

Appendix G

Species and Habitat Information

PLANT SPECIES

Table G-1
Plant Species Observed Within the Chehalis Basin

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
GRASS, FERNS, AND HERBACEOUS			
Canadian thistle	<i>Cirsium arvense</i>	Pacific silverweed	<i>Potentilla pacifica</i>
Colonial bentgrass	<i>Agrostis capillaris</i>	Pickleweed	<i>Salicornia virginica</i>
Common duckweed	<i>Lemna minor</i>	Quackgrass	<i>Agropyron repens</i>
Common velvet grass	<i>Holcus lanatus</i>	Red fescue	<i>Festuca rubra</i>
Deer fern	<i>Blechnum spicant</i>	Redtop	<i>Agrostis gigantea</i>
Dewey sedge	<i>Carex deweyana</i>	Salt grass	<i>Distichlis spicata</i>
Field horsetail	<i>Equisetum arvense</i>	Salt-marsh sandspurry	<i>Spergularia marina</i>
Field mustard	<i>Brassica campestris</i>	Seaside arrowgrass	<i>Triglochin maritima</i>
Fireweed	<i>Epilobium angustifolium</i>	Slough sedge	<i>Carex obnupta</i>
Fowl mannagrass	<i>Glyceria striata</i>	Small bedstraw	<i>Gallium trifidum</i>
Foxglove	<i>Digitalis purpurea</i>	Soft rush	<i>Juncus effusus</i>
Giant horsetail	<i>Equisetum telmateia</i>	Spike rush	<i>Eleocharis palustris</i>
Grooved rush	<i>Juncus patens</i>	Stinky bob	<i>Geranium robertianum</i>
Jaumea	<i>Jaumea carnosa</i>	Tall fescue	<i>Festuca arundinacea</i>
Lady fern	<i>Athyrium filix-femina</i>	Tufted hairgrass	<i>Deschampsia cespitosa</i>
Lyngby's sedge	<i>Carex lyngbyei</i>	Watson's willow-herb	<i>Epilobium watsonii</i>
Orchard morning glory	<i>Convolvulus arvensis</i>	Yarrow	<i>Achillea millefolium</i>
Pacific bleeding heart	<i>Dicentra formosa</i>		
SHRUBS			
American speedwell	<i>Veronica americana</i>	Oceanspray	<i>Holodiscus discolor</i>
Arrowleaf groundsel	<i>Senecio triangularis</i>	Pacific dogwood	<i>Cornus nuttallii</i>
Beaked hazelnut	<i>Corylus cornuta</i>	Pacific rhododendron	<i>Rhododendron macrophyllum</i>
Bracken fern	<i>Pteridium aquilinum</i>		
Cattail	<i>Typha latifolia</i>	Piggyback plant	<i>Tolmiea menziesii</i>
Claspleaf twisted-stalk	<i>Streptopus amplexifolius</i>	Prickly currant	<i>Ribes lacustre</i>
Common dandelion	<i>Taraxacum officinale</i>	Red clover	<i>Trifolium pratense</i>
Common mullein	<i>Verbascum thapsus</i>	Red elderberry	<i>Sambucus racemosa</i>
Common plantain	<i>Plantago major</i>	Red huckleberry	<i>Vaccinium parvifolium</i>
Common tansy	<i>Tanacetum vulgare</i>	Red-osier dogwood	<i>Cornus sericea</i>
Cooley's hedge-nettle	<i>Stachys cooleyae</i>	Reed canarygrass	<i>Phalaris arundinacea</i>
Creeping buttercup	<i>Ranunculus repens</i>	Salal	<i>Gaultheria shallon</i>
Curly dock	<i>Rumex crispus</i>	Salmonberry	<i>Rubus spectabilis</i>
Devil's club	<i>Oplopanax horridus</i>	Scotch broom	<i>Cytisus scoparius</i>
English ivy	<i>Hedera helix</i>	Sitka willow	<i>Salix sitchensis</i>
English laurel	<i>Prunus laurocerasus</i>	Skunk cabbage	<i>Lysichiton americanus</i>
English plantain	<i>Plantago lanceolata</i>	Snowberry	<i>Symphoricarpos albus</i>

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Evergreen blackberry	<i>Rubus laciniatus</i>	Stinging nettle	<i>Urtica dioica</i>
Evergreen huckleberry	<i>Vaccinium ovatum</i>	Stink currant	<i>Ribes bracteosum</i>
False-lily-of-the-valley	<i>Maianthemum dilatatum</i>	Sword fern	<i>Polystichum munitum</i>
Field mint	<i>Mentha arvensis</i>	Tall Oregon grape	<i>Mahonia aquifolium</i>
Himalayan blackberry	<i>Rubus armeniacus</i>	Trailing blackberry	<i>Rubus ursinus</i>
Holly	<i>Ilex aquifolium</i>	Twinberry	<i>Lonicera involucrate</i>
Indian plum	<i>Oemleria cerasiformis</i>	Twinflower	<i>Linnaea borealis</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>	Vine maple	<i>Acer circinatum</i>
Kentucky bluegrass	<i>Poa pratensis</i>	Water-parsley	<i>Oenanthe sarmentosa</i>
Laurel	<i>Kalmia spp.</i>	Western azalea	<i>Rhododendron occidentale</i>
Licorice fern	<i>Polypodium glycyrrhiza</i>	Western thimbleberry	<i>Rubus parviflorus</i>
Low Oregon grape	<i>Mahonia nervosa</i>	Western trillium	<i>Trillium ovatum</i>
Marsh yellowcress	<i>Rorippa palustris</i>	White clover	<i>Trifolium repens</i>
Nootka rose	<i>Rosa nutkana</i>	Wood rose	<i>Rosa gymnocarpa</i>
TREES			
Austrian black pine	<i>Pinus nigra</i>	Oregon ash	<i>Fraxinus latifolia</i>
Big-leaf maple	<i>Acer macrophyllum</i>	Oregon white oak	<i>Quercus garryana</i>
Bitter cherry	<i>Prunus emarginata</i>	Pacific madrona	<i>Arbutus menziesii</i>
Black cottonwood	<i>Populus trichocarpa</i>	Pacific ninebark	<i>Physocarpus capitatus</i>
Black hawthorn	<i>Crataegus douglasii</i>	Pacific willow	<i>Salix lasiandra</i>
Cascara	<i>Rhamnus purshiana</i>	Paper birch	<i>Betula papyrifera</i>
Cherry	<i>Prunus sp.</i>	Quaking aspen	<i>Populus tremuloides</i>
Crabapple	<i>Malus sp.</i>	Red alder	<i>Alnus rubra</i>
Domestic apple	<i>Malus domestica</i>	Scouler willow	<i>Salix scouleriana</i>
Douglas fir	<i>Pseudotsuga menziesii</i>	Sitka spruce	<i>Picea sitchensis</i>
Grand fir	<i>Abies grandis</i>	Western hemlock	<i>Tsuga heterophylla</i>
Hooker's willow	<i>Salix hookeriana</i>	Western red cedar	<i>Thuja plicata</i>
Oak	<i>Quercus sp.</i>	Western white pine	<i>Pinus monticola</i>
AQUATICS			
Broadleaf arrowhead	<i>Sagittaria latifolia</i>	Olney's three square bulrush	<i>Schoenoplectus americanus</i>
Broadleaf cattail	<i>Typha latifolia</i>	Small-fruited bulrush	<i>Scirpus microcarpus</i>
Common spikerush	<i>Eleocharis palustris</i>	Softstem bulrush	<i>Schoenoplectus tabernaemontani</i>
Creeping spikerush	<i>Eleocharis palustris</i>	Water buttercup	<i>Ranunculus longirostris</i>
Giant bur-reed	<i>Sparganium eurycarpum</i>	Watercress	<i>Nasturtium officinale</i>
Hardstem bulrush	<i>Schoenoplectus acutus</i>	Yellow water lily	<i>Nuphar lutea</i>
Narrowleaf bur-reed	<i>Sparganium angustifolium</i>		

VEGETATION AND LAND COVER

Table G-2
Standardized Habitat Type Terminology and Equivalent Terms of Habitat Mapping Resources

EIS HABITAT TERMINOLOGY	USGS NATIONAL LAND COVER DATA EQUIVALENT	WDFW FLOODPLAIN SURVEY	RESERVOIR FOOTPRINT STUDY
Agriculture	Cultivated crops, hay/pasture	Agriculture	Not applicable
Bare ground	Barren land	Riverine bar	Disturbed/bare ground, rocky outcrop/cliff
Coniferous forest	Evergreen forest	Coniferous	Managed forest 0 – 10 years, 10 – 20 years, 20 – 60 years, 60+ years
Deciduous forest	Deciduous forest	Riparian forest	Alder-dominated forest
Developed	Developed, high intensity, medium intensity, low intensity, open space	Developed	Not applicable
Herbaceous/grassland	Herbaceous	Not applicable	Not applicable
Instream	Open water	Instream, off channel	Low flow channel, riverine
Mixed forest	Mixed forest	Not applicable	Not applicable
Perennial snow/ice	Perennial snow/ice	Not applicable	Not applicable
Prairie oak	Not applicable	Prairie oak	Not applicable
Shrub/scrub	Shrub/scrub	Not applicable	Not applicable
Wetland	Emergent herbaceous wetlands, woody wetlands	Not applicable	Not applicable

Notes:

EIS = Environmental Impact Statement

USGS = U.S. Geological Survey

WDFW = Washington State Department of Fish and Wildlife

Table G-3

Federal and State Threatened and Endangered Plant Species That Occur in Lewis, Thurston, Grays Harbor, Mason, and Pacific Counties

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS ¹	STATE STATUS ²	LEWIS COUNTY ^{1,2}	THURSTON COUNTY ^{1,2}	GRAYS HARBOR COUNTY ^{1,2}	MASON COUNTY ^{1,2}	PACIFIC COUNTY ^{1,2}
FEDERAL THREATENED AND ENDANGERED PLANTS								
Golden paintbrush	<i>Castilleja levisecta</i>	Threatened	Endangered		●			
Kincaid's lupine	<i>Lupinus sulphureus</i> ssp. <i>Kincaidii</i>	Threatened	N/A	●				
Nelson's checker-mallow	<i>Sidalcea nelsoniana</i>	Threatened	Endangered	●				
Water howellia	<i>Howellia aquatilis</i>	Threatened	Threatened		●			
STATE THREATENED AND ENDANGERED PLANTS								
Adder's-tongue	<i>Ophioglossum pusillum</i>		Threatened				●	
Bear's-foot sanicle	<i>Sanicula arctopoides</i>	Species of Concern	Endangered			●		●
Brewer's cinquefoil	<i>Potentilla breweri</i>		Threatened	●				
California swordfern	<i>Polystichum californicum</i>		Threatened		●			
Candle-snuffer moss	<i>Encalypta brevicollis</i>		Endangered	●				
Coyotebush	<i>Baccharis pilularis</i> ssp. <i>consanguinea</i>		Threatened					●
Dense sedge	<i>Carex densa</i>		Threatened	●	●			
Frigid shooting star	<i>Dodecatheon austrofrigidum</i>	Species of Concern	Endangered			●		●
Great polemonium	<i>Polemonium carneum</i>		Threatened	●	●	●		●
Hairy-stemmed checker-mallow	<i>Sidalcea hirtipes</i>		Threatened	●				
Hall's aster	<i>Symphyotrichum hallii</i>		Threatened		●			
Iwatsukiella moss	<i>Iwatsukiella leucotricha</i>		Endangered			●		●
Kincaid's sulfur lupine	<i>Lupinus oreganus</i>		Endangered	●				
Large-awned sedge	<i>Carex macrochaeta</i>		Threatened			●		●

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS ¹	STATE STATUS ²	LEWIS COUNTY ^{1,2}	THURSTON COUNTY ^{1,2}	GRAYS HARBOR COUNTY ^{1,2}	MASON COUNTY ^{1,2}	PACIFIC COUNTY ^{1,2}
Menzies' burnet	<i>Sanguisorba menziesii</i>		Threatened			●		
Ocean-bluff bluegrass	<i>Poa unilateralis</i> ssp. <i>Pachypholis</i>		Threatened					●
Oregon coyote-thistle	<i>Eryngium petiolatum</i>		Threatened	●				
Oregon goldenaster	<i>Heterotheca oregona</i>		Threatened	●	●		●	
Pacific lanceleaved springbeauty	<i>Claytonia multiscapa</i> ssp. <i>Pacifica</i>		Threatened			●	●	
Pacific pea	<i>Lathyrus vestitus</i> var. <i>ochropetalus</i>		Endangered	●	●			
Pale larkspur	<i>Delphinium leucophaeum</i>	Species of Concern	Endangered	●				
Pine-foot	<i>Pityopus californicus</i>		Threatened		●			
Pink sand-verbena	<i>Abronia umbellata</i> var. <i>acutalata</i>	Species of Concern	Endangered					●
Queen of the forest	<i>Filipendula occidentalis</i>	Species of Concern	Threatened					●
Quinault fawn-lily	<i>Erythronium quinaultense</i>		Threatened			●		
Roll's golden log moss	<i>Brotherella roellii</i>		Threatened	●				●
Rose checker-mallow	<i>Sidalcea virgata</i>		Endangered		●			
Thin-leaved peavine	<i>Lathyrus holochlorus</i>		Endangered	●				
Water lobelia	<i>Lobelia dortmanna</i>		Threatened				●	
White meconella	<i>Meconella oregana</i>	Species of Concern	Endangered	●				

Sources:

1. USFWS 2015
2. DNR 2015

Table G-4

Federal Plant Species Critical Habitats and Preferred Habitats That Occur in Lewis, Thurston, Grays Harbor, Mason, and Pacific Counties

COMMON NAME (SCIENTIFIC NAME)	AGENCY	STATUS ¹	PREFERRED HABITAT ²	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
FLOWERING PLANTS								
Golden paintbrush (<i>Castilleja levisecta</i>)	USFWS	Threatened	Gravelly, glacial outwash prairie; upland prairie, flat grasslands, some characterized by mounded topography and thickets of low deciduous shrubs		●			
Kincaid's lupine (<i>Lupinus sulphureus</i> ssp. <i>Kincaidii</i>)	USFWS	Threatened	Native, dry, upland prairie with the dominant species being red fescue (<i>Festuca rubra</i>) and/or Idaho fescue (<i>Festuca idahoensis</i>)	●				
Nelson's checker-mallow (<i>Sidalcea nelsoniana</i>)	USFWS	Threatened	Oregon ash (<i>Fraxinus latifolia</i>) swales and meadows with wet depressions, or along streams; wetlands with remnant prairie grasslands; primarily occurs in open areas with little or no shade and will not tolerate encroachment of woody species	●				
Water howellia (<i>Howellia aquatilis</i>)	USFWS	Threatened	Shallow water (1 to 2 meters) and on edges of deep ponds that are partially surrounded by deciduous trees such as black cottonwood and aspen (<i>Populus</i> spp.)		●			

Notes:

USFWS = U.S. Fish and Wildlife Service

1. USFWS 2015
2. NatureServe 2015

Table G-5
State Rare Plant Species That Occur in Lewis, Thurston, Grays Harbor, Mason, and Pacific Counties

COMMON NAME	SCIENTIFIC NAME	STATE STATUS ¹	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Alaska plantain	<i>Plantago macrocarpa</i>	Sensitive			●		
Alice's fleabane	<i>Erigeron aliceae</i>	Sensitive	●		●	●	●
Aquatic racomitrium moss	<i>Racomitrium aquaticum</i>	Review – Potential Concern			●		
Blandow's helodium moss	<i>Helodium blandowii</i>	Review – Potential Concern	●				
Blue joint reedgrass	<i>Calamagrostis canadensis</i> var. <i>imberbis</i>	Review – Potential Concern	●				
Blunt-leaf pondweed	<i>Potamogeton obtusifolius</i>	Sensitive		●		●	
Bog clubmoss	<i>Lycopodiella inundata</i>	Sensitive		●			●
Bolander's phacelia	<i>Phacelia bolanderi</i>	Review – Potential Concern					●
Branching montia	<i>Montia diffusa</i>	Sensitive	●		●		
Brewer's cliffbrake	<i>Pellaea breweri</i>	Sensitive				●	
Bristly sedge	<i>Carex comosa</i>	Sensitive		●			
Bulb-bearing water-hemlock	<i>Cicuta bulbifera</i>	Sensitive		●			
Buxbaumia moss	<i>Buxbaumia viridis</i>	Review – Potential Concern	●				
California compassplant	<i>Wyethia angustifolia</i>	Sensitive	●	●			
Canadian single-spike sedge	<i>Carex scirpoidea</i> ssp. <i>scirpoidea</i>	Sensitive				●	
Canadian St. John's-wort	<i>Hypericum majus</i>	Sensitive		●			
Coiled sedge	<i>Carex circinata</i>	Sensitive			●		
Common bluecup	<i>Githopsis specularioides</i>	Sensitive	●	●		●	
Cooley's buttercup	<i>Ranunculus cooleyae</i>	Sensitive			●		
Entireleaf nitrogen moss	<i>Tetraplodon mnioides</i>	Review – Potential Concern				●	
Few-flowered sedge	<i>Carex pauciflora</i>	Sensitive				●	
Fringed synthyris	<i>Synthyris schizantha</i>	Review – Potential Concern			●		
Giant chain fern	<i>Woodwardia fimbriata</i>	Sensitive		●		●	

Appendix G

COMMON NAME	SCIENTIFIC NAME	STATE STATUS ¹	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Golden chinquapin	<i>Chrysolepis chrysophylla</i> var. <i>chrysophylla</i>	Sensitive				●	
Harford's ragwort	<i>Packera bolanderi</i> var. <i>harfordii</i>	Sensitive					●
Humped bladderwort	<i>Utricularia gibba</i>	Review – Potential Concern		●			
Loose-flowered bluegrass	<i>Poa laxiflora</i>	Sensitive	●				●
Luminous moss	<i>Schistostega pennata</i>	Review – Potential Concern			●		
Mt. Rainier lousewort	<i>Pedicularis rainierensis</i>	Sensitive	●				
Northern grass-of-parnassus	<i>Parnassia palustris</i> var. <i>neo gaea</i>	Sensitive			●	●	●
Nuttall's quillwort	<i>Isoetes nuttallii</i>	Sensitive	●	●			
Nuttall's waterweed	<i>Elodea nuttallii</i>	Review – Potential Concern		●			
Obtuse sedge	<i>Carex obtusata</i>	Sensitive				●	
Oregon yampah	<i>Perideridia oregana</i>	Sensitive		●			
Pink fawn-lily	<i>Erythronium revolutum</i>	Sensitive	●	●	●		●
Puget balsamroot	<i>Balsamorhiza deltoidea</i>	Review – Potential Concern	●	●			
Scouler's catchfly	<i>Silene scouleri</i> ssp. <i>Scouleri</i>	Sensitive	●	●			
Scurvygrass	<i>Cochlearia groenlandica</i>	Sensitive			●	●	
Small-flowered trillium	<i>Trillium parviflorum</i>	Sensitive	●	●			
Smooth hornwort	<i>Ceratophyllum echinatum</i>	Review – Potential Concern		●		●	
Swamp sandwort	<i>Arenaria paludicola</i>	Possibly Extinct or Extirpated			●		
Tall agoseris	<i>Agoseris elata</i>	Sensitive		●			
Tall bugbane	<i>Cimicifuga elata</i>	Sensitive	●	●	●		
Tetraphis moss	<i>Tetraphis geniculata</i>	Review – Potential Concern	●		●	●	
Texas toadflax	<i>Nuttallanthus texanus</i>	Sensitive		●			
Thompson's wandering daisy	<i>Erigeron peregrinus</i> var. <i>thompsonii</i>	Sensitive			●		
Three-rib arrowgrass	<i>Triglochin striata</i>	Review – Potential Concern					●

COMMON NAME	SCIENTIFIC NAME	STATE STATUS ¹	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Tolmie's goldenrod	<i>Solidago missouriensis</i>	Review – Potential Concern		●			
Triangular-lobed moonwort	<i>Botrychium ascendens</i>	Sensitive				●	
Vancouver ground-cone	<i>Boschniakia hookeri</i>	Review – Potential Concern				●	●
Western sweetvetch	<i>Hedysarum occidentale</i> var. <i>occidentale</i>	Sensitive				●	
Western wahoo	<i>Euonymus occidentalis</i> var. <i>occidentalis</i>	Sensitive	●	●			●
White-top aster	<i>Sericocarpus rigidus</i>	Sensitive		●	●		
Yellow-flowered sedge	<i>Carex anthoxanthea</i>	Sensitive			●		
Yerba de Selva	<i>Whipplea modesta</i>	Sensitive		●			

Source:

1. DNR 2015

ANIMAL SPECIES

Table G-6
Summary of Tier 1 Habitat Concerns for Salmonids in Selected Chehalis Basin Sub-basins

SUB-BASIN	HABITAT CONCERNS	SALMONID SPECIES PRESENT
BLACK RIVER		
Black River	Low dissolved oxygen, poor riparian conditions, low flows	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, and winter-run steelhead
Porter Creek	Suspected lack of large woody material, passage barriers from culvert and road crossings	Fall-run Chinook salmon, spring-run Chinook salmon, coho salmon, cutthroat trout, and winter-run steelhead
UPPER AND SOUTH FORK CHEHALIS RIVER		
Upper Chehalis River	Passage barriers from culvert and road crossings, erosion, sedimentation, poor riparian conditions	Fall-run Chinook salmon, spring-run Chinook salmon, coho, cutthroat trout, and winter-run steelhead
South Fork Chehalis River	Poor riparian conditions, erosion, sedimentation, passage barriers from culvert and road crossings	Fall-run Chinook salmon, spring-run Chinook salmon, coho salmon, cutthroat trout, and winter-run steelhead
Lake Creek	Narrow riparian buffers, sedimentation, poor water quality	Coho salmon, cutthroat trout, and winter-run steelhead
Stillman Creek	Water quality, passage barriers from culvert and road crossings, erosion, sedimentation	Fall-run Chinook salmon, spring-run Chinook salmon, coho salmon, cutthroat trout, and winter-run steelhead
MAINSTEM CHEHALIS RIVER		
Mainstem Chehalis River	Loss of riparian canopy, water quality, poor connection with floodplain, loss of off-channel habitats	Fall-run Chinook salmon, spring-run Chinook salmon, summer-run Chinook salmon, coho salmon, fall-run chum salmon, cutthroat trout, winter-run steelhead, summer-run steelhead, and bull trout
LOWER CHEHALIS RIVER TRIBUTARIES		
Cloquallum Creek	Passage barriers from culvert and road crossings, log booms and jams create barriers to passage, poor riparian conditions, low flows	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, and winter-run steelhead
GRAYS HARBOR		
Grays Harbor Estuary	Poor water quality, reduced quantity of estuarine habitat	Fall-run Chinook salmon, spring-run Chinook salmon, summer-run Chinook salmon, coho salmon, fall-run chum salmon, cutthroat trout, winter-run steelhead, summer-run steelhead, and bull trout

SUB-BASIN	HABITAT CONCERNS	SALMONID SPECIES PRESENT
HOQUIAM RIVER		
Hoquiam River	Poor water quality, high water temperatures, passage barriers from culvert and road crossings, poor riparian conditions	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, and winter-run steelhead
HUMPTULIPS RIVER		
Humptulips River	High temperatures, poor water quality, passage barriers from culvert and road crossings, erosion, sedimentation	Fall-run Chinook salmon, spring-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, winter-run steelhead, summer steelhead, and bull trout
MIDDLE CHEHALIS RIVER TRIBUTARIES		
Lincoln Creek	Sedimentation, poor riparian conditions, passage barriers from culvert and road crossings	Coho salmon, winter-run steelhead, and cutthroat trout
Independence Creek	Erosion, sedimentation, poor riparian conditions, passage barriers from culvert and road crossings	Coho salmon and cutthroat trout
Garrard Creek	Erosion, poor riparian condition, passage barriers from culvert and road crossings	Coho salmon, winter-run steelhead, and cutthroat trout
Gaddis Creek	Erosion, incised channels, suspected barriers to fish passage	Coho salmon and cutthroat trout
Rock/Williams Creek	Erosion, poor floodplain function, passage barriers from culvert and road crossings	Fall-run Chinook salmon, spring-run Chinook salmon, coho salmon, winter-run steelhead, and cutthroat trout
Bunker Creek	Sedimentation, disconnected floodplain, passage barriers from culvert and road crossings	Coho salmon, winter-run steelhead, and cutthroat trout
Scammon, Mill, and Stearns creeks	Sedimentation, erosion, passage barriers from culvert and road crossings, poor water quality	Coho salmon, winter-run steelhead, and cutthroat trout
NEWAUKUM RIVER		
Newaukum River	Poor riparian conditions, high instream temperatures, low base flows, passage barriers from culvert and road crossings sedimentation	Spring-run Chinook salmon, fall-run Chinook salmon, coho salmon, winter-run steelhead, and cutthroat trout
Salzer Creek	Sedimentation, passage barriers from culvert and road crossings, poor riparian conditions	Coho salmon and cutthroat trout
Coal Creek	Poor riparian conditions, erosion, sedimentation, suspected low flows	Coho salmon and cutthroat trout
Dillenbaugh Creek	Erosion, sedimentation, poor riparian conditions, passage barriers from culvert and road crossings	Coho salmon and cutthroat trout

SUB-BASIN	HABITAT CONCERNS	SALMONID SPECIES PRESENT
Berwick Creek	Poor riparian conditions, passage barriers from culvert and road crossings	Coho salmon and cutthroat trout
China Creek	High instream temperatures, high turbidity, low flows, sedimentation, poor riparian conditions	Coho salmon and cutthroat trout
SATSOP RIVER		
Satsop River	Incised river channel, lack of channel migration, disconnection with floodplain, sedimentation, siltation, poor riparian condition, passage barriers from culvert and road crossings, low flows, sedimentation, siltation, high peak flows	Fall-run Chinook salmon, summer-run Chinook salmon, coho salmon, cutthroat trout, winter-run steelhead, chum salmon, and bull trout
SKOOKUMCHUCK RIVER		
Skookumchuck River	Constrained river channel migration, disconnection between river and off-channel habitats, flooding, poor riparian conditions, passage barriers from culvert and road crossings	Coho salmon, cutthroat salmon, winter-run steelhead, spring-run Chinook salmon, and fall-run Chinook salmon
Scatter Creek	Poor riparian conditions, poor water quality, high instream temperatures, low flows	Fall-run Chinook salmon, coho salmon, cutthroat trout, and winter-run steelhead
SOUTH BAY RIVERS		
South Bay tributaries	Impassable road crossings, erosion, sedimentation, poor riparian conditions,	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, and winter-run steelhead
Wishkah River	Fine sediments, poor riparian conditions, passage barriers from culvert and road crossings	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, winter-run steelhead, and bull trout
WYNOOCHEE RIVER		
Wynoochee River	Passage barriers from culvert and road crossings, poor riparian conditions, lack of off-channel habitat, disconnection from floodplain, scouring	Fall-run Chinook salmon, coho salmon, chum salmon, cutthroat trout, winter-run steelhead, summer-run steelhead, and bull trout

Source: GHLE 2011

Table G-7
Fish Species Identified in the WDFW PHS List for Grays Harbor County

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	PRIORITY AREA ¹	HABITAT USE
Black rockfish	<i>Sebastes melanops</i>	Candidate	Regular concentrations	Marine
Bocaccio rockfish	<i>Sebastes paucispinis</i>	Candidate	Regular concentrations	Marine
Brown rockfish	<i>Sebastes auriculatus</i>	Candidate	Regular concentrations	Marine
Canary rockfish	<i>Sebastes pinniger</i>	Candidate	Regular concentrations	Marine
China rockfish	<i>Sebastes nebulosus</i>	Candidate	Any occurrence	Marine
Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Candidate	Any occurrence	Anadromous
Chum salmon	<i>Oncorhynchus keta</i>	Candidate	Any occurrence	Anadromous
Coastal/Puget Sound bull trout	<i>Salvelinus confluentus</i>	Candidate	Any occurrence	Anadromous
Coastal resident/searun cutthroat trout	<i>Oncorhynchus clarki</i>	Priority	Any occurrence	Freshwater or anadromous
Coho salmon	<i>Oncorhynchus kisutch</i>	Priority	Any occurrence	Anadromous
Copper rockfish	<i>Sebastes caurinus</i>	Candidate	Regular concentrations	Marine
English sole	<i>Parophrys vetulus</i>	Priority	Breeding site	Marine
Eulachon	<i>Thaleichthys pacificus</i>	Candidate	Regular concentration	Anadromous
Greenstriped rockfish	<i>Sebastes elongatus</i>	Candidate	Regular concentrations	Marine
Kokanee	<i>Oncorhynchus nerka</i>	Priority	Any occurrence	Freshwater
Lingcod	<i>Ophiodon elongatus</i>	Priority	Any occurrence	Marine
Longfin smelt	<i>Spirinchus thaleichthys</i>	Priority	Breeding areas and regular concentrations	Freshwater
Pacific cod	<i>Gadus macrocephalus</i>	Candidate	Breeding areas and regular concentrations	Marine
Pacific hake	<i>Merluccius productus</i>	Candidate	Breeding areas and regular concentrations	Marine
Pacific herring	<i>Clupea pallasii</i>	Candidate	Breeding areas and regular concentrations	Marine
Pacific lamprey	<i>Entosphenus tridentata</i>	Priority	Any occurrence	Anadromous
Pacific sand lance	<i>Ammodytes hexapterus</i>	Priority	Breeding areas and regular concentrations	Marine
Pink salmon	<i>Oncorhynchus gorbuscha</i>	Priority	Any occurrence	Anadromous
Quillback rockfish	<i>Sebastes maliger</i>	Candidate	Regular concentrations	Marine
Rainbow trout/steelhead/inland redband trout	<i>Oncorhynchus mykiss</i>	Candidate	Any occurrence	Freshwater or anadromous
Redstripe rockfish	<i>Sebastes proriger</i>	Candidate	Regular concentrations	Marine
River lamprey	<i>Lampetra ayresi</i>	Candidate	Any occurrence	Anadromous
Rock sole	<i>Lepidopsetta bilineata</i>	Priority	Breeding areas and regular concentrations	Marine
Sockeye salmon	<i>Oncorhynchus nerka</i>	Candidate	Any occurrence	Anadromous

Appendix G

COMMON NAME	SCIENTIFIC NAME	STATE STATUS	PRIORITY AREA ¹	HABITAT USE
Surf smelt	<i>Hypomesus pretiosus</i>	Priority	Breeding areas and regular concentrations	Marine
Tiger rockfish	<i>Sebastes nigrocinctus</i>	Candidate	Any occurrence	Marine
Walleye pollock	<i>Theragra chalcogramma</i>	Candidate	Breeding areas and regular concentrations	Marine
White sturgeon	<i>Acipenser transmontanus</i>	Priority	Any occurrence	Anadromous
Widow rockfish	<i>Sebastes entomelas</i>	Candidate	Regular concentrations	Marine
Yelloweye rockfish	<i>Sebastes ruberrimus</i>	Candidate	Any occurrence	Marine
Yellowtail rockfish	<i>Sebastes flavidus</i>	Candidate	Regular concentrations	Marine

Notes:

1. Species are considered a priority only when they occur within known limiting habitats or priority areas. If limiting habitats are unknown, or species are rare, the priority area is described as “any occurrence.”

PHS = Priority Habitats and Species

WDFW = Washington State Department of Fish and Wildlife

Source: WDFW 2008

Salmon and Steelhead Species Life History Information

Chinook Salmon

Chehalis River fall-run Chinook salmon have a sub-yearling freshwater life history and typically out-migrate to marine habitats in their first spring. Adults typically return to spawn at 4 to 6 years of age, with the majority returning at age 5. During the period in which run size data were available (1970 to 2013), the total run size (before harvest) of fall-run Chinook salmon from the Chehalis Basin averaged 15,894, and ranged from a high run size of 39,698 in 1989 to a low of 5,124 in 1983. This species is heavily harvested in ocean fisheries, and hatchery production contributes significantly to annual returns (ASEPTC 2014).

A small number of summer-run Chinook salmon return to the Satsop River. The stock originates from the introduction of several early-timed hatchery stocks from the early 1950s into the 1970s. Satsop River summer-run Chinook salmon return to the river in late August—slightly earlier than fall-run stocks—however, the potential for hybridization exists. Between 1982 and 1990, the total number of natural spawners declined sharply from 750 to 37. From 1990 to 2014, the total number of natural spawners has averaged 47 fish, ranging from 0 in 2007 to 192 in 1996.

Chehalis spring-run Chinook salmon typically also have a sub-yearling freshwater life history and typically return to spawn at 3 to 6 years of age, with the majority returning at age 4. Compared to other species, spring-run Chinook salmon spend a relatively long period of time holding in the Chehalis River prior to spawning. Most enter the Chehalis River in the late winter and spring and spawn in the fall. For the period in which adult return data were available (1991 to 2013), the total run size of spring-run Chinook salmon to the Chehalis River averaged 2,448 fish, with a maximum run size of 5,153 in 2004 and a minimum of 724 in 2007. The number of spring-run Chinook salmon harvested annually is not well understood. Hatchery production does not contribute significantly to annual returns (ASEPTC 2014).

Chum Salmon

Chehalis River chum salmon spend very little time in freshwater and typically migrate to marine habitat as fry. The majority of adults return to spawn at 4 years of age. During the period in which return data are available (1969 to 2011), the estimated total run size for all Grays Harbor chum salmon averaged 38,948 fish, with a maximum run size of 137,075 in 1988 and a minimum of 8,879 in 2008.

Coho Salmon

Chehalis River coho salmon migrate to the Pacific Ocean as yearling smolts and return to spawn at 3 years of age. During the period in which run size data were available (1987 to 2013), the run of coho salmon (before harvest) averaged 60,000, with a maximum return size of 111,497 in 1991 and a minimum of 12,407 in 1994. Coho salmon are targeted in commercial and sport fisheries, and hatchery production contributes significantly to annual returns.

Coastal Cutthroat Trout

The abundance of cutthroat trout is not currently monitored in the Chehalis River; however, the Washington Department of Fish and Wildlife (2015) notes, “Weyerhaeuser has sampled more than eighty sites in the upper Chehalis Basin for species abundance. Cutthroat densities averaged between 0.22 and 0.23 fish per square meter, which is at or above levels observed in other watersheds in western Washington.”

Steelhead

Winter-run steelhead typically migrate to the Pacific Ocean after spending 2 to 3 years rearing in freshwater habitats. As adults, most return to spawn at 3 or 4 years of age. During the period in which run size data were available (1983 to 2013), the average total run size (pre-harvest) was 10,417, with a maximum run size of 19,000 in 2004 and a minimum of 6,298 in 1998. Winter-run steelhead are regularly harvested in sport fisheries, but are not targeted in commercial fisheries. Hatchery production has contributed significantly to winter-run steelhead returns in the Chehalis Basin.

Table G-8

Other Native and Non-native Fish Species Found in Freshwater and Estuarine Habitats of the Chehalis Basin

COMMON NAME	SCIENTIFIC NAME	FRESHWATER HABITAT	ESTUARINE HABITAT	COMMON NAME	SCIENTIFIC NAME	FRESHWATER HABITAT	ESTUARINE HABITAT
NATIVE SPECIES							
Arrow goby	<i>Clevelandia ios</i>		●	Pacific tomcod	<i>Microgadus proximus</i>		●
Bay goby	<i>Lepidogobius lepidus</i>		●	Peamouth	<i>Mylocheilus caurinus</i>		●
Bay pipefish	<i>Syngnathus griseolineatus</i>		●	Pile perch	<i>Rhacochilus vacca</i>		●
Black rockfish	<i>Sebastes melanops</i>		●	Plainfin midshipman	<i>Porichthys notatus</i>		●
Buffalo sculpin	<i>Enophrys bison</i>		●	Prickly sculpin	<i>Cottus asper</i>	●	●
Cabezon	<i>Scorpaenichthys marmoratus</i>		●	Redside shiner	<i>Richardsonius balteatus</i>		●
Coastrange sculpin	<i>Cottus aleuticus</i>	●	●	Reticulate sculpin	<i>Cottus perplexus</i>	●	●
Crescent gunnel	<i>Pholis laeta</i>		●	Riffle sculpin	<i>Cottus gulosus</i>	●	
English sole	<i>Parophrys vetulus</i>		●	River lamprey	<i>Lampetra ayresii</i>	●	●
Eulachon*	<i>Thaleichthys pacificus</i>	●	●	Rock greenling	<i>Hexagrammos lagocephalus</i>		●
Green sturgeon*	<i>Acipenser medirostris</i>	●	●	Rock sole	<i>Lepidopsetta bilineata</i>		●
High cockscomb	<i>Anoplarchus purpurescens</i>		●	Saddleback gunnel	<i>Pholis ornata</i>		●
Kelp greenling	<i>Hexagrammos decagrammus</i>		●	Sand sole	<i>Psettichthys melanostictus</i>		●
Largescale sucker	<i>Catostomus macrocheilus</i>	●	●	Sharpnose sculpin	<i>Clinocottus acuticeps</i>		●
Lingcod	<i>Ophiodon elongatus</i>	●		Shiner perch	<i>Cymatogaster aggregata</i>		●
Longnose dace	<i>Rhinichthys cataractae</i>	●		Silver surfperch	<i>Hyperprosopum ellipticum</i>		●
Northern anchovy	<i>Engraulis mordax</i>		●	Speckled dace	<i>Rhinichthys osculus</i>	●	●
Northern pikeminnow	<i>Ptychocheilus oregonensis</i>	●	●	Starry flounder	<i>Platichthys stellatus</i>		●
Olympic mudminnow*	<i>Novumbra hubbsi</i>	●		Striped seaperch	<i>Embiotoca lateralis</i>		●

COMMON NAME	SCIENTIFIC NAME	FRESHWATER HABITAT	ESTUARINE HABITAT	COMMON NAME	SCIENTIFIC NAME	FRESHWATER HABITAT	ESTUARINE HABITAT
Pacific herring	<i>Clupea harengus pallasii</i>		●	Surf smelt	<i>Hypomesus pretiosus</i>		●
Pacific lamprey	<i>Entosphenus tridentatus</i>	●	●	Three-spined stickleback	<i>Gasterosteus aculeatus</i>	●	●
Pacific Ocean perch	<i>Sebastes alutus</i>		●	Torrent sculpin	<i>Cottus rhotheus</i>	●	
Pacific sand lance	<i>Ammodytes hexapterus</i>		●	Tube-snout	<i>Aulorhynchus flavidus</i>		●
Pacific sardine	<i>Sardinops sagax</i>		●	Western brook lamprey	<i>Lampetra richardsonii</i>	●	
Pacific snake pricklyback	<i>Lumpenus sagitta</i>		●	White sturgeon	<i>Acipenser transmontanus</i>	●	●
Pacific staghorn sculpin	<i>Leptocottus armatus</i>		●	Whitefish	<i>Prosopium williamsoni</i>	●	●
NON-NATIVE SPECIES							
American shad	<i>Alosa sapidissima</i>	●	●	Pumpkinseed	<i>Lepomis gibbosus</i>	●	●
Bluegill	<i>Lepomis macrochirus</i>	●		Smallmouth bass	<i>Micropterus dolomieu</i>	●	
Largemouth bass	<i>Micropterus salmoides</i>	●		Yellow perch	<i>Perca flavescens</i>	●	

Notes:

* = special status species

Sources: Monaco et al. 1990; Hiss and Knudsen 1993; Envirovison 2000; Wydoski and Whitney 2003; Hughes and Herlihy 2012; Sandell et al. 2015

Table G-9

State WDFW Priority Species and Preferred Habitats in Lewis, Thurston, Grays Harbor, Mason, and Pacific Counties and USFS Special Status Species

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1,2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
BIRDS								
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Sensitive and USFS Special Status	Breeding areas, communal roosts, regular concentrations	Roost, nest habitat, and forage areas near lakes, reservoirs, rivers, and uneven-aged coniferous forest stands with readily available food source (fish and carrion)	●	●	●	●	●
Band-tailed pigeon (<i>Columba fasciata</i>)	Priority	Regular concentrations, occupied mineral sites	Mixed conifer and hardwood forests interspersed with younger wooded areas or small fields; Douglas fir, hemlock, red cedar, maple, spruce, willow, pine, cottonwood, and Oregon white oak	●	●	●	●	●
Black-backed woodpecker (<i>Picoides arcticus</i>)	Candidate	Breeding areas, regular occurrences	Associated with boreal and montane coniferous forests, especially in areas with standing dead trees such as burns, bogs, and windfalls	●				
Cavity-nesting ducks: Wood duck (<i>Aix sponsa</i>), Barrow's goldeneye (<i>Bucephala islandica</i>), Common goldeneye (<i>Bucephala clangula</i>), Bufflehead (<i>Bucephala albeola</i>), Hooded merganser (<i>Lophodytes cucullatus</i>)	Priority	Breeding areas	Nest primarily in late successional forests and riparian areas adjacent to low gradient rivers, sloughs, lakes, and beaver ponds; nest almost exclusively in tree cavities, which offer protection from weather and predators; snags and cavity trees near shallow wetlands are ideal for brood	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Common loon (<i>Gavia immer</i>)	Sensitive	Breeding sites, migratory stopovers, regular concentrations	Breeding habitat includes usually clear lakes containing both shallow and deepwater areas; nest sites are found on small islands, quiet backwaters, mainland shores, marshy portions of lakes; in winter and during migration, use inland lakes and rivers and marine and estuarine coastal waters		●	●	●	●
Golden eagle (<i>Aquila chrysaetos</i>)	Candidate	Breeding areas, foraging areas	Open, arid plateaus deeply cut by streams and canyons; western shrub-steppe and grassland communities and transition zones between shrub, grassland, and forested habitat; sometimes found in mature and old-growth forests near the edges of clearcuts in Western Washington; nests generally are located on cliffs and are occasionally located in trees	●	●	●	●	●
Great blue heron (<i>Ardea herodias</i>)	Priority	Breeding areas	Nesting habitat typically consists of mature forest; breeding herons feed in wetland complexes, large rivers and creeks, and small lakes; in fall/winter often prey on small mammals in fallow, freshly plowed, or mowed fields and in grasslands habitats	●	●	●	●	●
Harlequin duck (<i>Histrionicus histrionicus</i>)	Priority and USFS Special Status	Breeding areas, regular concentrations in saltwater	Require fast-flowing water with loafing sites nearby; streams usually have substrate that ranges from cobble to boulder with adjacent vegetated banks; have been found more often at distances more than 50 meters from roads or trails and in stream reaches with mature and old-growth forest cover; stream alterations that would cause greater surface runoff, changing water levels, or lower macroinvertebrate levels should be avoided	●	●	●	●	

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Mountain quail (<i>Oreortyx pictus</i>)	Priority	Any occurrence	Mixed evergreen-deciduous forests, regenerating clearcuts, forest and meadow edges, chaparral slopes, shrub-steppe, and mixed forest/shrub areas; seek brush, hardwood, and conifer communities for nesting and brooding in cool, moist bottoms of draws and canyons	●	●	●	●	●
Northern goshawk (<i>Accipiter gentilis</i>)	Candidate	Breeding areas, including alternate nest sites, post-fledging foraging areas	All forested regions with more than 50% closed canopy with multiple layers	●		●	●	●
Oregon vesper sparrow (<i>Pooecetes gramineus affinis</i>)	Candidate	Any occurrence	Various open habitats with grass, including prairie, sagebrush steppe, meadows, pastures, and roadsides	●	●			
Peregrine falcon (<i>Falco peregrinus</i>)	Sensitive	Breeding areas, regular occurrences	Nest on cliffs, typically 45 meters or more in height; nest on offshore islands and ledges on vegetated slopes; wetlands, especially intertidal mudflats, estuaries, and coastal marshes, are key feeding areas in winter; maintain large trees and snags in these areas	●	●	●	●	●
Pileated woodpecker (<i>Dryocopus pileatus</i>)	Candidate	Breeding areas	Old-growth and mature forest	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Purple martin (<i>Progne subis</i>)	Candidate and USFS Special Status	Breeding areas, including used artificial nest features, feeding areas	Insectivorous, colonial nesting swallows that nest in cavities over or near water/wetlands; artificial nest structures often used	●	●	●	●	●
Sooty grouse (<i>Dendragapus fuliginosus</i>)	Priority	Breeding areas, regular concentrations	During breeding season, can be found in forested habitats from sea level to thousands of feet in elevation; lowland forest is the preferred habitat for this species; in winter, found almost entirely in coniferous forests	●	●	●	●	●
Trumpeter swan (<i>Cygnus buccinator</i>)	Priority	Regular concentrations	Ponds, lakes, and marshes; breeding in areas of reeds, sedges, or similar emergent vegetation, primarily in freshwater; wintering in open ponds, lakes, and sheltered bays and estuaries			●	●	●
Vaux's swift (<i>Chaetura vauxi</i>)	Candidate	Breeding areas, communal roosts	Strongly associated with old-growth and mature forests; require hollow chambers in large snags or live trees with broken tops for nesting and night roosting	●	●	●	●	●
Waterfowl concentrations (<i>Anatidae</i> excluding Canada geese in urban areas)	Priority	Significant breeding areas, regular concentrations in winter	None provided	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1,2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Western grebe (<i>Aechmophorus occidentalis</i>)	Candidate	Breeding areas, regular concentrations, migratory stopovers, regular occurrences in winter	Marshes, lakes, and bays; in migration and winter, also sheltered seacoasts or rivers; nests anchored to living vegetation on large inland bodies of water very close to deep water to allow bird to swim submerged		●	●	●	●
Western Washington non-breeding concentrations of: Barrow's goldeneye (<i>Bucephala islandica</i>), Bufflehead (<i>Bucephala albeola</i>), Common goldeneye (<i>Bucephala clangula</i>)	Priority	Regular concentrations	Nest primarily in late successional forests and riparian areas adjacent to low gradient rivers, sloughs, lakes, and beaver ponds; nest almost exclusively in tree cavities, which offer protection from weather and predators; snags and cavity trees near shallow wetlands are ideal for brooding	●	●	●	●	●
Western Washington non-breeding concentrations of plovers (<i>Charadriidae</i>), sandpipers (<i>Scolopacidae</i>), and cormorants (<i>Phalaropodidae</i>)	Priority	Regular concentrations	Most significant areas during migration include Grays Harbor; during the non-breeding period, most shorebird species in Washington aggregate in large single- or multi-species flocks at estuaries, beaches, wetlands, or other foraging and/or roosting locations; flocks of black-bellied plovers (<i>Pluvialis squatarola</i>) occasionally occur at non-estuarine sites in Western Washington (e.g., flooded fields in the Wynoochee and Chehalis river valleys)	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Western Washington non-breeding concentrations of: loons (<i>Gaviidae</i>), grebes (<i>Podicipedidae</i>), cormorants (<i>Phalacrocoracidae</i>), fulmar and shearwaters (<i>Procellariidae</i>), storm-petrels (<i>Hydrobatidae</i>), alcids (<i>Alcidae</i>)	Priority	Regular concentrations	None provided		●	●	●	●
Wild turkey (<i>Melegris gallopavo</i>)	Priority	Regular concentrations and roost in WDFW's primary management zones for wild turkey	Depend on trees and grasses; trees provide food, escape cover, and roost sites, while grasses provide food for adults and an environment that allows poults	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1,2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
SEABIRDS*								
Brandt's cormorant (<i>Phalacrocorax penicillatus</i>)	Candidate	Breeding areas, regular concentrations	Mainly inshore coastal zone, especially in areas having kelp beds; also around some offshore islands; less commonly, inshore on brackish bays; in winter, mostly around sheltered inlets and other quiet waters; typically nest on flat or gently sloping surfaces on tops of rocky islands along coast; frequently nest with other seabirds			●		●
Brant (<i>Branta bernicla</i>)	Priority	Regular concentrations in foraging and resting areas, migratory stopovers	In winter, primarily occur in marine waters that are marshy, along lagoons and estuaries and on shallow bays, often in areas with eelgrass; nesting occurs mostly on coastal tundra, in low and barren terrain, on islands, deltas, lakes, and sandy areas among puddles and shallow, and in vegetated uplands		●	●	●	●
Common murre (<i>Uria aalge</i>)	Candidate	Breeding areas, regular concentrations	Occupy pelagic areas and rocky seacoasts when non-breeding; nest in the open or in crevices on broad and narrow cliff ledges, on cliff tops, and on flat rocky low-lying islands		●	●	●	●
Tufted puffin (<i>Fratercula cirrhata</i>)	Candidate	Breeding areas, regular concentrations	Primarily pelagic during non-breeding season; nests on offshore islands or along the coast, on slopes in ground burrows, under boulders, or under dense vegetation			●		

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Western Washington breeding concentrations of: Cormorants (<i>Phalacrocoracidae</i>), Storm-petrels (<i>Hydrobatidae</i>), Terns (<i>Laridae</i>), Alcids (<i>Alcidae</i>)	Priority	Breeding areas	None provided			●		
INSECTS								
Beller's ground beetle (<i>Agonum belleri</i>)	Candidate and USFS Special Status	Any occurrence	Lowland sphagnum bogs associated with lakes below elevations of 1,000 feet		●			
Blue-gray tailed dropper (<i>Prophyaon coeruleum</i>)	Candidate and USFS Special Status	Any occurrence	Moist, coniferous, or mixed-wood forests of varying age classes	●				
Johnson's hairstreak (<i>Mitoura johnsoni</i>)	Candidate	Any occurrence	Old-growth coniferous forests; associated with conifer mistletoe (genus <i>Arceuthobium</i>)	●		●	●	
Leschi's millipede (<i>Leschius mcallisteri</i>)	Candidate	Any occurrence	None provided		●			
Pacific clubtail (<i>Gomphus kurilis</i>)	Candidate and USFS Special Status	Any occurrence	None provided		●			

COMMON NAME (SCIENTIFIC NAME)	STATE STATUS ^{1, 2}	PRIORITY AREA ¹	PRIORITY HABITAT AND SPECIES DESCRIPTION ³	LEWIS COUNTY ¹	THURSTON COUNTY ¹	GRAYS HARBOR COUNTY ¹	MASON COUNTY ¹	PACIFIC COUNTY ¹
Puget Blue (<i>Plebejus icarioides blackmorei</i>)	Candidate and USFS Special Status	Any occurrence	Forest clearings with a presence of lupine (<i>Lupinus</i> spp.), Puget lowland prairies and their forest edges, power line cuts, and unsprayed railroad rights-of-way		●	●	●	
Queen Charlotte's copper (<i>Lycaena mariposa chaarlottensis</i>)	Candidate and USFS Special Status	Any occurrence	None provided			●		●
Valley silverspot (<i>Speyeria zerene bremnerii</i>)	Candidate and USFS Special Status	Any occurrence	Open prairies, arctic-alpine tundra, subalpine glades, and mid-elevation roadsides and clearings; only known host plant is the western blue violet (<i>Viola adunca</i>)	●	●			
MARINE MAMMALS*								
California sea lion (<i>Zalophus californianus</i>)	Priority	Haul-out areas	Coastal waters; hauls out on rocky and sandy beaches, primarily on islands			●	●	●
Dall's porpoise (<i>Phocoenoides dalli</i>)	Priority	Regular concentrations in foraging areas and in migration routes	Sounds, inland passages, nearshore regions (usually in deep water), and the open sea			●	●	●
Gray whale (<i>Eschrichtius robustus</i>)	Sensitive	Any occurrence	Mostly seen in coastal and shallow shelf waters; young are born in lagoons and bays			●	●	●

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Harbor seal (<i>Phoca vitulina</i>)	Priority	Haul-out areas	Coastal waters to about 10 miles offshore, bays, harbors, coastal rivers, lakes; most common in protected areas such as bays or inlets; rest on isolated mudbanks, rock or sandy shores, intertidal ledges, reefs, islands, piers and log rafts, and on ice in some areas		●	●	●	●
Pacific harbor porpoise (<i>Phocoena phocoena</i>)	Candidate	Regular concentrations in foraging areas and in migration routes	Coastal waters and adjacent offshore shallows; also inhabit inshore areas such as bays, channels, and rivers		●	●	●	●
TERRESTRIAL MAMMALS								
Cascade red fox (<i>Vulpes cascadenis</i>)	Candidate	Any occurrence	None provided	●				
Columbian black-tailed deer (<i>Odocoileus hemionus columbianus</i>)	Priority	Regular concentrations, migration corridors	Forage areas are less than 60% cover with understory of shrubs and vegetation; thermal cover of more than 70% canopy cover of old-growth or late-stage stand rotation	●	●	●	●	●

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Elk (<i>Cervus elaphus</i>)	Priority	Calving areas, migration corridors, regular concentrations in winter and in foraging areas along coastal waters	Forested areas in winter; summer can be moderate-sized patches of forage openings and cover areas	●	●	●	●	●
Marten (<i>Martes americana</i>)	Priority	Regular occurrence	Mixed-age forests of a variety of species composition	●	●	●	●	●
Mountain goat (<i>Oreamnos americanus</i>)	Priority	Breeding areas, regular concentrations	Alpine and subalpine habitat; steep grassy talus slopes, grassy ledges of cliffs, or alpine meadows, usually at timberline or above; may seek shelter and food in stands of spruce or hemlock in winter	●		●	●	
Olympic marmot (<i>Marmota olympus</i>)	Candidate	Any occurrence	Subalpine and alpine meadows and talus slopes near timberline; many colonies are located on south-facing slopes where food availability is probably greater because of earlier snowmelt			●	●	
Wolverine (<i>Gulo gulo</i>)	Candidate and USFS Special Status	Any occurrence	Large expanse of minimally disturbed forest	●				

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AMPHIBIANS								
Cascade torrent salamander (<i>Rhyacotriton cascadae</i>)	Candidate and USFS Special Status	Any occurrence	Coniferous forests in small, cold mountain streams and spring seepages; larvae often occur under stones in shaded streams, and adults also inhabit these streams or streambanks in saturated moss-covered talus or under rocks in splash zone	●	●			
Dunn's salamander (<i>Plethodon dunni</i>)	Candidate	Any occurrence	Forested areas from sea level to 1,006 meters; both juveniles and adults inhabit wet, rocky substrates that are heavily shaded, including wet talus slopes, seeps, and stream borders; use downed logs and woody debris for cover and feeding; utilize riparian areas more often than upslope areas, and are generally considered to be riparian associates	●		●		●
Larch mountain salamander (<i>Plethodon larselli</i>)	Sensitive and USFS Special Status	Any occurrence	Inhabit steep forests (e.g., Douglas fir and mixed hardwoods) or non-forested slopes associated with talus, scree, gravelly soils, or other rocky substrates where interstitial spaces exist between the rock and soil	●				

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Van Dyke's salamander (<i>Plethodon vandykei</i>)	Candidate and USFS Special Status	Any occurrence	Inhabit rocky seeps and streambanks or moist, north-facing, rocky habitats in forested areas from sea level to 1,097 meters; both juveniles and adults inhabit the splash zones of streams where they can be found under cobbles and woody debris and in cracks in rock faces; Van Dyke's salamanders have been found far from water on moss-covered talus slopes and fractured rock outcrops with northerly exposures; associated to some degree with riparian habitats in mature and old-growth coniferous forests where they are thought to use downed logs for cover and feeding	●	●	●	●	●
Western toad (<i>Anaxyrus boreas</i>)	Candidate	Any occurrence	Occur in a wide variety of habitats ranging from desert springs to mountain wetlands and various upland habitats around ponds, lakes, reservoirs, and slow-moving rivers and streams; for shelter, they dig burrows in loose soil or seclude themselves under logs or rocks; egg-laying sites include shallow areas of ponds, lakes, or reservoirs or pools of slow-moving streams	●	●	●	●	●
SHELLFISH*								
Butter clam (<i>Saxidomus giganteus</i>)	Priority	Regular concentrations	None provided			●		
Geoduck (<i>Penopea abrupta</i>)	Priority	Regular concentrations	Primarily in protected waters near the outside coast, found in fine to coarse substrates with minimal surge energy; live buried up to 1.3 meters below the surface of the sediment			●		

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Native littleneck clam (<i>Protothaca staminea</i>)	Priority	Regular concentrations	Coarse, sandy-rock muds of estuaries and on the open coast where there is appropriate substrate, detritus, and protection from predators			●		
Olympia oyster (<i>Ostrea conchaphila</i>)	Candidate	Any occurrence	Usually attaches to living mollusks or the carapace of large crustaceans and is usually solitary while the lurida form is attached to dead shells or rocks and may form extensive reefs			●		
Pacific oyster (<i>Crassostrea gigas</i>)	Priority	Regular concentrations	None provided			●		
Manila clam (<i>Venerupis philippinarum</i>)	Priority	Regular concentrations	None provided			●		
Razor clam (<i>Siliqua patula</i>)	Priority	Regular concentrations	Stable, sandy, surf-swept beaches of the open coast and some coastal bays; sub-tidal and inter-tidal areas of the ocean			●		
Dungeness crab (<i>Cancer magister</i>)	Priority	Breeding areas, regular concentrations	Offshore coastal waters and in estuaries			●		
Pandalid shrimp (<i>Pandalus</i> spp.)	Priority	Regular concentrations	None provided			●		
BATS								
Keen's long-eared bat (<i>Myotis evotis keenii</i>)	Candidate	Any occurrence	Associated with coastal forest habitat; roost in southwest-facing rock crevices, among geothermally heated rocks, in tree cavities, bark crevices, and buildings			●	●	

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Roosting concentrations of: Big-brown bat (<i>Eptesicus fuscus</i>), Myotis bats (<i>Myotis</i> spp.), Pallid bat (<i>Antrozous pallidus</i>)	Priority	Regular concentrations in naturally occurring breeding areas and other communal roosts	None provided	●	●	●	●	●
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Candidate and USFS Special Status	Any occurrence	Uses caves, mines, hollow trees, and built structures for roosting; westside lowland conifer-hardwood forest, ponderosa pine forest and woodlands, mixed highland conifer forest, eastside mixed conifer forest, shrub-steppe, and both east-side and west-side riparian wetlands	●	●	●	●	●
FISH								
Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	Candidate	Any occurrence	Anadromous; spend 2 to 4 years, but up to 6 years, of their lives in the ocean; migrate to spawn in streams where they were hatched, up to several hundred kilometers; eggs are deposited in gravel bottoms of large streams and rivers	●	●	●	●	●

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Chum salmon (<i>Oncorhynchus keta</i>)	Candidate	Any occurrence	Anadromous; spend 2 to 7 years, usually 3 to 5 years, in the ocean; migrate to spawn in streams where they hatched; not far from saltwater (usually within 100 km); spawning occurs in gravel riffles in rivers and streams of various sizes	●	●	●	●	●
Coastal/Puget Sound Bull Trout (<i>Salvelinus confluentus</i>)	Candidate	Any occurrence	Anadromous; bottoms of deep pools in cold rivers and large tributary streams, often in moderate to fast currents with temperatures of 45 to 50°F; also large cold-water lakes and reservoirs; migrant forms observed in estuaries	●	●	●	●	●
Coho salmon (<i>Oncorhynchus kisutch</i>)	Priority	Any occurrence	Anadromous; spend 2 (range of 1 to 3) years in the ocean; migrate to spawn in streams where they were hatched; in accessible coastal stream, generally in forested areas, usually at 6 to 12°C in loose coarse gravel	●	●	●	●	●
Eulachon (<i>Thaleichthys pacificus</i>)	Candidate	Regular concentration	Anadromous; nearshore ocean bottom, coastal inlets; spawns in coastal freshwater streams, seldom more than a few miles inland			●		
Southern green sturgeon (<i>Acipenser medirostris</i>)	N/A	Any occurrence	Anadromous; coastal marine waters, estuaries, and lower reaches of large rivers; southern population spawns in California rivers			●		
Pacific lamprey (<i>Entosphenus tridentate</i>)	Priority	Any occurrence	Anadromous; predatory phase of the life cycle occurs in the ocean, primarily near stream mouths in estuaries and in other coastal areas; ammocoetes inhabit shallow backwater and eddy areas along edges of streams in mud, silt, and sand; adults spawn in rock-, sand-, or gravel-bottomed clear streams	●	●	●	●	●

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Pink salmon (<i>Oncorhynchus gorbuscha</i>)	Priority	Any occurrence	Anadromous; adults spend most of their lives at sea (18 months); adults spawn in rivers and tributary streams; juveniles immediately move downstream after emergence to estuary where they can remain for several months before moving to sea in schools		●	●	●	●
River lamprey (<i>Lampetra ayresi</i>)	Candidate	Any occurrence	Anadromous; ammocoetes burrow in sandy-muddy backwaters of streams; adults feed in estuaries and at sea and spawn over gravel riffles in clear streams	●	●	●	●	●
Sockeye salmon (<i>Oncorhynchus nerka</i>)	Candidate	Any occurrence	Anadromous; adults spend 2 to 3 years in the ocean, then move up coastal rivers and spawn in streams with gravel or sandy bottom; juveniles spend 1 to 2 years in lakes before migrating to the ocean		●	●	●	●
White sturgeon (<i>Acipenser transmontanus</i>)	Priority	Any occurrence	Anadromous; adults spawn over deep gravel riffles or in deep holes with swift currents and rock bottoms; after spawning, adults migrate downstream to estuaries or saltwater	●	●	●	●	●
Kokanee (<i>Oncorhynchus nerka</i>)	Priority	Any occurrence	Freshwater; do best in well-oxygenated water in large, cold mountain lakes; water temperatures above 60°F lead to juvenile mortality; young not often found in estuarine or nearshore waters after reaching the marine environment; adults spawn in tributary streams of lakes in riffles over gravel substrate			●	●	

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Longfin smelt (<i>Spirinchus thaleichthys</i>)	Priority	Breeding areas and regular concentrations	Freshwater or anadromous; found in a wide range of temperature and salinity conditions in coastal waters near shore, bays, estuaries, and rivers; adults spawn in freshwater, over sandy-gravel substrates, rocks, and aquatic plants; anadromous populations spawn close to ocean where larvae are transported downstream to brackish-water nursery areas after hatching; lake populations spawn in tributaries		●	●	●	●
Olympic mudminnow (<i>Novumbra hubbsi</i>)	Sensitive	Any occurrence	Freshwater; found in well-vegetated quiet waters with mud or dark bottoms, especially in marshy streams, bogs, and swamps and also disturbed habitats such as roadside ditches and eutrophic waters; spawning sites are shallow, low-flow areas; eggs are individually adhesive on aquatic vegetation; do not co-exist with introduced spiny-rayed fishes	●	●	●	●	
Coastal resident/searun cutthroat trout (<i>Oncorhynchus clarki clarki</i>)	Priority	Any occurrence	Freshwater or anadromous; requires small, low-gradient coastal streams and estuarine habitat; adults spawn on clean small gravel substrates; fry move to sea within their first year after hatching; in summer, most individuals in stream are of the first-year age class, but a few may be older non-anadromous fish	●	●	●	●	●
Rainbow trout/steelhead/ (<i>Oncorhynchus mykiss</i>)	Candidate	Any occurrence	Freshwater or anadromous; anadromous populations occur in coastal rivers; resident populations inhabit small headwater streams with silt-free substrate; deep low-velocity pools are important wintering habitats; adults spawn in gravel stream riffles	●	●	●	●	●

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Black rockfish (<i>Sebastes melanops</i>)	Candidate	Regular concentrations	Marine; usually found shallower than 150 meters in feeding aggregations; found in rugged, rocky habitat, above pinnacles, and/or in high current locations; observed schooling with other fish, including yellowtail, widow, or dusky rockfish			●		
Bocaccio rockfish (<i>Sebastes paucispinis</i>)	Candidate	Regular concentrations	Marine; adults often occur in rocky areas, at depths of 12 to 481 meters; larvae and small juveniles are pelagic and commonly occur in upper 90 meters; juveniles sometimes form dense schools under drifting kelp mats			●		
Brown rockfish (<i>Sebastes auriculatus</i>)	Candidate	Regular concentrations	Marine; shallow coastal waters and bays, near shore to 128 meters deep; adults commonly found near sea bottom over both high and low terrain, sometimes among eelgrass; pelagic juveniles are solitary and inhabit turbid waters			●		
Canary rockfish (<i>Sebastes pinniger</i>)	Candidate	Regular concentrations	Marine; primarily inhabit waters 50 to 250 meters deep; juveniles are associated with rocky reefs, kelp canopies, and artificial structures such as piers and platforms; adults move into deeper water as they increase in size; adults hover in loose groups just above the bottom			●		
China rockfish (<i>Sebastes nebulosus</i>)	Candidate	Any occurrence	Marine; juveniles have been observed in shallow coastal waters; adults are solitary and territorial, preferring rocky outcrops with boulder fields and crevices			●		

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Copper rockfish (<i>Sebastes caurinus</i>)	Candidate	Regular concentrations	Marine; newly spawned fish begin settling near the surface around large algae canopies or eelgrass; juveniles move to deeper water within a few months and are seen over sand, low rocks, or reef-sand interface; adults are found over large rocks and boulder field or living in the dens of the giant Pacific octopus			●		
English sole (<i>Parophrys vetulus</i>)	Priority	Breeding site	Marine; adults spawn over soft mud bottoms; juveniles depend heavily on intertidal areas, estuaries, and shallow nearshore waters for food and shelter; adults are found in nearshore coastal waters			●		
Greenstriped rockfish (<i>Sebastes elongatus</i>)	Candidate	Regular concentrations	Marine; usually found between 100 to 250 meters; adults move to deeper waters as they age; adults are solitary and are often found resting on the seafloor and adjoining mussel mounds			●		
Lingcod (<i>Ophiodon elongatus</i>)	Priority	Any occurrence	Marine; adults spawn in well-oxygenated water in rocky marine sub-tidal areas in crevices and overhangs; larvae are found in near-surface marine waters and estuarine areas; adults are found in shallow, intertidal areas of bays near algae and seagrass beds			●		
Pacific cod (<i>Gadus macrocephalus</i>)	Candidate	Breeding areas and regular concentrations	Marine; cod are demersal and concentrate on the shelf edge and upper slope (100 to 250 meters) in the winter and move to shallower waters (less than 100 meters) in the summer; adults spawn in the sublittoral-bathyal zone (40 to 290 meters) near the bottom			●		

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Pacific hake (<i>Merluccius productus</i>)	Candidate	Breeding areas and regular concentrations	Marine; adults live in large schools overlying the continental shelf and slope; pelagic spawner, laying eggs several hundred miles offshore of southern California in the spring; migrate north and inland during the summer and fall			●		
Pacific herring (<i>Clupea pallasii</i>)	Candidate	Breeding areas and regular concentrations	Marine; live in coastal waters and often occur offshore; adults spawn in bays and estuaries; eggs adhere to eelgrass, kelp, and other objects; juveniles congregate in bays, inlets, and channels in the summer; juveniles move to deeper water in the fall and remain there until they mature (2 to 3 years)			●		
Pacific sand lance (<i>Ammodytes hexapterus</i>)	Priority	Breeding areas and regular concentrations	Marine; found in nearshore and intertidal marine environments; prefer well-lighted habitat at depths less than 50 meters; burrowing habitat is typically well-washed fine sand and fine gravel, free of mud, with a strong bottom current keeping oxygen levels high; adults feed in large schools in proximity of burrowing habitat			●		
Quillback rockfish (<i>Sebastes maliger</i>)	Candidate	Regular concentrations	Marine; found nearshore to 274 meters deep among rocks; juveniles found in shallower waters than adults and can be found on bull kelp-covered rocky outcrops; adults tend to live in deeper water as solitary individuals; prefer high-relief broken rock with flat-bladed kelps			●		
Redstripe rockfish (<i>Sebastes proriger</i>)	Candidate	Regular concentrations	Marine; found between 150 to 275 meters; usually live over high-relief rugged bottoms and may form dense schools that rise off the bottom during the day and disperse at night			●		

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Rock sole (<i>Lepidopsetta bilineata</i>)	Priority	Breeding areas and regular concentrations	Marine; inhabit gravel, sand, and muddy bottoms to 700 meters; adults spawn on the bottom			●		
Surf smelt (<i>Hypomesus pretiosus</i>)	Priority	Breeding areas and regular concentrations	Marine; sometimes found in brackish water in midwater in deep scattering layers; adults spawn on sand and gravel beaches in light to moderate surf, during incoming or high tide			●		
Tiger rockfish (<i>Sebastes nigrocinctus</i>)	Candidate	Any occurrence	Marine; occur at water depths between 18 to 298 meters; adults live on rock outcrops that have caves and crevices; rarely observed in the open during the day			●		
Walleye pollock (<i>Theragra chalcogramma</i>)	Candidate	Breeding areas and regular concentrations	Marine; occur in schools on or near the bottom; juveniles are found above the thermocline; juveniles begin to settle at the bottom in the fall months after which they occupy semi-demersal waters			●		
Widow rockfish (<i>Sebastes entomelas</i>)	Candidate	Regular concentrations	Marine; adults most commonly found between 140 to 210 meters well above the bottom over boulders or other high-relief bottoms; fish disperse into small schools off the bottom during the day and then form dense schools near the bottom at night			●		
Yelloweye rockfish (<i>Sebastes ruberrimus</i>)	Candidate	Any occurrence	Marine; most commonly found between 91 to 180 meters; juveniles are associated with rocky reefs, kelp canopies, and artificial structures such as piers and platforms in shallower waters; adults move into deeper waters as they increase in size and inhabit rocky bottoms and outcrops			●		

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Yellowtail rockfish (<i>Sebastes flavidus</i>)	Candidate	Regular concentrations	Marine; only juveniles have been found in Puget Sound; older juveniles and adults are found over high relief such as boulders and sheer rock walls; rarely seen over cobble-mud bottoms; form schools of thousands that swim well off the bottom			●		

Notes:

* = The only marine habitat in the Chehalis Basin is within Grays Harbor County

USFS = U.S. Forest Service

WDFW = Washington State Department of Fish and Wildlife

Sources:

1. WDFW 2008
2. USFS 2016
3. NatureServe 2015

Table G-10
Native and Non-native Shellfish Found in Freshwater and Estuarine Habitats in the Chehalis Basin

COMMON NAME	SCIENTIFIC NAME	FRESHWATER HABITAT	ESTUARINE HABITAT
NATIVE SPECIES			
Dungeness crab	<i>Cancer magister</i>		●
Pandalid shrimp	<i>Pandalus</i> spp.		●
Butter clam	<i>Saxidomus giganteus</i>		●
Geoduck	<i>Penopea abrupta</i>		●
Native littleneck clam	<i>Protothaca staminea</i>		●
Olympia oyster	<i>Ostrea lurida</i>		●
Razor clam	<i>Siliqua patula</i>		●
Western floaters	<i>Anodonta</i> spp.	●	
Western pearlshell	<i>Margaritifera falcate</i>	●	
Western ridged mussel	<i>Gonidea angulate</i>	●	
Red urchin	<i>Strongylocentrotus franciscanus</i>		●
NON-NATIVE SPECIES			
Pacific oyster	<i>Crassostrea gigas</i>		●
Manila clam	<i>Venerupis philippinarum</i>		●

Sources: Herrmann 1972; Monaco et al. 1990; Waterstrat 2013; TWC et al. 2014

Table G-11
Wildlife Species Known or Likely to Occur in the Chehalis Basin

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
AMPHIBIANS			
American bullfrog	<i>Rana catesbeiana</i>	Northwestern salamander	<i>Ambystoma gracile</i>
Dunn's salamander*	<i>Plethodon dunni</i>	Pacific treefrog	<i>Pseudacris regilla</i>
Ensatina	<i>Ensatina eschscholtzii</i>	Northern red-legged frog	<i>Rana aurora</i>
Long-toed salamander	<i>Ambystoma macrodactylum</i>	Rough-skinned newt	<i>Taricha granulosa</i>
Coastal giant salamander*	<i>Dicamptodon tenebrosus</i>	Van Dyke's salamander	<i>Plethodon vandykei</i>
Coastal tailed frog*	<i>Ascaphus truei</i>	Western red-backed salamander	<i>Plethodon vehiculum</i>
Columbia torrent salamander*	<i>Rhyacotriton kezeri</i>	Western toad	<i>Anaxyrus boreas</i>
BIRDS			
American crow	<i>Corvus brachyrhynchos</i>	Killdeer	<i>Charadrius vociferus</i>
American goldfinch	<i>Carduelis tristis</i>	Mallard	<i>Anas platyrhynchos</i>
American robin	<i>Turdus migratorius</i>	Marsh wren	<i>Cistothorus palustris</i>
American widgeon	<i>Mareca americana</i>	Northern flicker	<i>Colaptes auratus</i>
Barn swallow	<i>Hirundo rustica</i>	Northern harrier	<i>Circus cyaneus</i>
Belted kingfisher	<i>Ceryle alcyon</i>	Olive-sided flycatcher	<i>Contopus borealis</i>
Bewick's wren	<i>Thryomanes bewickii</i>	Orange-crowned warbler	<i>Vermivora celata</i>
Black-capped chickadee	<i>Parus atricapillus</i>	Osprey	<i>Pandion haliaetus</i>
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>	Pileated woodpecker	<i>Dryocopus pileatus</i>
Black-throated gray warbler	<i>Dendroica nigrescens</i>	Purple finch	<i>Carpodacus purpureus</i>
Brown creeper	<i>Certhia americana</i>	Red breasted sapsucker	<i>Sphyrapicus ruber</i>
Brown-headed cowbird	<i>Molothrus ater</i>	Red-breasted nuthatch	<i>Sitta canadensis</i>
Bushtit	<i>Psaltriparus minimus</i>	Red-tailed hawk	<i>Buteo jamaicensis</i>
California quail	<i>Callipepla californica</i>	Red-winged blackbird	<i>Agelaius phoeniceus</i>
Canada goose	<i>Branta canadensis</i>	Rock dove	<i>Columba livia</i>
Chestnut-backed chickadee	<i>Parus rufescens</i>	Ruby-crowned kinglet	<i>Regulus calendula</i>
Common yellowthroat	<i>Geothlypis trichas</i>	Rufous hummingbird	<i>Selasphorus rufus</i>
Cooper's hawk	<i>Accipiter cooperii</i>	Savanah sparrow	<i>Passerculus sandwichensis</i>
Dark-eyed junco	<i>Junco hyemalis</i>	Solitary vireo	<i>Vireo solitarius</i>
Downy woodpecker	<i>Picoides pubescens</i>	Song sparrow	<i>Melospiza melodia</i>
European starling	<i>Sturnus vulgaris</i>	Spotted towhee	<i>Pipilo erythrophthalmus</i>
Gadwall	<i>Anas strepera</i>	Steller's jay	<i>Cyanocitta stelleri</i>
Golden-crowned kinglet	<i>Regulus satrapa</i>	Swainson's thrush	<i>Catharus ustulatus</i>
Gray catbird	<i>Dumetella carolinensis</i>	Tree swallow	<i>Tachycineta bicolor</i>

Appendix G

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Great blue heron	<i>Ardea herodias</i>	Varied thrush	<i>Ixoreus naevius</i>
Great horned owl	<i>Bubo virginianus</i>	Violet-green swallow	<i>Tachycineta thalassina</i>
Green-winged teal	<i>Anas crecca</i>	White-breasted nuthatch	<i>Sitta carolinensis</i>
Hairy woodpecker	<i>Picoides villosus</i>	White-crowned sparrow	<i>Zonotrichia leucophrys</i>
House finch	<i>Carpodacus mexicanus</i>	Winter wren	<i>Troglodytes</i>
House sparrow	<i>Passer domesticus</i>	Yellow warbler	<i>Dendroica petechia</i>
House wren	<i>Troglodytes aedon</i>	Yellow-rumped warbler	<i>Dendroica coronata</i>
MAMMALS			
Bat	<i>Myotis sp.</i>	Opossum	<i>Didelphis virginiana</i>
Black-tailed deer	<i>Odocoileus hemionus columbianus</i>	Raccoon	<i>Procyon lotor</i>
Black bear	<i>Ursus americanus</i>	River otter	<i>Lontra canadensis</i>
Coyote	<i>Canis latrans</i>	Roosevelt elk	<i>Cervus elaphus roosevelti</i>
Deer mouse	<i>Peromyscus maniculatus</i>	Shrew	<i>Sorex sp.</i>
Douglas' squirrel	<i>Tamiasciurus douglasii</i>	Shrew mole	<i>Neurotrichus gibbsii</i>
Eastern gray squirrel	<i>Sciurus carolinensis</i>	Southern red-backed vole	<i>Clethrionomys gapperi</i>
Least chipmunk	<i>Tamias minimus</i>	Striped skunk	<i>Mephitis</i>
American beaver	<i>Aplodontia rufa</i>	Townsend's mole	<i>Scapanus townsendii</i>
Long-tailed weasel	<i>Mustela frenata</i>	Townsend's vole	<i>Microtus townsendii</i>
Masked shrew	<i>Sorex cinereus</i>	Vole	<i>Microtus sp.</i>
Norway rat	<i>Rattus norvegicus</i>	Water shrew	<i>Sorex palustris</i>
REPTILES			
Common garter snake	<i>Thamnophis sirtalis</i>	Northwestern garter snake	<i>Thamnophis ordinoides</i>
Northern alligator lizard	<i>Gerrhonotus coeruleus</i>	Western terrestrial garter snake	<i>Thamnophis elegans</i>

* = Special Status Species

Table G-12

Federal and State Threatened and Endangered Species and Preferred Habitats That Occur in Lewis, Thurston, Grays Harbor, Mason, and Pacific Counties and USFS Special Status Species

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
AMPHIBIANS								
Oregon spotted frog (<i>Rana pretiosa</i>)	Threatened (USFWS)	Endangered and USFS Special Status	Highly aquatic, inhabiting marshes and marshy edges of ponds, streams, and lakes	●	●	●	●	
BIRDS								
Northern spotted owl (<i>Strix occidentalis caurina</i>)	Threatened (USFWS)	Endangered	Mature, old-growth forests (nesting, roosting, foraging); second-growth used for dispersal	●	●	●	●	●
Streaked horned lark (<i>Eremophila alpestris strigata</i>)	Threatened (USFWS)	Endangered and USFS Special Status	Large expanses of bare or thinly vegetated land, including fields, prairies, dunes, upper beaches, airports, and similar areas with low/sparse grassy vegetation		●	●	●	●
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	Threatened (USFWS)	Endangered	Barren to sparsely vegetated sand beaches, dry salt flats in lagoons, dredge spoils deposited on beach or dune habitat, levees and flats at salt-evaporation ponds, river bars, along alkaline or saline lakes, reservoirs, and ponds			●		●
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Threatened (Western U.S. Distinct Population Segment [USFWS])	Candidate and USFS Special Status	Breed in open woodlands, parks, deciduous, riparian woodlands; nest in tall cottonwood and willow riparian woodlands, moist thickets, orchards, or overgrown pasture	●	●	●	●	●

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
SEABIRDS								
Brown pelican (<i>Pelecanus occidentalis</i>)	Recovery (USFWS)	Endangered	Inhabit mainly coastal waters and are rarely seen inland or far out at sea; feed mostly in shallow estuarine waters; make extensive use of sand pits, offshore sand bars, and islets for nocturnal roosting and daily loafing; dry roosting sites are essential			●		
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	Threatened (USFWS)	Threatened	Mature, old-growth forests (nesting, roosting)	●	●	●	●	●
Short-tailed albatross (<i>Phoebastria albatrus</i>)	Endangered (USFWS)	Candidate	Occurs in regions of high marine productivity; nests on the ground on small oceanic islands or on volcanic ash slopes with sparse vegetation; pairs tend to nest in the same site during successive nesting attempts			●		
INSECTS								
Mardon skipper (<i>Polites mardon</i>)	Species of Concern (USFWS)	Endangered and USFS Special Status	Primarily inhabits open grasslands on glacial outwash prairies as well as openings and ridgetops within ponderosa pine (<i>Pinus ponderosa</i>) woodlands; Idaho fescue (<i>Festuca idahoensis</i>) is the suspected host plant		●			
Oregon silverspot (<i>Speyeria zerene hypolyta</i>)	Threatened (USFWS)	Endangered	Occurs in coastal salt spray meadows, stabilized dunes, and montane meadows; primary larval host plant is the hookedspur violet (<i>Viola adunca</i>); important adult nectar plants include common yarrow (<i>Achillea millefolium</i>), western pearly everlasting (<i>Anaphalis margaritacea</i>), Canada goldenrod (<i>Solidago canadensis</i>), and Douglas aster (<i>Symphotrichum subspicatus</i> var. <i>subspicatus</i>)					●

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
Taylor's checkerspot (<i>Euphydryas editha taylori</i>)	Endangered (USFWS)	Endangered and USFS Special Status	Prairies with a dominance of original vegetation; host plants include the native seaside plantain (<i>Plantago maritima macrocarpa</i>) and the non-native English plantain (<i>P. major lanceolata</i>).	●	●		●	
TERRESTRIAL MAMMALS								
Fisher (<i>Martes pennanti</i>)	Proposed Threatened (West Coast Distinct Population Segment [USFWS])	Endangered and USFS Special Status	Mature, uneven stands of coniferous and mixed coniferous/deciduous with extensive continuous canopy where 50% to 90% of overstory is evergreen that is optimal winter habitat	●	●	●	●	●
Gray wolf (<i>Canis lupus</i>)	Endangered (USFWS)	N/A	Security habitat is more than 300 meters from road, ungulate prey base	●				
Olympia pocket gopher (<i>Thomomys mazama pugetensis</i>)	Threatened (USFWS)	Threatened	Prairie and mountain meadows	●	●	●	●	
Tenino pocket gopher (<i>Thomomys mazama tumuli</i>)	Threatened (USFWS)	Threatened	Prairie and mountain meadows	●	●	●		
Western pocket gopher (<i>Thomomys mazama couchi louiei</i>)	Species of Concern (USFWS)	Threatened	Prairie and mountain meadows	●	●	●		
Western pocket gopher (<i>Thomomys mazama melanops</i>)	Species of Concern (USFWS)	Threatened	Prairie and mountain meadows	●	●	●		

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
Yelm pocket gopher (<i>Thomomys mazama yelmensis</i>)	Threatened (USFWS)	Threatened	Prairie and mountain meadows	●	●	●		
Western gray squirrel (<i>Sciurus griseus</i>)	N/A	Threatened and USFS Special Status	Pine and oak typical; transitional, conifer-dominated areas that merge with open patches of oak and other deciduous trees; mature and large seeded mast-producing trees provide abundant food and sites for nest construction	●	●	●		
FISH								
Coastal/Puget Sound bull trout (<i>Salvelinus confluentus</i>)	Threatened (USFWS)	Candidate	Anadromous; bottoms of deep pools in cold rivers and large tributary streams, often in moderate to fast currents with temperatures of 45 to 50°F; also large cold-water lakes and reservoirs; migrant forms observed in estuaries	●	●	●	●	●
Eulachon (<i>Thaleichthys pacificus</i>)	Threatened (NMFS)	Candidate	Anadromous; nearshore ocean bottom, coastal inlets; spawns in coastal freshwater streams, seldom more than a few miles inland			●		
Green sturgeon (<i>Acipenser medirostris</i>)	Threatened (NMFS [Southern Distinct Population Segment])	N/A	Anadromous; coastal marine waters, estuaries, and lower reaches of large rivers; southern population spawns in California rivers			●		
MARINE MAMMALS								
Blue whale (<i>Balaenoptera musculus</i>)	Endangered (NMFS)	Endangered	Mainly pelagic; generally prefer cold waters and open seas, but young are born in warmer waters of lower latitudes			●		
Humpback whale (<i>Megaptera novaeangliae</i>)	Endangered (NMFS)	Endangered	Open ocean and coastal waters, sometimes including inshore areas such as bays; summer distribution in temperate and subpolar waters; in winter, found in tropical/subtropical waters near island or coasts			●		

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
Killer whale (<i>Orcinus orca</i>)	Endangered (NMFS)	Endangered	Mainly in coastal waters, but may occur anywhere in all oceans and major seas at any time of year			●		
Sperm whale (<i>Physeter microcephalus</i>)	Endangered (NMFS)	Endangered	Pelagic, prefer deep water, sometimes around islands or in shallow shelf waters; occur in highest densities near productive waters, near steep drop-offs or strong oceanographic features (e.g., edges of continental shelves, large islands, offshore banks, and over submarine trenches and canyons)			●		
Steller (northern) sea lion (<i>Eumetopias jubatus</i>)	Delisted (Eastern Distinct Population Segment [NMFS])	Threatened	Marine habitat includes coastal waters near shore and over the continental slope; sometimes ascend rivers in pursuit of prey; rookeries generally occur on beaches or remote islands with difficult access for humans and other mammalian predators; haul-out locations include exposed rocks, reefs, beaches, jetties, breakwaters, navigational aids, floating docks, and sea ice			●		
REPTILES								
Western pond turtle (<i>Actinemys marmorata</i>)	Species of Concern (USFWS)	Endangered and USFS Special Status	Marshes, ponds, sloughs, and small lakes in Washington from sea level to approximately 763 meters; permanent and intermittent bodies of water on a variety of substrates, including rock, gravel, sand, mud, and decaying vegetation; submerged vegetation, rocks and logs, undercut banks, and mud are also important refugia; adults require emergent logs or boulders or floating vegetation for basking during sunny hours; dense, woody vegetation that shades potential basking sites may render an area unsuitable	●	●	●	●	

COMMON NAME (SCIENTIFIC NAME)	FEDERAL STATUS (AGENCY) ^{1,2}	STATE STATUS ^{3,4}	PREFERRED HABITAT ⁵	COUNTIES ^{1, 2, 3}				
				LEWIS	THURSTON	GRAYS HARBOR	MASON	PACIFIC
SEA TURTLES*								
Green sea turtle (<i>Chelonia mydas</i>)	Threatened (USFWS)	N/A	Fairly shallow waters (except when migrating) inside reefs, bays, and inlets; lagoons and shoals with an abundance of marine grass and algae; open beaches with a sloping platform and minimal disturbance are required for nesting			●		
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Endangered (USFWS)	N/A	The most pelagic of the sea turtles; sandy nesting beaches backed with vegetation and sloped sufficiently so the distance to dry sand is minimal; preferred nesting beaches have proximity to deep water and generally rough seas			●		

Notes:

* = The only marine habitat in the Chehalis Basin is within Grays Harbor County

N/A = not applicable

NMFS = National Marine Fisheries Services

USFWS = U.S. Fish and Wildlife Service

USFS = U.S. Forest Service

1. USFWS 2015

2. NOAA 2015

3. WDFW 2008

4. USFS 2016

5. NatureServe 2015

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