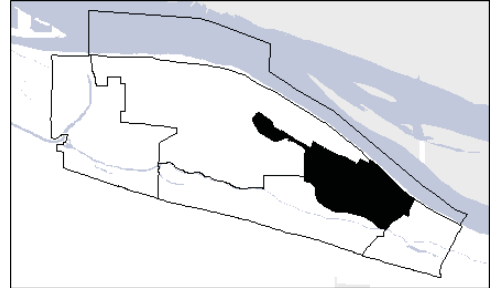


INVENTORY SITE CS5: Airport Way

Summary Information

Watershed: Columbia Slough

Neighborhood: Parkrose



USGS quadrangle and quarter section maps: 1N2E08, 1N2E09, 1N2E10, 1N2E15, 1N2E16

River Mile: none

Site Size: 734 acres

Previous Inventories: Inventory and Analysis of Wetlands, Water Bodies and Wildlife Habitat Areas for the Columbia Corridor: Industrial/Environmental Mapping Project (City of Portland January 1989)

Zoning: General Industrial 2 (IG2)

General Employment (EG2)

Open Space (OS)

Aircraft Landing height overlay (h)

Airport Noise overlay (x)

Environmental Conservation overlay (c)

Environmental Protection overlay (p)

Scenic overlay (s)

Existing Land Use: industrial; commercial

General Description: This site is located between the Middle Columbia Slough and Columbia River, west of I-205. The site contains secondary drainageways known as the PIC Ditches, multiple wetlands and upland grassland habitat. There is also a Port mitigation site located here.

Resource Features: open water stream channels; herbaceous and forested wetlands; vegetated flood area; bottomland hard wood forest; grasslands

Functional Values: microclimate and shade; stream flow moderation and water storage; bank function, and sediment, pollution and nutrient control; large wood and channel dynamics; organic inputs, food web and nutrient cycling; wildlife habitat; habitat connectivity/ movement corridor

Special Habitat Area(s):

- *CS24: Upland Grassland* - area critical to sensitive species (S); upland meadow important to grassland-associated species (G); migratory stopover habitat (M); and wildlife connectivity corridor (C)

Special Status Species:

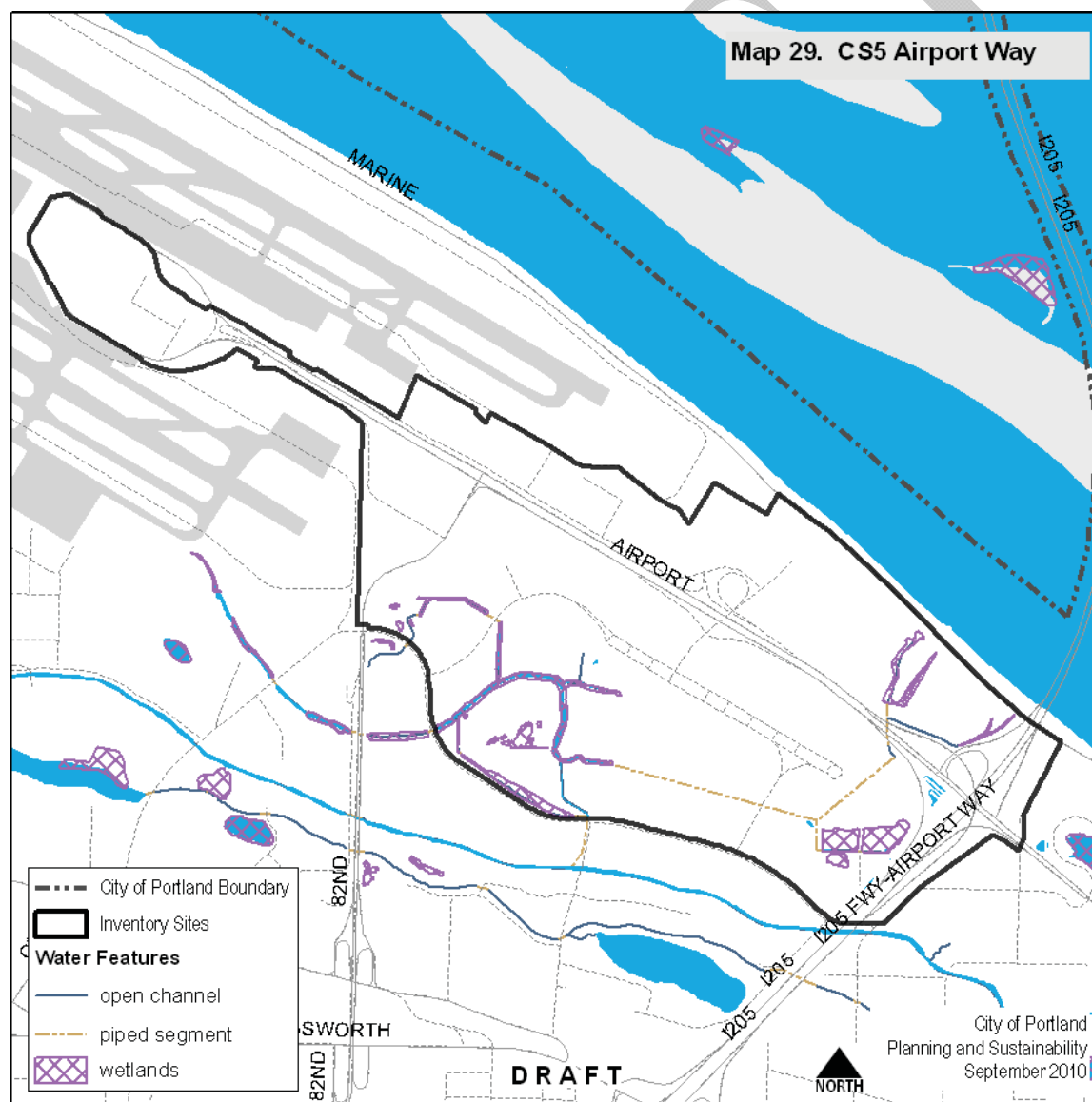
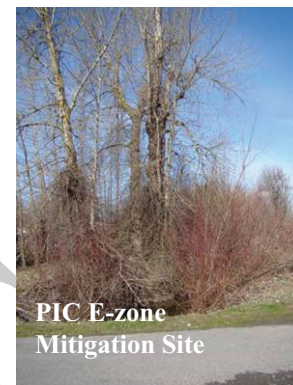
- *Bird:* American kestrel, bald eagle, bushtit, common yellowthroat, downy woodpecker, great blue heron, green heron, hooded merganser, northern harrier, Vaux's swift, western meadowlark, western wood peewee, willow flycatcher, and wood duck
- *Mammal:* American Beaver

Natural Hazards: flood area

Contamination: Yes

Site Description

The Airport Way inventory site is 734 acres in size and is located between the Middle Columbia Slough and Columbia River. The site begins at the eastern edge of the I-205 right-of-way, extends west down Airport Way, and ends at the airport terminal building (Map 29). The site includes the Portland International Airport long-term and economy parking lots, hotels, car rental lots, and other commercial and aviation related uses along Airport Way and NE 82nd Avenue. The Portland International Center (PIC) is also within the site which includes IKEA and other commercial businesses. The site includes a portion of I-205 and associated right-of-way including the on and off ramps for Airport Way. There are approximately 339 acres of impervious area, including 16.8 miles of roads, located the site. Site CS5 Map 1 shows an aerial view of the Airport Way inventory site.



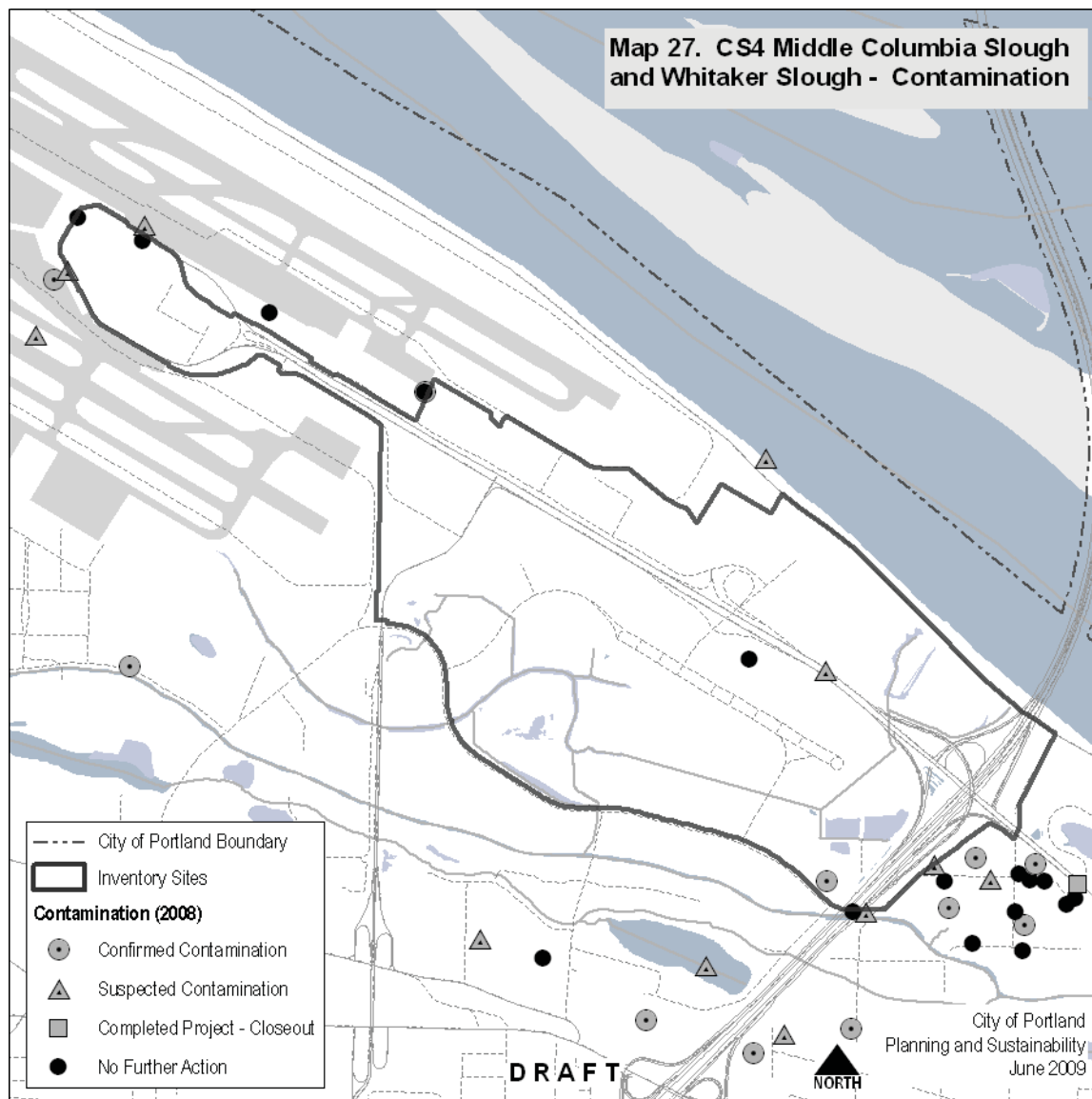
The site contains 2.4 miles of secondary drainageways, including the PIC ditches, and 8 wetlands totaling 19 acres. (CS5 Map 2). The 6-acre flood area includes 4 acres of vegetated flood area and 2 acres of non-vegetated flood area (CS5 Map 2). The Multnomah County Drainage District (MCDD) maintains the water levels in the secondary drainageways to provide flood protection and stormwater conveyance for developed lands.

Vegetated areas of at least $\frac{1}{2}$ acre include approximately 8 acres of forest or dense tree canopy, 17 acres of woodland, 6 acres of shrubland and 233 acres of herbaceous cover (CS5 Map 3).

Table 22: Summary of Natural Resource Features in CS5: Airport Way

	Study Area (734)
Stream (miles)	2.4
Wetlands (acres)	19
Flood Area (acres)*	6
Vegetated (acres)	4
Non-vegetated (acres)	2
Open Water (acres)	0
Vegetated Areas $\geq \frac{1}{2}$ acre (acres)**	264
Forest (acres)	8
Woodland (acres)	17
Shrubland (acres)	6
Herbaceous (acres)	233
Impervious Surfaces (acres)	339
* The flood area includes the FEMA 100-year floodplain plus the adjusted 1996 flood inundation area.	
** The vegetation classifications are applied in accordance with the National Vegetation Classification System specifications developed by The Nature Conservancy. The data within the primary study area and within 300 feet of all open water bodies in Portland is draft and is currently being updated based 2006 aerial photography.	

The Oregon Department of Environmental Quality (DEQ) has identified confirmed and suspected contaminated areas within the site (Map 30). Soil and groundwater within the site contain contamination resulting from past and current activities auto wrecking yards and electrical equipment warehouse. Types of pollutants found in the site included benzo(a)pyrene, PCBs, total petroleum hydrocarbons (TPH), acetone, chloroform, ethylbenzene, toluene, methyl ethyl ketone, and xylenes. Potential environmental and health risks include direct contact and groundwater migration. For more information regarding contamination, visit the DEQ website at <http://www.deq.state.or.us/lq/ecsi/ecsi.htm>.



Natural Resource Description

The natural resources are described for subareas of the inventory site (Map 31).



Portland International Center

The Portland International Center (PIC) is located between Alderwood Drive and Cascade Station. PIC is 151 acres in size and includes drainageways, known as the PIC ditches, wetlands, upland grasslands and a Port mitigation site.

PIC Ditches and Wetlands

Within the site there are roughly 1.7 miles of secondary drainageways that collectively referred to by MCDD and the Port of Portland as the “PIC Ditches.”¹ The PIC Ditches include remnants of historic drainageways and man-made agricultural ditches. The PIC Ditches are actively maintained by the

¹ Portions of the PIC Ditches are also known as Green Heron Slough.

Multnomah County Drainage District (MCDD) for stormwater flow and conveyance. Maintenance includes mowing the bank, removing woody debris from the water and periodic dredging. The channels of the PIC Ditches are deeply incised, with steep banks.

Much of the riparian area around the secondary drainageways is dominated by grasses, predominantly reed canary grass, and Himalayan blackberry with some areas of willow and red-osier dogwood. The banks are routinely mowed, reducing structural diversity and wildlife habitat. A Port of Portland mitigation site is located along the southern most secondary drainageway – PIC E-Zone Mitigation Site.

Just south of the IKEA parking lot and east of the Trimet MAX light rail tracks are three herbaceous wetlands and an associated drainageway. The northern two wetlands are 2.24 and 2.7 acres. Between the wetlands and Interstate 205 there are a few large trees. The predominant vegetation type in all three wetlands is reed canary grass. The following species were documented utilizing this area by Port of Portland staff between 2002 and 2009.

Table 23: Port of Portland Wildlife Species Observations in the PIC Wetland Site 2002-2009

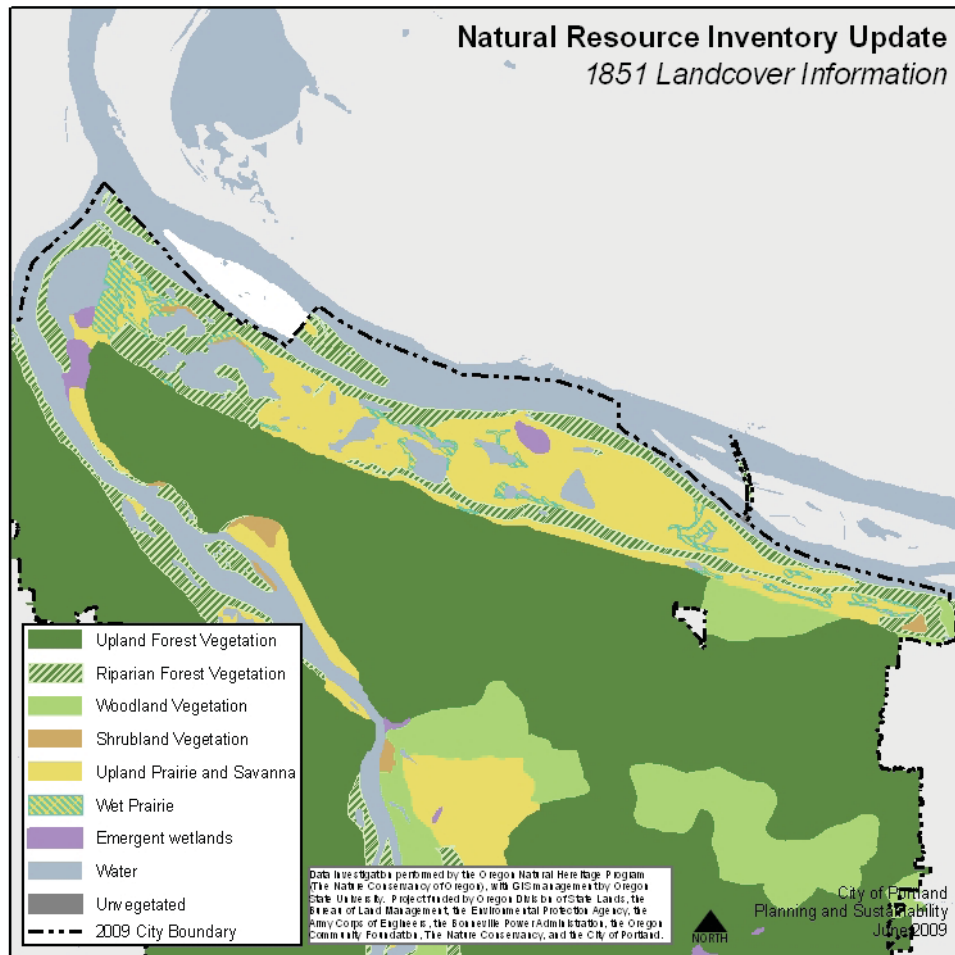
Birds		
American wigeon	Great blue heron	Red-tailed hawk
California gull	Mallard	White-crowned sparrow
Canada goose	Northern pintail	

PIC Upland Grasslands

Roughly 151 acres of Special Habitat Area (SHA) CS24: Airport Upland Grasslands is located within this site. In total, SHA CS24 encompasses roughly 1,000 acres of low herbaceous vegetation directly surrounding the Portland International Airport (PDX). Although the vegetation communities within this inventory site are not representative of a native grassland or prairie, the combination of the size of the open area, vegetation type, sandy fill and management activities causes the site to mimic some characteristics of a native grassland or prairie. Until roughly 150 years ago upland prairie and savannah habitats covered much of the Columbia Slough watershed (Map 22). Today, native grassland and prairie habitats throughout the region have been reduced to less than one percent of their historic extent and are now defined as an imperiled habitat (Metro, 2009)



PIC Upland grasslands



Map 32. 1851 Landcover Information

As such, while this inventory site does not contain native grassland or prairie vegetation, the cumulative effect of all the grassy and sparsely vegetated areas around the airport, and absence of vertical structures, creates a contiguous 1,200-acre flat grassland-like habitat adjacent to the Columbia River that attracts a high diversity and concentration of migratory and grassland-associated wildlife species. Over 100 species of birds, including grassland specialists, occur in this site annually. Some of these species, such as savannah sparrows and European starlings, occur in great numbers in the inventory site; while other species, such as Osprey occur in smaller numbers. Rare species that occur annually on migration include long-billed curlew and loggerhead shrike. While much of the resource function is attributed to the grasslands as a whole, there is some differentiation between different locations, five of which are addressed in inventory site CS2: Portland International Airport: 33rd Fields, Southwest Quadrant (SW Quad), Deicing Field, Fuel Farm and Airfield.

The Portland International Center (PIC) upland grasslands are located within this inventory site. Vegetation varies more in this location than in others, but is primarily made up of weedy herbaceous and shrubby plants. Invasive weeds such as thistle, teasel and Himalayan blackberry are common. The area is mowed once a year and targeted weed species are sprayed as needed.

PIC provides limited habitat for generalist species such as moles, voles, and other small mammals. Predators such as coyotes and raptors use them extensively for hunting grounds. A population of Western meadowlarks, a City of Portland *at risk* species, occurs at the site (Port, AIRMAN; Audubon). Non-special status birds that use the upland grassland habitat include savannah sparrow, American pipit, Lazuli bunting, barn swallow, cliff swallow, Western kingbird, red-winged blackbird and yellow-headed

blackbird. The following wildlife species were documented by the Port of Portland in the area between 2002 and 2009:

Table 24: Port of Portland Wildlife Species Observations in the Upland Grasslands 2002-2009

Birds		
American crow	European starling	Osprey
American goldfinch	Glaucous-winged gull	Red-tailed hawk
American kestrel	Great-blue heron	Red-winged blackbird
Bald eagle	Great egret	Rock dove
Barn swallow	Great horned owl	Savannah sparrow
Brewer's blackbird	House finch	Short-eared owl
Brown-headed cowbird	House sparrow	Tree swallow
California gull	Killdeer	Turkey vulture
Canada goose	Mallard	Vaux's swift
Cliff swallow	Northern harrier	Western meadowlark
Mammals		
Coyote	Squirrel	

All of the upland grassland areas, including PIC, are part of one Special Habitat Area, CS24: Airport Upland Grasslands, because the habitats meet the criteria for migratory stopover (M), grassland-associated species use (G), area vital for at risk species (S) and a connectivity corridor with the Columbia River (C).

PIC E-Zone Mitigation Site

Along NE Alderwood Road is a Port of Portland mitigation site. The PIC E-zone Mitigation Site is located along one of the PIC Ditches addressed in the previous section. The mitigation site is comprised of a woodland containing black cottonwood, willow and ash. Reed canary grass, rushes and cattails are common at the water's edge. Wildlife observed in this section of the PIC Ditches and the surrounding riparian vegetation include American crow, American kestrel, Canada goose, European starling, great blue heron, great egret, great horned owl, mallard, pileated woodpecker, red-tailed hawk, western scrub jay, coyote and raccoon. The following wildlife species were documented utilizing the site by Port of Portland staff from 2001 thru 2008.



Table 25: Port of Portland Wildlife Species Observations in the PIC E-zone Mitigation Site 2001-2008

Birds		
Accipiter, unidentified	European starling	Ruby-crowned kinglet
American crow	Golden-crowned sparrow	Savannah sparrow
American goldfinch	Great blue heron	Sharp-shinned Hawk
American kestrel	Great egret	Sparrow, unidentified
American robin	Great horned owl	Spotted towhee
American wigeon	Green heron	Song sparrow
Bald eagle	Green-winged Teal	Swallow, unidentified
Barn swallow	Gull, unidentified	Tree swallow
Belted kingfisher	Hooded merganser	Turkey vulture
Bewick's wren	House finch	Vaux's swift
Black-capped chickadee	Hummingbird, unidentified	Violet-green swallow
Black-headed grosbeak	Killdeer	Warbler, unidentified
Brewer's blackbird	Lazuli bunting	Warbling vireo
Bushtit	Mallard	Western kingbird
cackling goose	Mourning dove	Western meadowlark

Canada goose	Northern flicker	Western scrub jay
Cedar waxwing	Northern harrier	western wood peewee
Cinnamon teal	Northern shrike	white-breasted nuthatch
Cliff swallow	Osprey	White-crowned sparrow
Common yellowthroat	Red-tailed hawk	Willow flycatcher
Dark-eyed junco	Red-winged blackbird	Wilson's snipe
Double-crested cormorant	Ring-necked duck	Wood duck
Downy woodpecker	Ring-necked pheasant	Yellow-rumped Warbler
Mammals		
Beaver	Gray fox	Raccoon
Cottontail rabbit	Mole	Rodent, unidentified
Coyote	Mouse	Vole
Reptiles and Amphibians		
Bullfrog	garter snake	Pacific treefrog
common garter snake	Long-toed salamander	
Fish		
Carp	Fish, unidentified	

Economy Parking Forested Wetland

Located in the middle of the Portland International Airport economy parking lot is a wetlands and associated drainageways. This forested area contains 50 to 60 year old cottonwood trees. This area is within the FAA regulated approach surface of the north runway (Runway 28R). Objects with heights that penetrate into this surface must be removed or maintained to protect the critical airspace; as a result, trees in this area are routinely topped as they grow into the protected airspace. The understory is dominated by Himalayan blackberry but willow and red-osier dogwood are also present. Emergent vegetation is present in the wetland.



Economy Parking Forested Wetland

An unnamed remnant slough channel is present on the western part of the site. It is isolated from the Columbia River by the levee but is hydrologically connected to the Columbia Slough via the Port's stormwater conveyance system. The unnamed slough receives flow from a secondary drainage that exists along the southern end of the site. A stormwater swale present on the eastern edge of the site drains the economy parking lot and flows into the secondary drainage at the south end of the site. These water features are classified as forested wetlands and total 1.85 acres. The wetlands and forest provide food, roosting, perching and nesting opportunities for waterfowl, shorebirds, songbirds, woodpecker and raptor. Reptile and amphibian utilization is also likely. Due to the proximity of the forest to the Columbia River, the area is likely used by migratory birds. Table 25 provides a list of wildlife species observed in this forested wetland complex.

Table 26: Port of Portland Wildlife Species Observations in the Economy Parking Forested Wetland 2002-2009

Birds		
American crow	Bushtit	Northern flicker
American goldfinch	Canada goose	Red-tailed hawk
American kestrel	Cedar waxwing	Ruby-crowned kinglet
Anna's hummingbird	Downy woodpecker	Song sparrow
American robin	European starling	Western scrub jay
Black-capped chickadee	Great blue heron	Wood duck
Bewick's wren	Mallard	Yellow-rumped warbler
Brown creeper	Mourning dove	
Mammals		
Beaver	Coyote	Rabbit
Reptiles and Amphibians		
Bullfrog		

I-205 Forested Area

Between Interstate 205 and the economy parking lot is forested area that contains a drainageway and wetland. The vegetation assemblage along the I-205 southbound off-ramp to Airport Way includes cottonwood with a predominantly Himalayan blackberry understory. During spring 2009 site visits, Cooper's hawk and coyote were observed in the forested area. Along the I-205 northbound off-ramp to Airport Way the drainageway is surrounded by grasses, predominantly reed canary grass,, Himalayan blackberry and a strip of planted trees along the parking lot.

Natural Resource Evaluation

The natural resources located within this site have been evaluated for relative riparian and wildlife habitat quality. Relative quality is presented in the form of relative functional value ranks for riparian corridors, wildlife habitat, and riparian/wildlife habitat value combined (Table 27). The relative ranks are produced using GIS models and information on Special Habitat Areas. The model criteria are not sensitive to the species of vegetation present or whether vegetation is native or non-native. However, the model criteria do assign different riparian functional values to cultivated, heavily manicured and managed landscapes and semi-natural and natural vegetation. The approach used to generate the relative ranks is summarized in the introduction to the inventory sites. Additional detail is provided in the Methodology Overview section of this report and the *Natural Resource Inventory Update: Riparian Corridors and Wildlife Habitat* (City of Portland, 2008).

All of the ranked resource areas provide at least some important riparian and habitat value, recognizing that current condition and function levels may vary considerably. The relative ranks can inform planning programs, design of development or redevelopment projects, mitigation and restoration activities.

Riparian Areas

The site contains portions of the Columbia Slough secondary drainageways, wetlands, riparian vegetation, as detailed in the natural resource description. These landscape features provide the following riparian functions:

- Microclimate and shade
- Stream flow moderation and water storage
- Bank stability, and sediment, pollution and nutrient control
- Large wood and channel dynamics
- Organic inputs, food web and nutrient cycling
- Riparian wildlife movement corridor

High relative functional ranks are assigned to the Columbia Slough, Whitaker Slough, wetlands, and secondary drainageways. Riparian forests and areas of dense tree canopy receive a high or medium relative ranks depending on proximity to open water. Medium and low relative ranks are generally assigned to lower structure riparian vegetation. Other areas are assigned a high, medium or low relative rank depending on the proximity and extent of vegetation relative to the water body (CS5 Map 4).

Wildlife Habitat

A wildlife habitat patch is, for purposes of the inventory model, defined as forest and/or wetland areas, 2 acres in size or greater, plus adjacent woodland vegetation (note Special Habitat Areas may be smaller and may contain different types of vegetation or other resource features).

The site contains forested areas and wetlands that provide wildlife habitat and connectivity between habitat patches. The forested areas provides nesting, breeding and foraging habitats for a diverse range of bird and mammal species, as well as amphibians, reptiles, and invertebrate species.

Based on the wildlife habitat model criteria, a medium relative rank is assigned to forests and/or wetlands because of the size, interior area and proximity to water and other patches (CS5 Map 5).

Special Habitat Areas (SHA) descriptions

SHAs contain unique features and provide critical wildlife habitat as described in the Natural Resources Description section above. SHAs receive a high relative rank for wildlife habitat. The SHA ranking supersedes lower rankings generated by the GIS model. Therefore, all SHAs within the site rank high for wildlife habitat (CS4 Map 5). There is one SHA within this inventory site, CS24.B: Upland Grassland,

which meets the following criteria: area critical to sensitive species (S); upland meadow important to grassland-associated species (G); migratory stopover habitat (M); and wildlife connectivity corridor (C).

Combined Relative Riparian/Wildlife Habitat Ranking

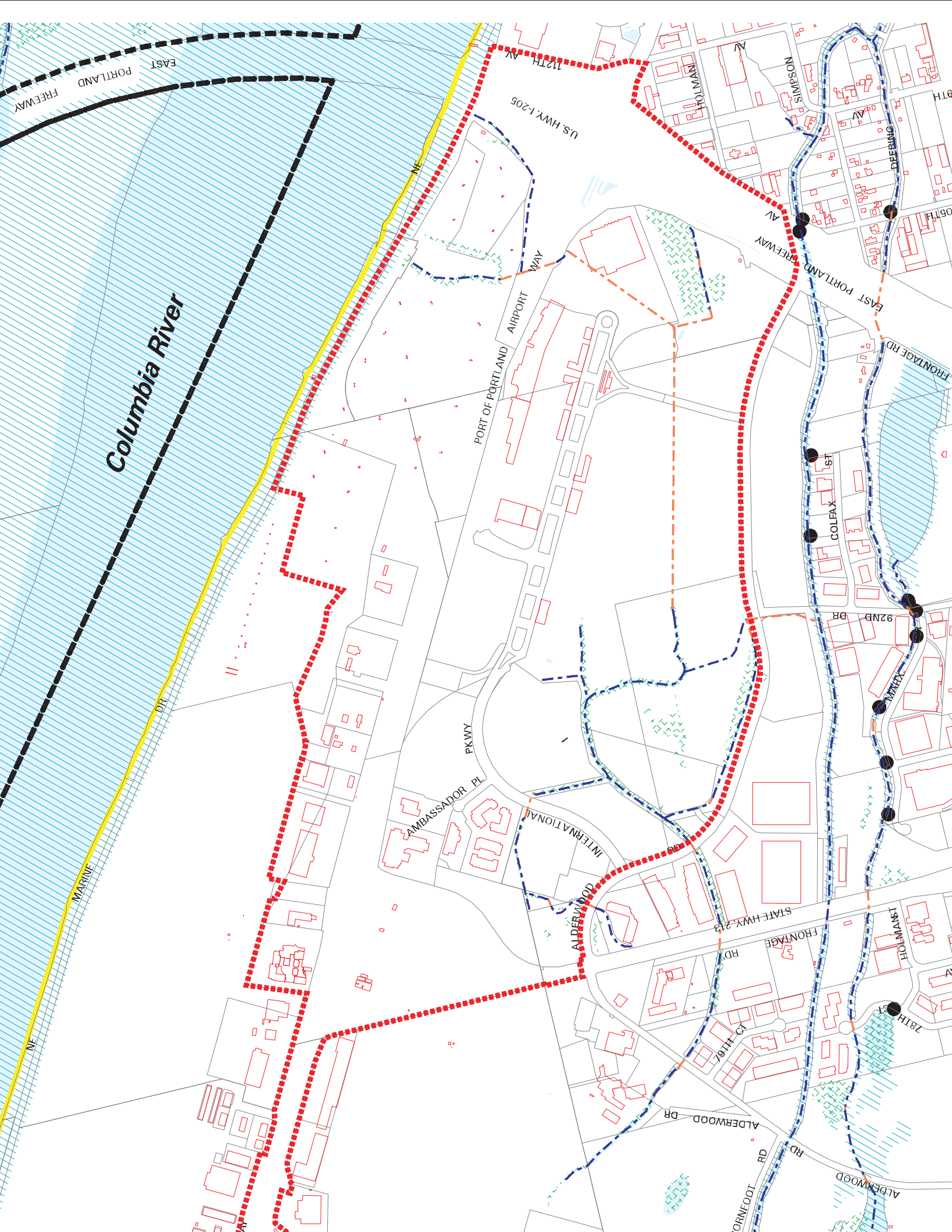
Where areas that are mapped as riparian corridors and wildlife habitat overlap, and their relative ranks differ, the combined relative rank will be the higher of the two ranks. For example, an area that ranks medium for riparian function and low for wildlife habitat will receive a medium combined relative rank (CS5 Map 6).

Table 27: Summary of Ranked Resources in CS5: Airport Way

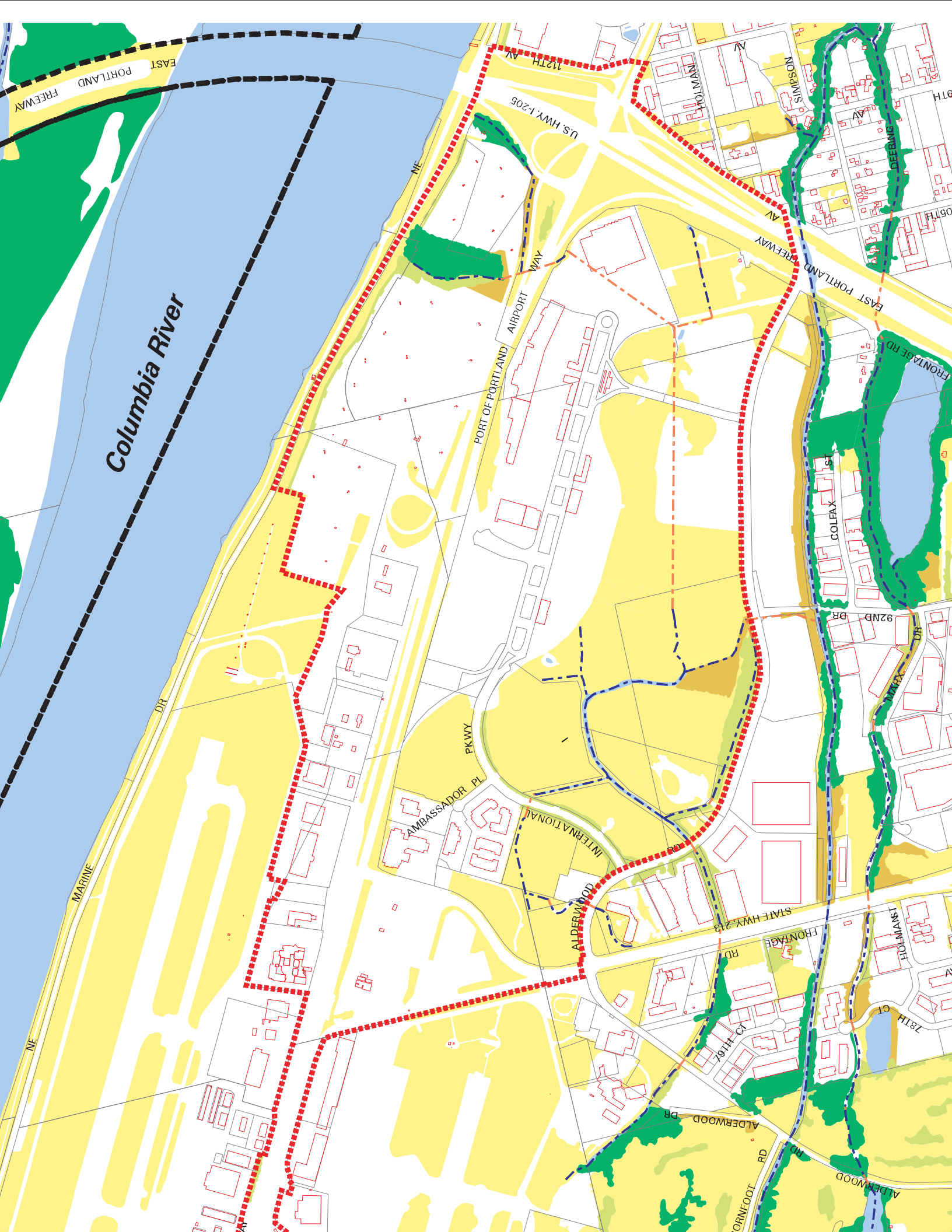
Total Inventory Site = 734 acres				
	High	Medium	Low	Total
Riparian Resources*				
acres	32	51	64	147
percent total inventory site area	4	7	9	20
Wildlife Habitat				
Wildlife Habitat*				
acres	0	22	0	22
percent total inventory site area	0	3	0	3
Special Habitat Areas*				
acres	199			
percent total inventory site area	27			
Wildlife Habitat - adjusted by Special Habitat Areas **				
acres	199	12	0	211
percent total inventory site area	27	2	0	29
Combined Total***				
acres	217	12	15	244
percent total inventory site area	30	2	2	34
** High-ranked riparian resources, Special Habitat Areas, and wildlife habitat includes the Willamette River ** Special Habitat Areas rank high for wildlife habitat * Because riparian resources, Special Habitat Areas, and wildlife habitat overlap, the results cannot be added together to determine the combined results.				



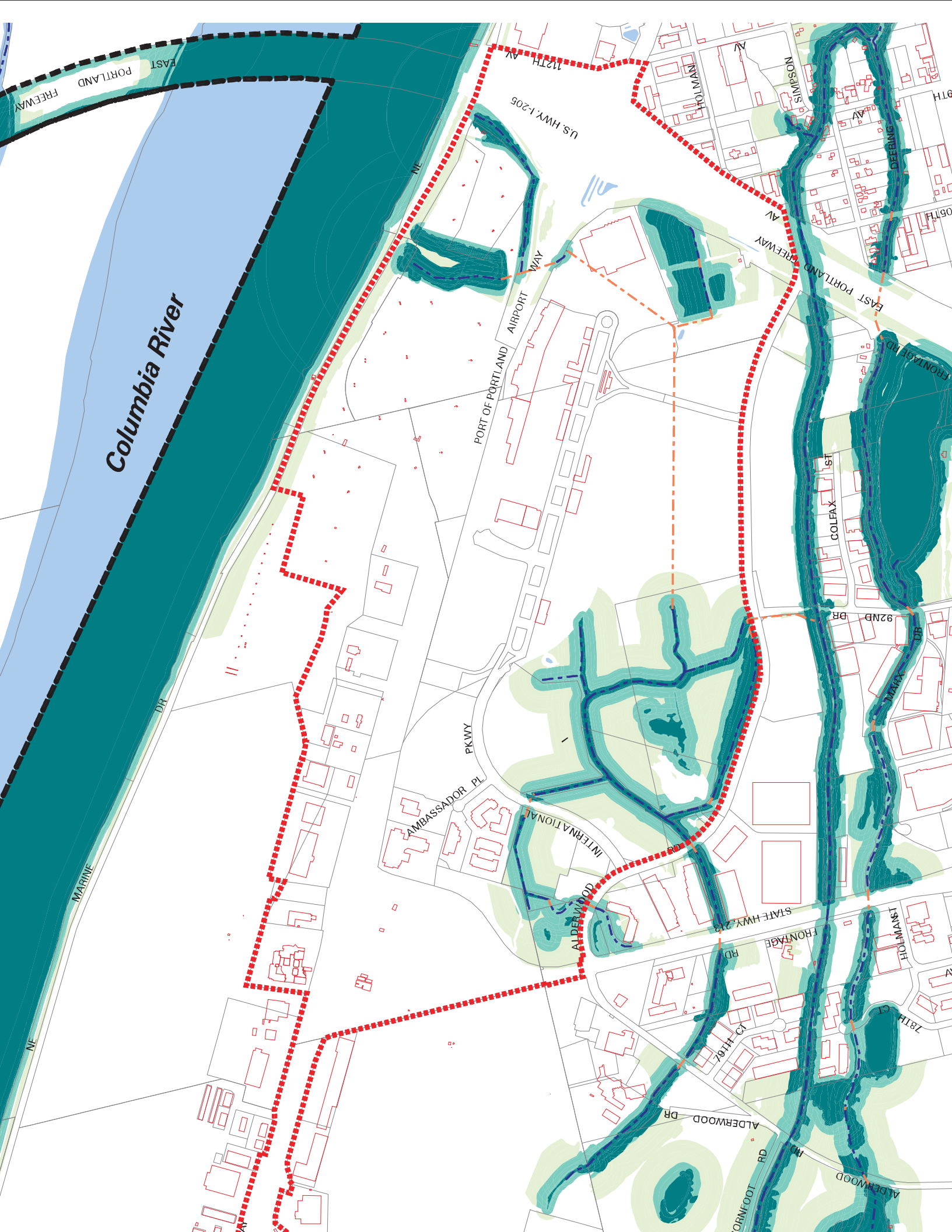
LEVA



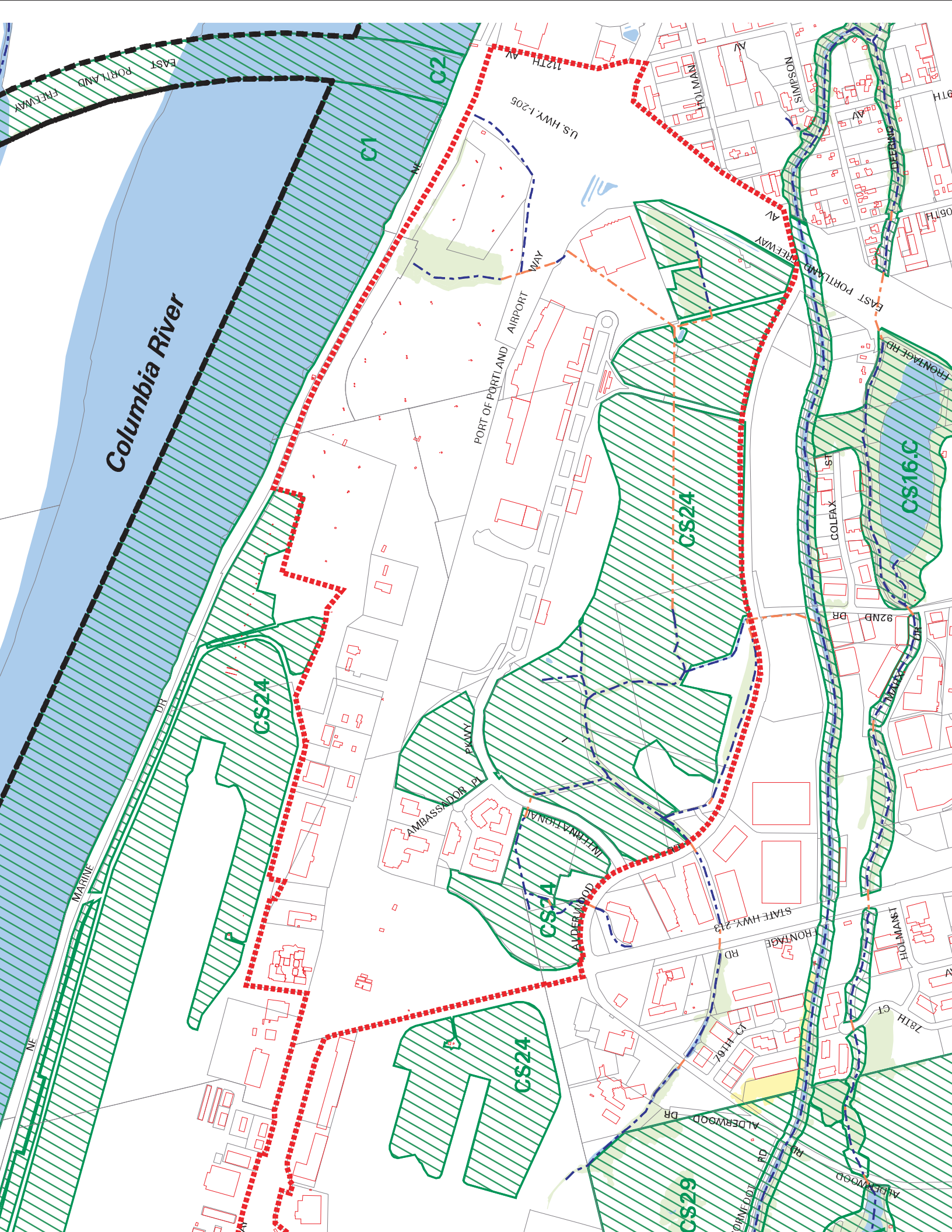
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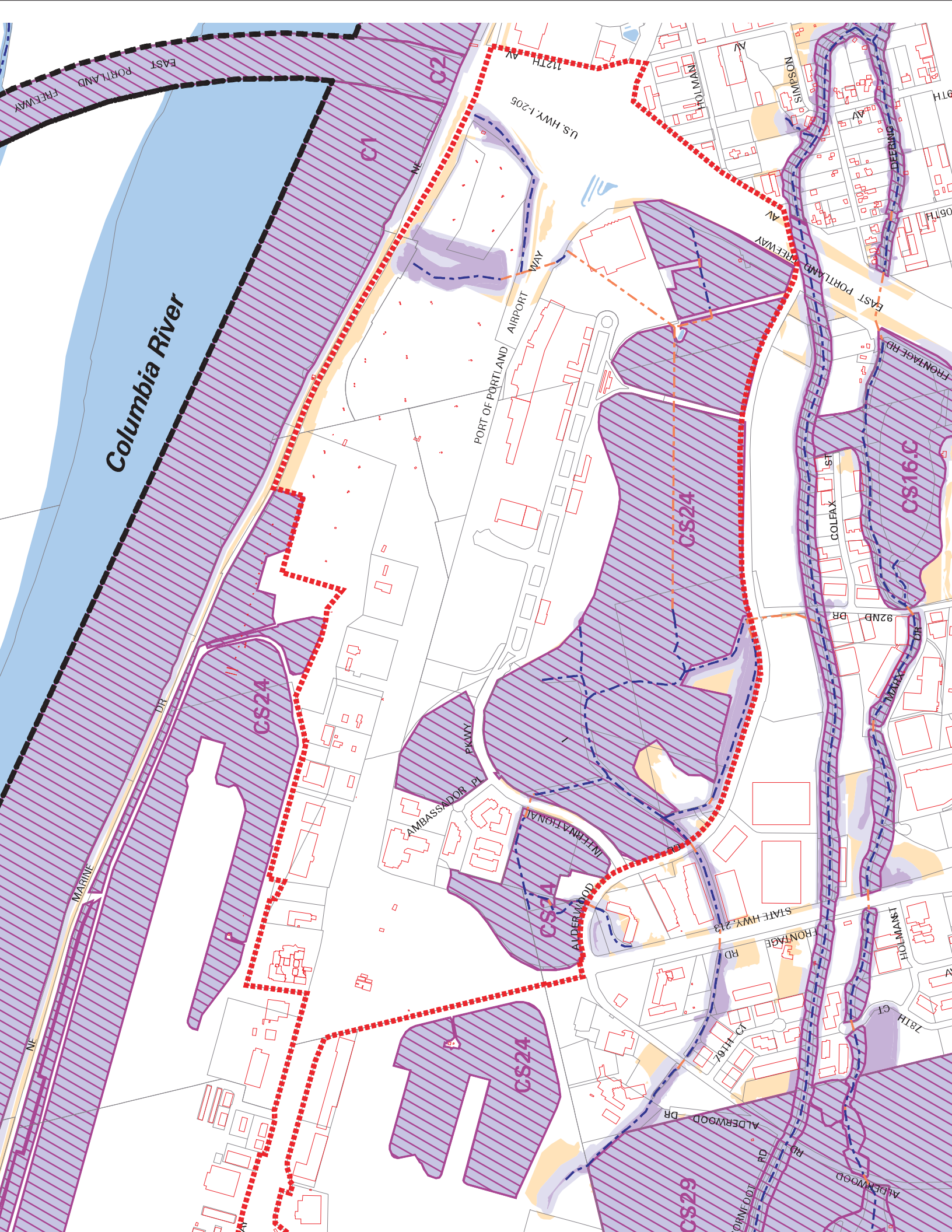
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