (5) types of bird, as follows:

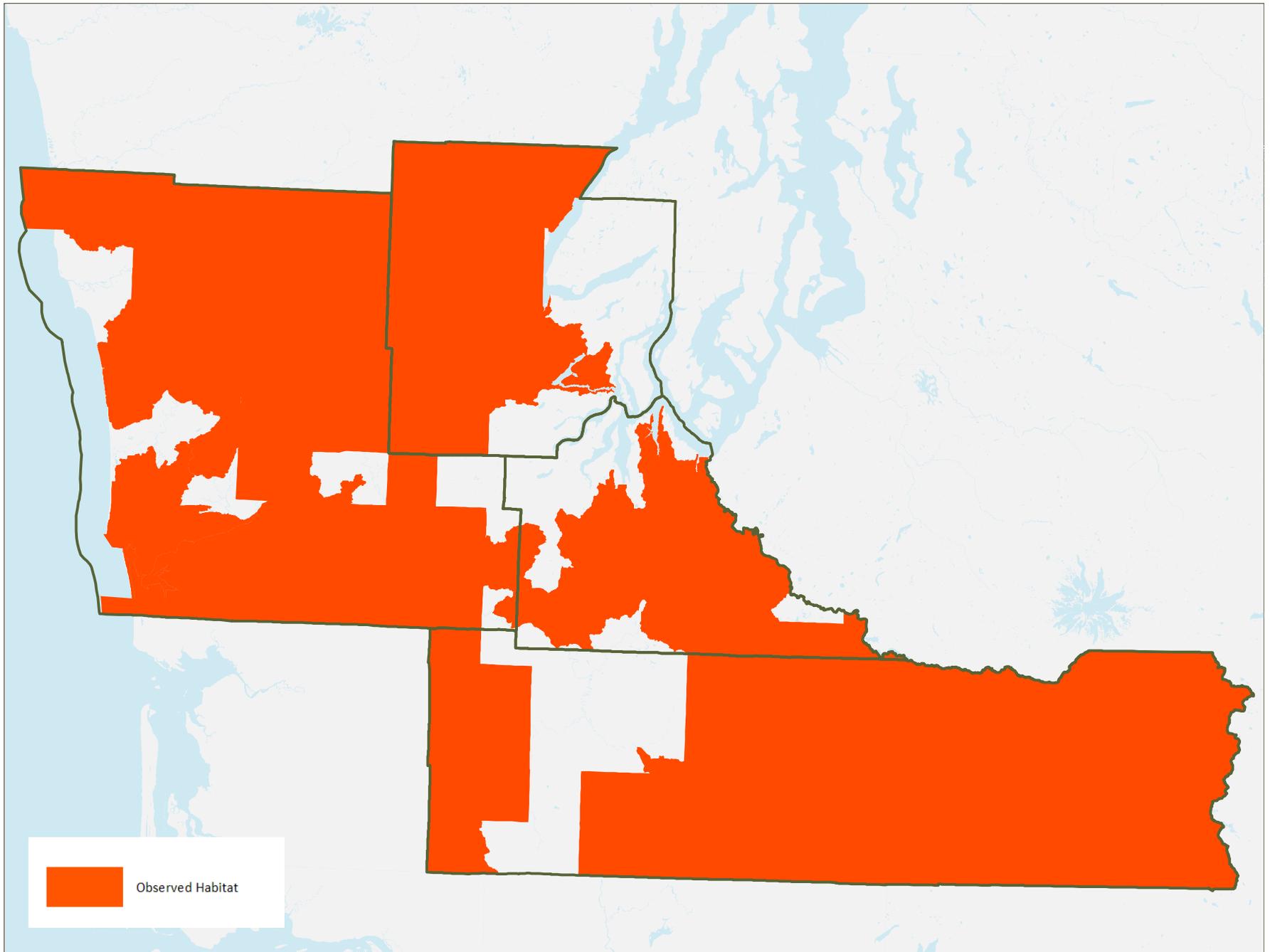
- Oregon Spotted Frog (*Rana pretiosa*)
- Mazama Pocket Gopher (*Thomomys mazama*)
- Marbled Murrelet (*Brachyramphus marmoratus*)
- Northern Spotted Owl (*Strix occidentalis caurina*)
- Streaked Horned Lark (*Eremophila alpestris strigata*)
- Western Snowy Plover (*Charadrius alexandrinus nivosus*)
- Yellow-billed Cuckoo (*Coccyzus americanus*)

At most there are parcels that contain observed habitat for a total of four (4) of the seven (7) endangered species included in the study¹, (additionally, the endangered Bull Trout (*Salvelinus confluentus*)/Dolly Vardon (*Salvelinus malma*) fish species are accounted for within Salmon-Bearing Streams). There are ninety (90) parcels which contain observed habitat for four (4) endangered species; these parcels are found in clusters throughout the Study

Area, excluding Lewis County. Within Lewis County, there are eighteen (18) parcels that contain critical habitat for a maximum of three (3) species.

The map at the right shows the distribution of critical habitat for all seven species.

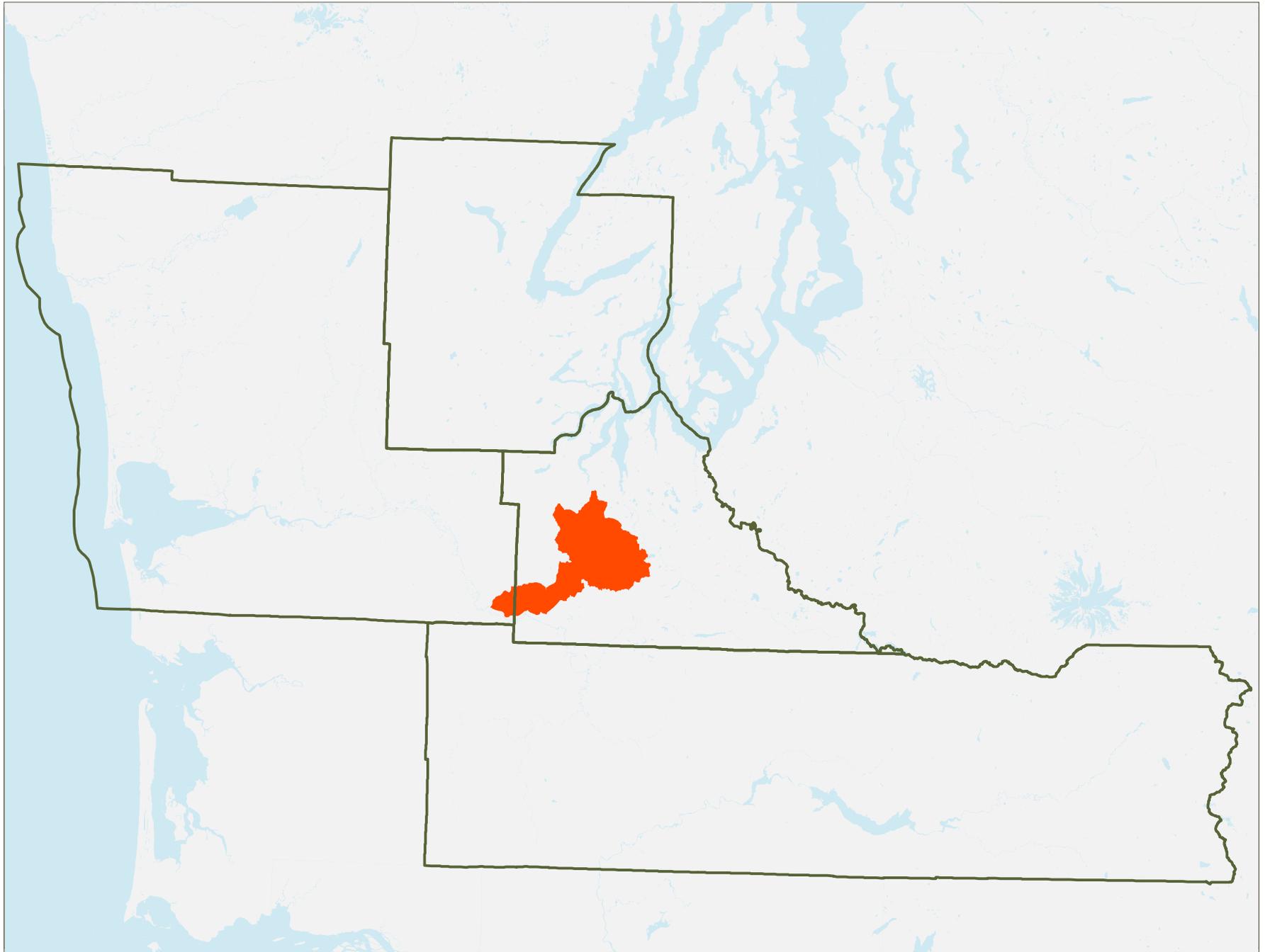
¹ Species for which habitat was not evaluated, but which has the potential to occur in the area of interest, include: Taylor's Checkerspot Butterfly (*Euphydryas editha taylori*), Oregon Silverspot Butterfly (*Speyeria zerene hippolyta*), Short-Tailed Albatross (*Phoebastria albatrus*), Brown Pelican (*Pelecanus occidentalis*), Leatherback Sea Turtle (*Dermochelys coriacea*), Burrington Jumping-Slug Snail (*Hemphillia burringtoni*), Puget Oregonian Snail (*Cryptomastix devia*), Grizzly Bear (*Ursus arctos horribilis*), Gray Wolf (*Canis lupus*), Canada Lynx (*Lynx canadensis*), and North American Wolverine (*Gulo gulo luscus*). Neither were specific plant species included.



Oregon Spotted Frog

Observed habitat for the Oregon Spotted Frog, as shown in the map to the right, is primarily located in central and western Thurston County, and partly in the southeastern corner of Grays Harbor County. The frog's habitat is almost entirely aquatic. Federal listing status is Threatened.





Mazama Pocket Gopher

The Mazama Pocket Gopher is found primarily in Thurston and Mason Counties, but small portions of habitat are also found across the borders of Grays Harbor and Lewis Counties. The United States Fish and Wildlife Service makes a distinction between four subspecies of pocket gopher, including: Olympia (*Thomomys mazama pugetensis*), Roy Prairie (*Thomomys mazama glacialis*), Tenino (*Thomomys mazama tumuli*), and Yelm (*Thomomys mazama yelmensis*) pocket gophers. The observed habitat data from Washington State Department of Fish and Wildlife does not distinguish between subspecies. Federal listing status for all four subspecies is Threatened.



