

## CHAPTER VI. IMPLEMENTATION TOOLS

The recommendations for each inventory site should be implemented through the updates to existing zoning code regulations and maps in the following ways:

1. Where there is a *strictly limit* decision it is recommended that conflicting uses be restricted to a narrow set of environmentally appropriate development, such as natural resource enhancement, major public trails, and structures for river-dependent and river-related uses; as well as public utilities and infrastructure, such as bridges, and maintenance, repair and replacement of existing structures. The code should require any negative impacts to natural resource features and functions be avoided and minimized to the maximum extent practicable; and unavoidable negative impacts should be fully mitigated. Mitigation for unavoidable impacts should result in no net loss of features or functions, at minimum. Mitigation in all floodplains, vegetated or developed, 170 feet landward of the ordinary high water mark should also result in preservation of existing floodplain functions and, during future development, a significant improvement of at least one functional value.

Where there will be unavoidable negative impacts to natural resource features and functions, mitigation should be required to address all features and functions impacted and account for:

- location of the mitigation site in proximity to the impact site;
  - timing of the mitigation action(s) in relation to the timing of impacts;
  - lag-time to achieve desired future conditions and functions of the mitigation actions;
  - relationship between the mitigation site and adjacent habitats and land uses; and
  - monitoring needed to ensure the mitigation is successful.
2. Where there is a *limit* decision it is recommended new impacts to the natural resources be minimized but not necessarily avoided. Site design and new development should be compatible with nearby natural areas and the Willamette River. Mitigation for unavoidable negative impacts should be mitigated.

Where there will be unavoidable negative impacts to natural resource features and functions, mitigation should be required to address all features and functions impacted and account for:

- location of the mitigation site in proximity to the impact site;
  - timing of the mitigation action(s) in relation to the timing of impacts;
  - lag-time to achieve desired future conditions and functions of the mitigation actions;
  - relationship between the mitigation site and adjacent habitats and land uses; and
  - monitoring needed to ensure the mitigation is successful.
3. The zoning code should provide exemptions or a non-discretionary review track for conflicting uses with minimal and definable impacts on natural resource feature and functions. For other conflicting uses with impacts that are not minimal and definable, a discretionary review track should be used. Under either a non-discretionary or discretionary review track, mitigation for unavoidable negative impacts to features and function should be required.

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## APPENDICES

**Appendix A.** Portland Watershed Goals & Objectives

**Appendix B.** City of Portland *Natural Resource Inventory Update: Project Report*

**Appendix C.** SHA Criteria

**Appendix D.** Special Status Species List

**Appendix E.** Oaks Bottom Wildlife Refuge Bird List

# APPENDIX A: Portland Watershed Management Plan, City-wide Goals and Objectives

(BUREAU OF ENVIRONMENTAL SERVICES, 2006)

**Hydrology Goal:** Move toward normative stream flow conditions to protect and improve watershed and stream health, channel functions, and public health and safety.

Objectives

**Stream Flow and Hydrologic Complexity:** Protect and increase rainfall interception areas, create infiltration and detention areas to normalize stream hydrographs, reduce stormwater flow to sewer systems, and reduce basement flooding.

**Channel and Floodplain Function:** Protect and restore the extent, connectivity, and function of streams, other open drainageways, wetlands, riparian areas and floodplains to improve bank stability and natural hydrologic functions and reduce risk to development and human safety.

**Stormwater Conveyance:** Maintain stormwater collection and conveyance infrastructure capacity.

**Physical Habitat Goal:** Protect, enhance, and restore aquatic and terrestrial habitat conditions and support key ecological functions and improved productivity, diversity, capacity, and distribution of native fish and wildlife populations and biological communities.

Objectives

**Aquatic Habitat:** Protect and improve aquatic, riparian, and floodplain habitat extent, quality, and connectivity that supports the persistence of native fish and wildlife communities.

**Terrestrial Habitat:** Protect and improve upland habitat extent, quality, and connectivity that support the persistence of native terrestrial communities and connectivity to aquatic and riparian habitat.

**Water and Sediment Quality Goal:** Protect and improve surface water and groundwater quality to protect public health and support native fish and wildlife populations and biological communities.

Objectives

**Stream Temperature:** Protect and improve stream temperatures, dissolved oxygen, and pH levels that protect ecological health and achieve applicable water quality standards.

**Human Pathogens:** Maintain and manage sewer infrastructure and stormwater inputs and runoff to limit sewage overflow and the delivery of pathogens to waterways and achieve applicable water quality and sewer design manual standards.

**Urban Pollutants:** Manage the sources and transport of urban stormwater and industrial pollutants and nutrients to limit surface water, groundwater, soil, and sediment contamination to levels that protect ecological and human health and achieve applicable water quality standards.

**Biological Communities Goals:** Protect, enhance, manage and restore native aquatic and terrestrial species and biological communities to improve and maintain biodiversity in Portland’s watersheds.

Objectives

***Fish and Other Aquatic Organisms:*** Implement watershed actions to maximize the persistence of native Willamette and Columbia River fish and other aquatic organisms and assist with species recovery and potential population productivity by protecting and improving hydrology, habitat, and water quality.

***Terrestrial Wildlife and Vegetation:*** Implement watershed actions to restore populations of terrestrial organisms to healthy, self-sustaining levels, protect and restore the composition and structure of native vegetation communities, and reduce populations of non-native plants and organisms to levels that do not compete with native species.

## APPENDIX B: Natural Resources Inventory Project Report

The *Natural Resources Inventory Project Report* (June 2012) was adopted as factual basis for the Comprehensive Plan. The inventory presented in this document uses the methodology and data sets adopted in the report. The *Natural Resources Inventory Project Report* is available

<http://www.portlandonline.com/portlandplan/?a=400492&>.



## APPENDIX C: Special Habitat Area Criteria

CODE	CRITERIA
P	Area contains sensitive or unique plant populations
W	Wetlands and associated seeps, springs and streams that are part of the wetland complex
O	Native oak
B	Bottomland hardwood forest
I	Riverine island
D	River delta
M	Migratory stopover habitat
C	Corridor between patches or habitats
S	An <i>at risk</i> wildlife species uses the habitat area or feature on more than incidental basis to complete one or more life history stages
E	Elk migratory corridor
G	Upland habitat or landscape feature important to individual grassland-associated species or assemblages of grassland-associated species on more than an incidental basis
U	Resource or structure that provides critical or unique habitat function in natural or built environments (such as bridges or street trees)

### P - Area contains sensitive or unique plant species

This criterion applies to areas containing the following plant species:

1. Those listed by USFWS or NOAA Fisheries as Endangered, Threatened, Proposed Endangered, or Proposed Threatened under the Endangered Species Act or by the ODA or ODFW under the Oregon Endangered Species Act; OR
2. Oregon Endangered Species Act; OR
3. Species that receive an Oregon Natural Heritage rank 1, 2 or 3
  - 1 = Critically imperiled because of extreme rarity or especially vulnerable to extinction or extirpation
  - 2 = Imperiled because of extreme rarity or especially vulnerable to extinction or extirpation
  - 3 = Rare, uncommon or threatened, but not immediately imperiled

Not included are plant populations that are listed by USFWS/NOAA or ODA/ODFW as Candidate Taxa or Species of Concern, unless the plant population received an Oregon Natural Heritage rank of 1-3 or is a wetland indicator species. Also not included are those plant populations that received an Oregon Natural Heritage rank of 4 = not rare and apparently secure, but with cause for long-term concern, or 5 = demonstrably widespread and secure.

### W – Wetlands and associated seeps, springs and streams that are part of a wetland complex

This criterion applies to selected wetlands, and associated seeps, springs and streams that provide critical watershed functions (i.e., water quality, hydrology, wildlife habitat, etc.) and are increasingly rare within Portland. SHAs include primarily those wetlands that:

1. Are connected to a stream or flood area;
2. Are part of a larger resource area, such as a wetland located within or adjacent to a forest; or

### 3. Provide connectivity between other high value habitats.

This criterion may incorporate constructed wetlands where the purpose of the wetland includes providing fish and wildlife habitat. Upland wetlands that are very small and are surrounded by development or intense land uses, such as golf courses, and certain water quality facilities are generally not designated as SHAs.

#### O – Native oak

The native oak criterion applies to areas that contain Oregon white oaks. Other tree species and vegetation, including invasive plants such as Himalayan blackberries, may be present.

#### B – Bottomland hardwood forest

This criterion applies to selected areas that contain remnant bottomland hardwood. Not all bottomland hardwood forests in the city are designated as a SHA. To be designated, an area must be considered unique, rare or declining within a particular watershed.

#### I – Riverine island

This criterion applies to islands or the portions of riverine islands that provide habitat for shorebirds, waterfowl, terns, gulls, Bald Eagles, river otter and other river/island-associated resident and/or migrating wildlife species. Beaches, mudflats, shoals and areas of large wood deposits are included along with other relevant resource features.

#### D – River delta

This criterion applies to river deltas that provide habitat for shorebirds, waterfowl, terns and gulls, Bald Eagles or other wildlife. The area shall contain beaches, mudflats and/or large wood deposits.

#### M – Migratory stopover habitat

This criterion is applied to vegetated areas and other landscape features (e.g., buttes) where use by migratory bird species has been documented, or is reasonably expected to occur, on more than an incidental basis. The criterion applies to areas that:

1. Provide nesting opportunities;
2. Provide food and resting opportunities;
3. Provide sufficient cover to reduce predation; and
4. Support a diverse assemblage or high concentration of migratory species

*On more than an incidental basis* means the identified species is documented to repeatedly or periodically use the habitat or feature.

*Reasonably expected to occur* generally applies to resource features that typically provide the functions listed above (e.g., buttes, ridge-tops/high elevation features, wetlands, mudflats, riparian areas or focal sites) and where local or regional technical experts state such uses by migratory birds is expected based on existing information or observations.

C – Corridor between patches or habitats

This criterion applies to vegetated areas that:

1. Provide connectivity between high value habitats including other Special Habitat Areas;
2. Provide connectivity between water bodies, riparian areas and upland habitats; or
3. Extend outward from another SHA to provide a wildlife movement corridor.

S – An *at risk* wildlife species uses the habitat area or feature on more than incidental basis to complete one or more life history stages

This criterion applies to areas with documented use by the following wildlife species (see Appendix 2: Special Status Fish and Wildlife Species in Portland):

1. Species listed by USFWS or NOAA Fisheries as:
  - LE - Listed Endangered
  - LT - Listed Threatened
  - PE - Proposed Endangered
  - PT - Proposed Threatened
  - SoC - Species of Concern
  - C - Candidate

Includes areas designated as Critical Habitats by NOAA Fisheries

2. Species Listed by Oregon Department of Agriculture (ODA) or ODFW as:
  - LE - Listed Endangered
  - LT - Listed Threatened
  - SC - Critical
  - SV - Vulnerable
3. Species that received an Oregon Natural Heritage rank or list 1, 2 or 3.
  - 1 = Critically imperiled because of extreme rarity or especially vulnerable to extinction or extirpation
  - 2 = Imperiled because of extreme rarity or especially vulnerable to extinction or extirpation
  - 3 = Rare, uncommon or threatened, but not immediately imperiled;

Life cycle phases include but are not limited to:

- courtship, nesting, breeding
- rearing young, juvenile development (e.g. noise, light)
- feeding, foraging, hunting
- resting, basking, perching
- cover/protection from predators or disturbances
- dispersal, migration, migratory stopover
- over-wintering

This criterion may apply to individuals that make up a local population, pairs, colonies or a regional population.

*On more than an incidental basis* means the identified species is documented to repeatedly or periodically use the habitat or feature.

E – Elk migratory corridor

This criterion is applied to areas that ODFW has designated as elk migratory corridors.

G – Upland habitat or landscape feature important to individual grassland-associated species or assemblages of grassland-associated species on more than an incidental basis

This criterion is applied to areas that contain vegetative structure, topography or soil substrates that provide functions similar to a native meadow, prairie or grassland and where use by grassland-associated wildlife species has been documented. This criterion is also applied to areas that:

1. Are part of a larger resource area, such as a grassy area located adjacent to a forest;
2. Provide connectivity between other high value habitats; or
3. Extend outward from an SHA to provide a wildlife movement corridor.

For the purposes of the G criterion, grassland-associated species include:

- Deer Mouse
- Gray-tailed Vole
- Camas Pocket Gopher
- Red Fox
- Oregon Vesper Sparrow
- Savannah Sparrow
- Western Meadowlark
- White-tailed Kite
- Short-eared Owl
- Streaked Horned Lark
- Northern Harrier
- American Kestrel
- Common Nighthawk
- Chipping Sparrow

*On more than an incidental basis* means the identified species is documented to repeatedly or periodically use the habitat or feature.

U – Resource or structure that provides critical or unique habitat function in natural or built environments

This criterion applies to resources or structures that are generally not accounted for by other criteria, and that provide a documented critical or unique habitat function. Examples include: bridges, chimneys, rock outcrops, groundwater upwelling areas, and street trees.

Note: Special Habitat Areas have been designated based on documented information about specific sites or areas. In addition, some of the SHAs reflect specific watershed conditions.

## APPENDIX D: Special Status Fish and Wildlife Species

	Common Name	Scientific Name	Federal Status	ODFW Status	ODFW StratSp	ORNHIC Rank	ORNHIC List	NWPCC Subbasin	PIF FocalSp	OWEB Priority	ABC/Audubon Watchlist	SHA At Risk Species
Amphibian	Clouded Salamander	<i>Aneides ferreus</i>		SV		G3/S3	3					X
	Northern Red-legged Frog	<i>Rana aurora aurora</i>	SoC	SV	X	G4T4/S3	2	X		X		X
Reptiles	Northwestern Pond Turtle	<i>Actinemys marmorata</i>	SoC	SC	X	G3T3/S2	1	X		X		X
	Western Painted Turtle	<i>Chrysemys picta bellii</i>		SC	X	G5/S2	2			X		X
Birds	American Bittern	<i>Botaurus lentiginosus</i>								X		
	American Kestrel	<i>Falco sparverius</i>						X	X	X		
	American White Pelican	<i>Pelecanus erythrorhynchos</i>		SV	X	G3/S2B	2					X
	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Delisted	LT		G4/S3B, S4N	2	X				X
	Band-tailed Pigeon	<i>Columba fasciata</i>	SoC			G5/S4	4		X	X		X
	Black-throated Gray Warbler	<i>Dendroica nigrescens</i>							X			
	Brown Creeper	<i>Certhia americana</i>							X			
	Bufflehead	<i>Bucephala albeola</i>				G5/S2B,S5N	4					X
	Bullock's Oriole	<i>Icterus bullockii</i>							X	X		
	Bushtit	<i>Psaltriparus minimus</i>							X			
	Chipping Sparrow	<i>Spizella passerina</i>			X			X	X			
	Common Nighthawk	<i>Chordeiles minor</i>		SC	X	G5/S5	4					X
	Common Yellowthroat	<i>Geothlypis trichas</i>						X				
	Downy Woodpecker	<i>Picoides pubescens</i>							X			
	Dunlin	<i>Calidris alpina</i>						X		X		
Great Blue Heron	<i>Ardea herodias</i>								X			

	Common Name	Scientific Name	Federal Status	ODFW Status	ODFW StratSp	ORNHIC Rank	ORNHIC List	NWPPC Subbasin	PIF FocalSp	OWEB Priority	ABC/Audubon Watchlist	SHA At Risk Species
	Green Heron	<i>Butorides virescens</i>						X				
	Hammond's Flycatcher	<i>Empidonax hammondii</i>							X			
	Hermit Warbler	<i>Dendroica occidentalis</i>							X		Yellow List	
	Hooded Merganser	<i>Lophodytes cucullatus</i>								X		
	House Wren	<i>Troglodytes aedon</i>							X			
	Hutton's Vireo	<i>Vireo huttoni</i>							X			
	Loggerhead Shrike	<i>Lanius ludovicianus</i>		SV	X	G4/S3B, S2N	4					X
	Long-billed Curlew	<i>Numenius americanus</i>		SV	X	G5/S3B	4				Yellow List	X
	Merlin	<i>Falco columbarius</i>				G5/S1B	2					X
	Nashville Warbler	<i>Vermivora ruficapilla</i>							X			
	Northern Harrier	<i>Circus cyaneus</i>						X	X			
	Olive-sided Flycatcher	<i>Contopus cooperi</i>	SoC	SV		G5/S4	4	X	X	X	Yellow List	X
	Orange-crowned Warbler	<i>Vermivora celata</i>							X			
	Pacific-slope Flycatcher	<i>Empidonax difcilus</i>							X	X		
	Peregrine Falcon	<i>Falco peregrinus</i>	Delisted	SV		G4/T3/S1B	2					X
	Pileated Woodpecker	<i>Dryocopus pileatus</i>		SV		G5/S4	4	X	X			X
	Purple Finch	<i>Carpodacus purpureus</i>								X		
	Purple Martin	<i>Progne subis</i>	SoC	SC	X	G5/S3B	2	X	X	X		X
	Red Crossbill	<i>Loxia curvirostra</i>							X			
	Red-eyed Vireo	<i>Vireo olivaceus</i>						X	X			
	Red-necked Grebe	<i>Podiceps grisegena</i>		SC	X	G5/S1B,S4N	2					X
	Rufous Hummingbird	<i>Selasphorus rufus</i>							X			
	Short-eared Owl	<i>Asio flammeus</i>			X				X	X	Yellow List	
	Sora	<i>Porzana carolina</i>						X				

	Common Name	Scientific Name	Federal Status	ODFW Status	ODFW StratSp	ORNHIC Rank	ORNHIC List	NWPCC Subbasin	PIF FocalSp	OWEB Priority	ABC/Audubon Watchlist	SHA At Risk Species
	Streaked Horned Lark	<i>Eremophila alpestris strigata</i>	C	SC	X	G5/T2/S2B	1	X	X	X		X
	Swainson's Hawk	<i>Buteo swainsoni</i>		SV	X	G5/S3B	4				Yellow List	X
	Swainson's Thrush	<i>Catharus ustulatus</i>							X			
	Thayer's Gull	<i>Larus thayeri</i>									Yellow List	
	Varied Thrush	<i>Ixoreus naevius</i>							X		Yellow List	
	Vaux's Swift	<i>Chaetura vauxi</i>						X	X			
	Vesper Sparrow (Oregon)	<i>Poocetes gramineus</i>	SoC	SC	X	G5/T3/S2B, S2N	2	X	X	X		X
	Western Meadowlark	<i>Sturnella neglecta</i>		SC WV	X	G5/S5	4	X	X	X		X
	Western Sandpiper	<i>Calidris mauri</i>									Yellow List	
	Western Wood-Pewee	<i>Contopus sordidulus</i>						X	X			
	White-breasted Nuthatch (Slender-billed)	<i>Sitta carolinensis aculeata</i>		SV	X			X	X	X		X
	White-tailed Kite	<i>Elanus leucurus</i>				G5/S1B, S3N	2					X
	Willow Flycatcher (Little)	<i>Empidonax traillii brewsteri</i>		SV	X	G5TU/S1B	4	X	X	X	Yellow List	X
	Wilson's Warbler	<i>Wilsonia pusilla</i>							X			
	Winter Wren	<i>Troglodytes troglodytes</i>							X			
	Wood Duck	<i>Aix sponsa</i>						X				
	Yellow Warbler	<i>Dendroica petechia</i>						X	X	X		
	Yellow-breasted Chat	<i>Icteria virens</i>	SoC	SC WV	X	G5/S4?	4		X			X
Mammals	American Beaver	<i>Castor canadensis</i>						X				
	California Myotis	<i>Myotis californicus</i>		SV		G5/S3	4					X
	Camas Pocket Gopher	<i>Thomomys bulbivorus</i>	SoC			G3G4/S3S4	3					X
	Fringed Myotis	<i>Myotis thysanodes</i>	SoC	SV		G4G5/S2	2					X

	Common Name	Scientific Name	Federal Status	ODFW Status	ODFW StratSp	ORNHIC Rank	ORNHIC List	NWPCC Subbasin	PIF FocalSp	OWEB Priority	ABC/Audubon Watchlist	SHA At Risk Species	
	Hoary Bat	Lasiurus cinereus		SV		G5/S3	4					X	
	Long-eared Myotis	Myotis evotis	SoC			G5/S3	4					X	
	Long-legged Myotis	Myotis volans	SoC	SV		G5/S3	4					X	
	Northern River Otter	Lontra canadensis						X					
	Red Tree Vole	Arborimus = Phenacomys longicaudus	SoC	SV		G3G4/S3S4	3	X				X	
	Silver-haired Bat	Lasionycteris noctivagans	SoC	SV	X	G5/S3S4	4					X	
	Townsend's Big-eared Bat	Corynorhinus townsendii townsendii	SoC	SC	X	G4/T3T4/S2	2	X				X	
	Western Gray Squirrel	Sciurus griseus		SV	X	G5/S4	3	X				X	
	White-footed Vole	Arborimus = Phenacomys albipes	SoC			G3G4/S3	4					X	
	Yuma Myotis	Myotis yumanensis	SoC			G5/S3	4					X	
Fish	Chinook Salmon	Oncorhynchus tshawytscha	LT, LE	LT		G5T2Q/S2	1			X		X	
	Chum Salmon	Oncorhynchus keta	LT	SC		G5T2Q/S2	1			X		X	
	Coho Salmon	Oncorhynchus kisutch	LT	LE		G4T2Q/S2	1			X		X	
	Chum Salmon	Oncorhynchus keta	LT							X			
	Sockeye Salmon	Oncorhynchus nerka	LT, LE							X			
	Steelhead Trout	Oncorhynchus mykiss	LT	SC		G5T2Q/S2	1			X		X	
	Coastal Cutthroat Trout	Oncorhynchus clarki clarki	PT	SC		G4T2Q/S2	2					X	
	Columbia Eulachon	Thaleichthys pacificus	LT										
	Pacific Lamprey	Lampetra tridentata	SoC	SV		G5/S3	2			X		X	
	River Lamprey	Lampetra ayresi	SoC			G4/S4	4			X		X	
	Oregon Chub	Oregonichthys crameri	LT	SC						X			

Footnotes:

LE Listed Endangered

Species listed by the by the USFWS, NMFS, ODFW or ODA as Endangered

LT Listed Threatened

Species listed by the USFWS, NMFS, ODFW or ODA as Threatened



PE	Proposed Endangered	Species proposed by the USFWS or NMFS to be listed as Endangered under the ESA
PT	Proposed Threatened	Species proposed by the USFWS or NMFS to be listed as Threatened under the ESA
SoC	Species of Concern	Former C2 candidates which need additional information in order to propose as Threatened or Endangered under the ESA. These are species which USFWS is reviewing for consideration as Candidates for listing under the ESA.
C	Candidate	Species for which NMFS or USFWS have sufficient information to support a proposal to list under the ESA
SC	Critical	Species for which listing by ODFW or ODA as threatened or endangered is pending; or those for which listing as threatened or endangered may be appropriate if immediate conservation actions are not taken. Also considered critical are some peripheral species that are at risk throughout their range, and some disjunct populations.
SV	Vulnerable	Species for which listing by ODFW or ODA as threatened or endangered is not believed to be imminent and can be avoided through continued or expanded use of adequate protective measures and monitoring. In some cases the population is sustainable, and protective measures are being implemented; in others, the population may be declining and improved protective measures are needed to maintain sustainable populations over time.
ODFW StratSp		Identified as a 'Strategy Species' in the ODFW Comprehensive Wildlife Conservation Strategy for Oregon (2005) for the Willamette Valley Ecoregion. Strategy species are those closely associated with 'Strategy Habitats' or are declining for a variety of reasons.
ORNHIC Rank		1 Critically imperiled because of extreme rarity or because it is somehow especially vulnerable to extinction or extirpation, typically with 5 or fewer occurrences.
ORNHIC Rank		2 Imperiled because of rarity or because other factors demonstrably make it very vulnerable to extinction (extirpation), typically with 6-20 occurrences.
ORNHIC Rank		3 Rare, uncommon or threatened, but not immediately imperiled, typically with 21-100 occurrences.
ORNHIC Rank		4 Long-term Concern Not rare and apparently secure, but with cause for long-term concern, usually more than 100 occurrences.
ORNHIC Rank		5 Secure Demonstrably widespread, abundant, and secure
ORNHIC Rank		H Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered.
ORNHIC Rank		T The taxon has a trinomial (a subspecies, variety or recognized race)
ORNHIC Rank		U Unknown rank.
ORNHIC Rank		NR Not yet ranked
ORNHIC Rank		G Global rank system was developed by The Nature Conservancy and is maintained by The Association for Biodiversity Information (ABI) in cooperation with Heritage Programs or Conservation Data Centers (CDCs) in all 50 states, in 4 Canadian provinces, and in 13 Latin American countries.
ORNHIC Rank		S State rank system was developed by The Nature Conservancy and is maintained by The Association for Biodiversity Information (ABI) in cooperation with Heritage Programs or Conservation Data Centers (CDCs) in all 50 states, in 4 Canadian provinces, and in 13 Latin American countries.
ORNHIC Rank		Q Indicates the taxon has taxonomic questions
ORNHIC Rank		? Assigned rank is uncertain.
ORNHIC Rank		X Presumed extirpated or extinct.
ORNHIC List 1		Contains species that are threatened with extinction or presumed to be extinct throughout their entire range.
ORNHIC List 2		Contains species that are threatened with extirpation or presumed to be extirpated from the state of Oregon. These are often peripheral or disjunct species which are of concern when considering species diversity within Oregon's borders. They can be very significant when protecting the genetic diversity of a taxon. ORNHIC regards extreme rarity as a significant threat and has included species that are very rare in Oregon on this list.
ORNHIC List 3		Contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.

ORNHIC List 4

Contains species that are of conservation concern but are not currently threatened or endangered. This includes species which are very rare but are currently secure, as well as species which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered. While these species currently may not need the same active management attention as threatened or endangered species, they do require continued monitoring.

## **APPENDIX E: Oaks Bottom Bird List**

Species	s	S	F	W
<b><u>Flycatchers (continued)</u></b>				
*Willow Flycatcher	u	u	u	
Hammond's Flycatcher	u		o	
Dusky Flycatcher	x			
Pacific-slope Flycatcher	u		o	
Say's Phoebe	r			
Ash-throated Flycatcher			x	
Western Kingbird	x	x		
Eastern Kingbird		x		
<b><u>Shrikes to Vireos</u></b>				
Northern Shrike				x
Cassin's Vireo	o		r	
*Hutton's Vireo	u	u	u	u
Warbling Vireo	u	o	u	
<b><u>Corvids</u></b>				
*Stellar's Jay	u	u	u	u
*Western Scrub-Jay	c	c	c	c
Common Raven		x		
*American Crow	c	c	c	c
<b><u>Swallows</u></b>				
*Purple Martin	f	f	f	
Tree Swallow	u	o	u	r
*Violet-green Swallow	c	f	c	
Northern Rough-winged Swallow	u	o	u	
Cliff Swallow	u	o	u	
*Barn Swallow	c	c	c	x
<b><u>Chickadees to Bushtits</u></b>				
*Black-capped Chickadee	c	c	c	c
Chestnut-backed Chickadee	u	u	u	u
*Bushtit	c	c	c	c
<b><u>Nuthatches to Creepers</u></b>				
Red-breasted Nuthatch	u	u	u	u
White-breasted Nuthatch	f	u	f	f
*Brown Creeper	f	f	f	f
<b><u>Wrens to Kinglets</u></b>				
*Bewick's Wren	c	c	c	c
House Wren	r		r	
Winter Wren	f		f	f
Marsh Wren	o	o	o	
Rock Wren	x			
Golden-crowned Kinglet	f		f	f
Ruby-crowned Kinglet	c		c	c
<b><u>Thrushes</u></b>				
Townsend's Solitaire	x			x
Swainson's Thrush	u	o	u	
Hermit Thrush	u		u	u
*American Robin	c	c	c	c
Varied Thrush	u		u	u
<b><u>Starling</u></b>				
*European Starling	c	c	c	c

Species	s	S	F	W
<b><u>Pipits to Waxwings</u></b>				
American Pipit	o		o	
*Cedar Waxwing	f	f	f	f
<b><u>Wood Warblers</u></b>				
Orange-crowned Warbler	f	o	f	x
Nashville Warbler	o		r	
Yellow Warbler	u	r	u	
Yellow-rumped Warbler	c	u	c	f
Black-throated Gray Warbler	f	o	u	x
Townsend's Warbler	u		u	u
Blackpoll Warbler	x			
MacGillivray's Warbler	r			
*Common Yellowthroat	f	f	f	r
Wilson's Warbler	u	o	u	x
Yellow-breasted Chat	x			
<b><u>Tanagers</u></b>				
Western Tanagers	u		u	
<b><u>Sparrows</u></b>				
*Spotted Towhee	c	c	c	f
Brewer's Sparrow		x		
Savannah Sparrow	r	r	r	
Fox Sparrow	f		f	f
*Song Sparrow	c	c	c	c
Lincoln's Sparrow	o		o	o
Swamp Sparrow	x			x
White-throated Sparrow	o		o	o
White-crowned Sparrow	u	o	u	o
Golden-crowned Sparrow	c		c	f
*Dark-eyed Junco	c	u	c	c
<b><u>Grosbeaks to Buntings</u></b>				
*Black-headed Grosbeak	f	u	u	
Blue Grosbeak	x			
Lazuli Bunting		x		
<b><u>Icterids</u></b>				
Western Meadowlark	x		x	x
Brown-headed Cowbird	o	o	o	
*Red-winged Blackbird	c	c	c	f
Brewer's Blackbird	o	o	o	o
Bullock's Oriole	r			
<b><u>Finches</u></b>				
Purple Finch	o	o		o
*House Finch	c	c	c	c
Red Crossbill	o	r	o	o
Common Redpoll	x		x	x
Pine Siskin	u	r	u	u
*Lesser Goldfinch	c	c	c	c
*American Goldfinch	c	c	c	c
Evening Grosbeak	u		o	o
<b><u>Old World Sparrows</u></b>				
House Sparrow	u	u	u	u

# Oaks Bottom Bird List



Portland, OR

Illustrated and compiled by  
Christopher Hinkle  
January 2010

**Key:**

s=spring – usually March through May

S=summer – usually June to mid-August

F=fall – usually mid-August to November

W=winter – usually November through February

\*=Nesting confirmed or very likely

c=common; almost always present in proper habitat

f=fairly common; often seen

u=uncommon; sometimes seen

o=occasional; only a handful of records each year

r=rare; rarely occurs and usually not every year

x=extremely rare; fewer than five records

Despite its urban surrounding in SE Portland, 160-acre Oaks Bottom is a true birding hotspot, with over 185 species recorded. This list covers Oaks Bottom Wildlife Refuge and the adjacent section of Willamette River, encompassing various habitats including a large shallow central lake, mixed maple and oak woodlands, riparian cottonwood, ash and willow forests, patches of shrubs, small fields and clearings, and open waters of the Willamette River. The Springwater Corridor multi-use trail passes through the refuge paralleling the river and offers views of the lake from its west shore. A one-mile trail loops around the east side of the lake. Short side trails lead up the bluff to Sellwood Park to the south, and the refuge parking lot to the north. The refuge is also accessible from Oaks Amusement Park.

Species	s	S	F	W
<b><u>Waterfowl</u></b>				
Greater White-fronted Goose	o		o	
*Canada Goose	c	c	c	c
Cackling Goose	u		o	u
Trumpeter Swan			x	
Tundra Swan	r		r	r
*Wood Duck	f	f	f	f
Eurasian Wigeon	o		o	o
American Wigeon	f		f	f
Gadwall	c		c	c
*Mallard	c	c	c	c
Blue-winged Teal	r	r	r	x
Cinnamon Teal	o	o	o	
Green-winged Teal	c		c	c
Northern Shoveler	c		c	c
Northern Pintail	c		c	c
Canvasback	o		o	o
Redhead	x		x	x
Ring-necked Duck	c		c	c
Greater Scaup	x		x	x
Lesser Scaup	f		f	f

Species	s	S	F	W
<b><u>Waterfowl (continued)</u></b>				
Surf Scoter			x	x
Bufflehead	c		c	c
Common Goldeneye	o		o	o
Hooded Merganser	u	u	u	u
Common Merganser	f	f	f	f
Ruddy Duck	o		o	o
<b><u>Pheasant &amp; Quail</u></b>				
Ring-necked Pheasant	r	r	r	r
California Quail	r	r	r	r
<b><u>Grebes</u></b>				
*Pied-billed Grebe	f	f	f	f
Horned Grebe	r		r	r
Red-necked Grebe			x	x
Eared Grebe			x	
Western Grebe	r	x	r	r
<b><u>Pelicans to Cormorants</u></b>				
American White Pelican	x	x	x	
Brown Pelican				x
Double-crested Cormorant	c	f	c	c
<b><u>Egrets &amp; Herons</u></b>				
Great Blue Heron	c	c	c	c
Great Egret	r		o	r
Snowy Egret			x	
Green Heron	u	u	u	o
Black-crowned Night-Heron			x	
<b><u>Vultures</u></b>				
Turkey Vulture	f	f	f	
<b><u>Osprey, Hawks &amp; Falcons</u></b>				
*Osprey	c	c	c	
Bald Eagle	u	u	u	u
Northern Goshawk	x			
Sharp-shinned Hawk	u	u	u	u
*Cooper's Hawk	u	u	u	u
Red-shouldered Hawk	x		x	x
Red-tailed Hawk	f	f	f	f
Northern Harrier	x	x	x	x
American Kestrel	o	o	o	o
Merlin	o		o	o
Peregrine Falcon	u	u	u	u
<b><u>Rails to Cranes</u></b>				
Sora	x			
Virginia Rail	o		o	
American Coot	c	c	c	c
Sandhill Crane	r		r	
<b><u>Shorebirds</u></b>				
Semipalmated Plover				o
*Killdeer	f	f	f	u
Greater Yellowlegs	o	r	u	
Lesser Yellowlegs				r

Species	s	S	F	W
<b><u>Shorebirds (Continued)</u></b>				
Solitary Sandpiper	x			
*Spotted Sandpiper	u	u	u	u
Marbled Godwit			x	
Western Sandpiper	o	r	u	
Least Sandpiper	o	o	u	
Baird's Sandpiper			x	
Pectoral Sandpiper			x	
Dunlin	r		r	r
Short-billed Dowitcher			x	
Long-billed Dowitcher	o	r	u	
Wilson's Snipe	o		o	
Wilson's Phalarope			x	
Red-necked Phalarope			x	
<b><u>Gulls &amp; Terns</u></b>				
Bonaparte's Gull			x	
Mew Gull	u		u	u
Ring-billed Gull	f	o	f	f
California Gull	c	u	c	c
Herring Gull	u		u	u
Thayer's Gull	u		u	u
Glaucous Gull			x	x
Glaucous-winged Gull	c	u	c	c
Western Gull	u		u	u
Caspian Tern				r
Black Tern	x			
<b><u>Pigeons &amp; Doves</u></b>				
Rock Pigeon	f	f	f	f
Band-tailed Pigeon	o	o	o	r
Eurasian Collared-Dove	x	x	x	
Mourning Dove	o	o	o	o
<b><u>Owls</u></b>				
*Western Screech-Owl	u	u	u	u
*Great Horned Owl	r	r	r	r
Barred Owl			x	
<b><u>Swifts to Hummingbirds</u></b>				
Vaux's Swift	c	c	c	
*Anna's Hummingbird	c	c	c	c
*Rufous Hummingbird	f	u	u	
<b><u>Kingfisher</u></b>				
*Belted Kingfisher	f	f	f	f
<b><u>Woodpeckers</u></b>				
*Red-breasted Sapsucker	u	u	u	u
*Downy Woodpecker	c	c	c	c
Hairy Woodpecker	o	o	o	o
Pileated Woodpecker	o	o	o	o
*Northern Flicker	c	c	c	c
<b><u>Flycatchers</u></b>				
Olive-sided Flycatcher	o		o	
*Western Wood-Pewee	u	u	u	