Botanical and Wildlife Resources Report
Wallula Gap Business Park
Wallula, Washington

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1. Introduction

The Wallula Gap Business Park is located north of the town of Wallula, east of State Route 12, and south of the JR Simplot Company Feedlot, Walla Walla County, Washington. The majority of the business park property is located in sections 2 and 11 of Township 7 North, Range 31 East, Willamette Meridian, with the northeastern corner located in Section 35 of T8N, R31E, W.M. Additional Port-owned lands are present in the East ½ of Section 3, and Northeast ¼ of Section 10 of T7N, R31E, W.M.

The business park site was previously owned by Boise Cascade Corporation and was managed in part as the Cottonwood Fiber Farm. Currently, the majority of the site is being leased for center-pivot irrigated agriculture.

A botanical and wildlife resources assessment of the property was conducted in 2007. This report presents an updated review of existing information on wildlife and botanical resources and provides the results of field surveys conducted at the Project site during May 2023.

The overall Study Area (Project site) totals approximately 1,460 acres, including approximately 977 acres of irrigated lands. The Survey Area excluded the irrigated lands and included approximately 483 acres of non-cultivated, disturbed shrub-steppe habitat, subdivided into 15 individual subareas (Figure 1).

2. Pre-Field Review of Special Status Species and Habitats

Existing information on the occurrence of special status species and habitats was compiled from agency sources prior to conducting field surveys. For this review, special status species were defined as those federally listed as endangered or threatened, species proposed for federal for listing, and federal candidate species. Federally designated critical habitat for listed and proposed species was included. In addition, Washington State threatened, endangered, and sensitive species and Washington Department of Fish and Wildlife Priority Habitats and Species (PHS) were included.

Information on threatened and endangered species and other species and habitats with special management status was obtained from the U.S. Fish and Wildlife Service (USFWS 2023a and b), Washington Department of Fish and Wildlife (WDFW 2023a, b, and c), Washington Department of Natural Resources Natural Heritage Program (WNHP 2021 and 2023), and the Walla Walla County Weed Control Board (Walla Walla County NWCB 2023).

Table 1 presents the special status species and habitats known or suspected to occur in western Walla Walla County based on existing data.

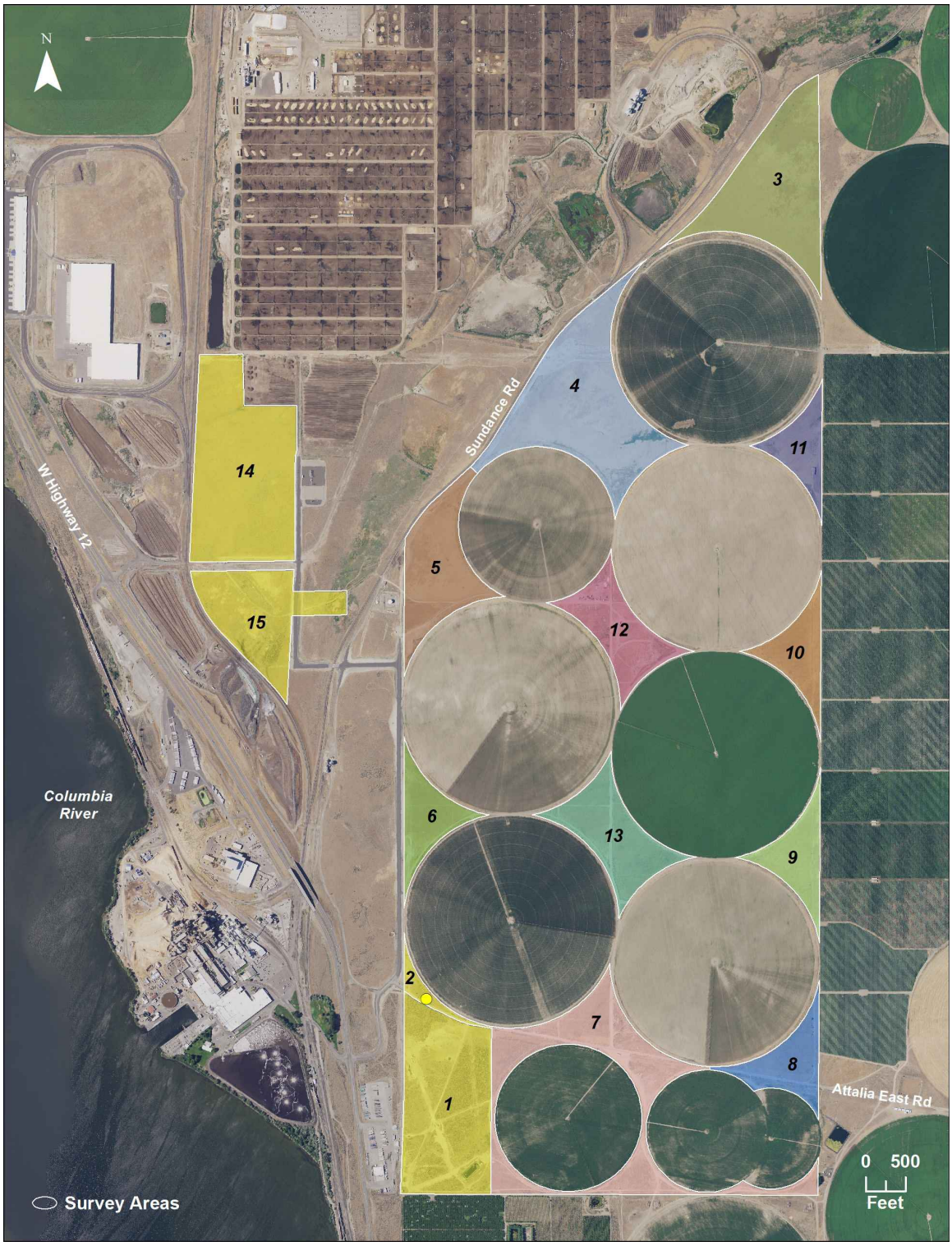

Figure 1. Survey Area and Fifteen Subareas

Table 1. Special Status Species and Habitats Known or Suspected to Occur in Western Walla Walla County

Common name	*Scientific Name*	Federal Status	State Status	Habitat Requirements	Occurrence Notes
Vascular Plants					
Great Basin gilia	*Aliciella leptomeria*	None	Sensitive	Open habitats, dry bluffs, sandy swales often on hard, gravelly, or sandy fine basalt soils in sagebrush steppe from low to middle elevations	Historical record in Walla Walla County (WNHP); 2001 collection in SW Walla Walla County (WTU Herbarium); unlikely to occur at Project site
Thistle milk-vetch	*Astragalus kentrophyta var. douglasii*	None	Possibly extirpated	Sandy ground, dunes, or eroded riverbanks at low elevations	Regional endemic known only from vague historical records, likely collected near or within the 'Great Bend' of the Columbia River in WA or OR; not seen since 1883, habitat possibly flooded by damming of the river; unlikely to occur at Project site
Pauper milk-vetch	*Astragalus misellus var. pauper*	None	Threatened	Dry, open areas in shrub-steppe	Historical record in Walla Walla County; currently known from Benton, Douglas, Franklin, Kittitas, Klickitat, and Yakima counties; unlikely to occur at Project site
Gray cryptantha	*Cryptantha leucophaea*	None	Threatened	Unstabilized sandy soils and dunes along the Columbia River	Historical record (1980) in southwestern portion of Port of Walla Walla property; not relocated in 2001; habitat limited at Port of Walla Walla property; may occur at Project site
Beaked cryptantha	*Cryptantha rostellata*	None	Sensitive	Coarse substrates along dry drainages in open grassland and shrub-steppe	Historical record in western Walla Walla County; habitat limited at Port of Walla Walla property; may occur at Project site

Common name	***Scientific Name***	**Federal Status**	**State Status**	**Habitat Requirements**	**Occurrence Notes**
Yellow wildrye	*Leymus flavescens*	None	Endangered	Shifting sand dunes and disturbed sandy areas along ditches or road banks, riverbanks	Historical records in Walla Walla County and other Columbia Plateau counties; currently known from five sites (only two since 2010); may occur at Project site
False monkeyflower	*Mimetanthe pilosa*	None	Sensitive	Gravelly or sandy seasonally moist openings, creek beds, or riverbanks	Historical record in southcentral Walla Walla County; habitat lacking on Port of Walla Walla Property; unlikely to occur at Project site
Coyote tobacco	*Nicotiana attenuata*	None	Sensitive	Dry sandy bottomlands, rocky washes, and other dry, open places	Historical record in/near Walla Walla County; currently known mainly north and west of Wallula Gap; habitat limited on Port of Walla Walla Property; unlikely to occur at Project site
Annual sandwort	*Sabulina pusilla*	None	Sensitive	Dry, rocky cliffs and outcroppings in sagebrush desert to ponderosa pine forest openings	Historical record from eastern Walla Walla County; recent records from Hanford Reach; habitat lacking on Port of Walla Walla Property; unlikely to occur at Project site
Priority Habitats (plant communities)					
Shrub-steppe		None	Priority Habitat	One or more layers of perennial grasses and a conspicuous but discontinuous layer of shrubs	PHS-mapped shrub-steppe and presumptive shrub-steppe are present outside of irrigated croplands on the Port of Walla Walla property
Birds					
American White Pelican	*Pelecanos erythrorhynchos*	None	Sensitive	Colonial nesters of isolated islands in freshwater lakes and occasionally rivers	Known to nest on Crescent and Badger islands in Columbia River; observed flying over Port of Walla Walla property

Common name	***Scientific Name***	**Federal Status**	**State Status**	**Habitat Requirements**	**Occurrence Notes**
Golden eagle	*Aquila chrysaetos*	None	Candidate	Open sagebrush, ponderosa pine and grasslands near cliffs and plateaus	Locally uncommon resident in Columbia River Basin; not documented on Port of Walla Walla property; may occur in the vicinity at Project site as occasional visitor
Northern goshawk	*Accipiter gentilis*	None	Candidate	Mature and old-growth conifer forests with relatively open canopy; open woodlands	Uncommon migrant or winter visitor; documented at McNary NWR, Snake River (Burbank), Walla Walla River; habitat lacking on Port of Walla Walla property; unlikely to occur at Project site
Ferruginous hawk	*Buteo regalis*	None	Endangered	Shrub-steppe and juniper-savannah, avoiding croplands; nests on rock, trees, or artificial structures; sensitive to human disturbance	Mapped PHS occurrence in/near Port of Walla Walla property; documented breeding on artificial platforms March–August approx. 4 miles east; breeding and perching habitat lacking on Port property; may occur at Project site as occasional visitor for foraging
Ring-necked Pheasant	*Phasianus colchicus*	None	WDFW Priority	Introduced from Asia; present in agricultural areas and considered Priority species in Walla Walla County	Non-native game species; no priority management areas mapped at Project site; observed on Port of Walla Walla property
Upland Sandpiper	*Bartramia longicauda*	None	Endangered	Grasslands and agricultural fields of grain crops, alfalfa, and grazed pastures	Rare eastern WA breeder with most recent occurrences in Spokane area; unlikely to occur at Project site
Western burrowing owl	*Athene cunicularia*	None	Candidate	Nest in underground burrows in grassland and shrub-steppe	Uncommon summer resident, rare winter resident; not observed on Port of Walla Walla property during 2007 surveys; nest burrows present 3 miles east in 2001; may occur at Project site

Common name	***Scientific Name***	**Federal Status**	**State Status**	**Habitat Requirements**	**Occurrence Notes**
Vaux's swift	*Chaetura vauxi*	None	WDFW Priority	Breeds in tree cavities in forested habitats; uses trees and chimneys for roosting	Migratory flocks congregate at Walla Walla River delta in September; habitat lacking on Port of Walla Walla property; unlikely to occur at Project site
Sage thrasher	*Oreoscoptes montanus*	None	Candidate	Sagebrush obligate, typically foraging and breeding on the ground	Breeds in Columbia Basin areas with large expanses of sagebrush; reported at McNary NWR; may occur at Project site
Loggerhead shrike	*Lanius ludovicianus*	None	Candidate	Open shrublands and woodlands, including sagebrush, juniper communities	Rare summer resident in region; occasional winter visitor to McNary NWR; habitat limited on Port of Walla Walla property; may occur at Project site as occasional winter visitor
Mammals					
Townsend's big-eared bat	*Coryhorhinus townsendii*	None	Candidate	Inhabits forested and arid habitats; requires undisturbed buildings, caves, mines or bridges for roosting	Roosting/hibernating habitat lacking on Port of Walla Walla property; unlikely to occur at Project site
Black-tailed jackrabbit	*Lepus californicus*	None	Candidate	Shrub-steppe habitats and grasslands with rabbitbrush and sagebrush	Not observed during 2007 surveys of Port of Walla Walla property; habitat limited at Project site; may occur at Project site
White-tailed jackrabbit	*Lepus townsendii*	None	Candidate	Hilly, native bunchgrass sites, wintering in sagebrush flats	Not observed during 2007 surveys of Port of Walla Walla property; habitat lacking at Project site; unlikely to occur at Project site
Washington ground squirrel	*Urocitellus washingtoni*	None	Candidate	Shrub-steppe with native bunchgrasses particularly on deep, silty loam soils	Not observed during 2007 surveys of Port of Walla Walla property; suitable soils not present at site; recorded several miles south of Walla Walla River; may occur at Project site

Common name	*Scientific Name*	Federal Status	State Status	Habitat Requirements	Occurrence Notes
Reptiles					
Northern sagebrush lizard	*Sceloporus graciosus*	None	Candidate	Sand dunes, loose soil in sagebrush	Historical observations in western Walla Walla County; not observed during 2007 surveys of Port of Walla Walla property; suitable habitat present; may occur at Project site
Striped whipsnake	*Masticophis taeniatus*	None	Candidate	Sagebrush steppe at low elevation, usually associated with open rocky areas	Columbia Plateau ecoregion; only 26 observations in WA, most along Columbia River in Grant County; habitat limited at Project site; may occur at Project site

(H) = Historical records: indicates occurrence has not been reconfirmed for 40 or more years, or the species is extirpated from the county.

Federal Status:
- LE: Listed Endangered - Species in danger of extinction throughout all of a significant portion of its range; protected under the Endangered Species Act of 1973, as amended (ESA)
- PE: Proposed Endangered
- LT: Listed Threatened – Species likely to become endangered within the foreseeable future throughout all or a significant portion of its range; protected under ESA
- PT: Proposed Threatened
- Candidate: Sufficient information exists to support listing as Endangered or Threatened

State Status:
- Endangered - In danger of becoming extinct or extirpated from Washington within the foreseeable future
- Threatened - Likely to become endangered in Washington within the foreseeable future
- Sensitive - Vulnerable or declining and could become endangered or threatened
- Candidate – Under review for listing as Endangered, Threatened, or Sensitive in Washington
- Priority (habitats and species) - Habitats and species with unique or significant values and considered priorities for management by WDFW

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WNHP 2023. Project Area Report: Database search results for rare plant species on Wallula Gap Business Park lands and vicinity, prepared by WNHP, April 4, 2023.

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2.1 Special Status Plants

No federally listed, proposed, or candidate plant species are known or suspected to occur in the Study Area (USFWS 2023a). No federally-designated critical habitat for plant species is present.

Washington Natural Heritage Program (WNHP) reported an historical occurrence of gray cryptantha (*Cryptantha leucophaea*) in the Study Area (WNHP 2023). This species is designated Threatened in Washington State. Gray cryptantha is a regional endemic from the Columbia and lower Yakima rivers. It grows on sandy substrate, typically unstabilized sand dunes. Surveys conducted for the Port of Walla Walla in 2007 did not relocate the population (SEA 2007).

Beaked cryptantha (*Cryptantha rostellata*) is a state Threatened species known from Kittitas County and a vague historical record in western Walla Walla County (WNHP 2021). It occurs in extremely dry sites, often dry drainages, dominated by big sagebrush and bluebunch wheatgrass.

Yellow wildrye (*Leymus flavescens*) is a state Endangered species known from several Columbia Plateau counties, including Walla Walla (WNHP 2021). WNHP does not report any occurrences at or near the Project site. Yellow wildrye grows on unstabilized sand dunes and disturbed sandy soils.

The remaining special status plant species shown on Table 1 are unlikely to occur at or near the Project site, based on current distribution and habitat requirements.

2.2 Priority Habitats

The WDFW PHS database (WDFW 2023a and b) was reviewed. One priority habitat, shrub-steppe, has been mapped by WDFW on and adjacent to the Project site. Both disturbed shrub-steppe and presumptive shrub-steppe are shown on the WDFW maps.

USFWS National Wetland Inventory maps (USFWS 2023b) were reviewed to determine the presence of mapped wetlands, waterbodies, and riparian areas. No wetlands, waterbodies or riparian areas are present on the Project site. A series of constructed lagoons is present adjacent to Port lands along the northern edge of the Project site, and the Columbia River is located west of the site (approximately 950 ft west at the closest point).

Inland dunes, a priority habitat in Washington, occur in Washington's arid lands where sandy sediments were deposited during the Missoula floods. Reworking of these deposits by wind produced widespread sand fields. Dunes were also formed by sand that was transported and deposited by the Columbia and Snake rivers. Soils at the Project site are dominated by Adkins loamy fine sand (northern and north central portion of site), several loamy fine sand soil types of the Quincy Series (northern half of site), and Quincy-Duneland and Active Duneland soils on the southernmost portion of the site, south of Attalia Road (NRCS 2023; Appendix 1 Soil Survey

Map). These soils are all characterized by a high proportion of sand. The WDFW PHS database indicates no mapped inland dunes near the Project site (WDFW 2023a).

2.3 Special Status Wildlife

No federally listed, proposed, or candidate animal species are known or suspected to occur at the Project site and no critical habitat for wildlife species has been designated (USFWS 2023a).

American white pelican is a Washington state Sensitive species known to nest on islands in the Columbia River near the Project site (WDFW 2004). White pelicans are commonly observed flying over the Project site, but do not directly use the site.

Golden eagle is a state Candidate species. Golden eagles are not common in this portion of the Columbia River basin, but have been observed at McNary NWR (Avibase 2023). Golden eagle may occasionally travel through the vicinity. No suitable nesting habitat for golden eagle is present at or near the Project site.

Ferruginous hawk is state Endangered species known to breed on artificial nest platforms several miles east of the Project site (WDFW 2000). WDFW PHS map data (2023a) shows a ferruginous hawk occurrence area encompassing most of the Project site. Hawks may forage at and near the Project site; however, no suitable nesting or perching habitat for the species is present.

Ring-necked pheasant is a non-native game species considered a Priority Species by WDFW. Pheasant are known to occur on and adjacent to the Project site. No priority management areas for ring-necked pheasant have been mapped at the Project site (WDFW 2023a).

Western burrowing owl, a state Candidate species, is present in western Walla Walla County and adjoining Franklin County. A reproductive pair of burrowing owls was observed about three miles east of the Project site during 2001 (SEA 2001). Surveys of the Project site vicinity conducted in 2001 did not detect any individual burrowing owls or their burrows. No occurrence areas are mapped in the Project vicinity by WDFW PHS (WDFW 2023a).

Sage thrasher is a state Candidate species and an obligate of sagebrush steppe, occurring mainly in large expanses of shrub-steppe. The species has been observed at the McNary National Wildlife Refuge (Avibase 2023). No PHS occurrence areas are mapped near the Project site (WDFW 2023a).

Loggerhead shrike is a state Candidate species. They are rare summer breeders in the region, and occasional winter visitors to the McNary NWR (Avibase 2023, WDFW 2023c). Shrikes may be occasional visitors to the Project site during winter months, but are more likely to be observed along the Walla Walla River riparian/shrubland interface to the south.

Black-tailed jackrabbit is a state Candidate species that uses grasslands and shrub-steppe habitats (WDFW 2023c). The species was documented east of the project site in 1996 (Kleinfelder and EnviroNet AeroSciences 1997) at an unspecified location along the Chevron Petroleum Products pipeline. Surveys on and near the Project site in 2001 did not detect the presence of black-tailed jackrabbits (SEA 2001). No PHS occurrence areas are mapped near the Project site (WDFW 2023a).

The state and federal Candidate species Washington ground squirrel is endemic to grassland and shrub-steppe habitats in southeastern Washington and northeastern Oregon (WDFW 2023c). Remaining populations in the state are found in Douglas, Grant, Lincoln, Adams, Franklin, and Walla Walla counties. The species is closely associated with silty loam soils, particularly those in the Warden series (USFWS 2004), not present at the Project site. Washington ground squirrels can be found in other soil Series including Quincy (USFWS 2004). Washington ground squirrel surveys on and near the Project site in 2001 and 2007 did not detect any evidence of individual ground squirrels or burrows (SEA 2001, 2007) and WDFW PHS data (WDFW 2023a) does not show any mapped occurrences in the Project vicinity.

Northern sagebrush lizard is a state Candidate species of sand dunes and open sandy areas within shrub-steppe habitat. The Project site is within the range of the species, although sightings have declined sharply since 2006 (WNHP et al. 2009). No occurrence areas are mapped in the Project vicinity by WDFW PHS (WDFW 2023a); however, potentially suitable habitat for the species is present.

Striped whipsnake is an extremely rare species, designated as a state Candidate, associated with rocky areas within sagebrush habitats (WNHP et al. 2009). Although the Project site is within the known range of this species, the majority of soils are sandy and rocky areas are limited; WDFW PHS mapping reports no occurrence areas (WDFW 2023a).

One WDFW priority habitat area for wildlife has been mapped in and adjacent to the project site (WDFW 2023a). This area, including all but the northernmost portion of the Project site and extending south and west of the Project, represents a known occurrence of ferruginous hawk.

The Project is located less than a quarter mile inland from the Columbia River, which is a migratory flyway for many bird species. The McNary National Wildlife Refuge (NWR) units at the Walla Walla River delta, along the eastern shore of Lake Wallula, and near Burbank, provide habitat for waterfowl and other bird species. Wintering waterfowl also use agricultural lands for forage during winter months. The Project site is not within the primary flyway, nor does it provide a major food source for migratory birds. However, many species of migratory birds pass through the area traveling to and from NWR lands, water bodies, and agricultural fields.

No major migration corridors for big game are known to exist at the Project site. Most white-tailed deer use is concentrated in the Walla Walla River corridor and along wooded portions of the Columbia River. Mule deer are typically found further inland in shrub-steppe habitats as well as draws and canyons. Mule deer are occasionally observed in and around the

Project site; however, no PHS mapped large concentrations of deer have been documented on the at the Project site or its immediate vicinity (WDFW 2023a).

3.0 Spring 2023 Field Surveys

A late-spring survey of the Project site was conducted to document the occurrence and distribution of rare plants and wildlife, and to assess the extent and condition of shrub-steppe habitat. An additional objective of the survey was to document the occurrence of weed species listed by Walla Walla County.

3.1 Target Plant Species and Priority Habitats

Data provided by the WNHP indicate that one special status plant species has been documented historically on the Wallula Gap Business Park property. This species, gray cryptantha, grows in loose, sandy soils and flowers in May and June. This was the primary target species of the rare plant survey. Other rare plant species with potential to occur based on habitat requirements and historical observations include beaked cryptantha and yellow wildrye (Table 1). All portions of the Project site with substantial cover (>5%) of sagebrush were included in the survey. Areas of open, unstabilized sand were noted during the survey.

3.2 Target Wildlife Species

Walkthrough surveys were conducted in the Survey Area for special status wildlife species that have potential to occur at the Project site (Table 1). Incidental sightings of wildlife and wildlife sign also were recorded during the surveys.

3.3 Survey Protocol

Pedestrian surveys of the Project site were conducted on May 16 and 17, 2023. The Survey Area and 15 individual subareas surveyed are presented in Figure 1. The mid-May survey period was appropriate for the identification the target species gray cryptantha, beaked cryptantha, and yellow wildrye. The majority of potentially occurring weed species also were identifiable at this time. The survey timing coincided with breeding periods for several special status wildlife species including western burrowing owl, sage thrasher, and black-tailed jackrabbit. The survey period coincided with post-breeding and pre-hibernation periods for Washington ground squirrel.

The Survey Area included all portions of the Project site mapped as disturbed shrub-steppe and presumptive shrub-steppe by WDFW (WDFW 2023a); irrigated agricultural lands were not surveyed. The intuitive controlled survey method (Whiteaker *et al*. 1998) was used to review the sites. Per this method, the surveyor meanders through the habitat, focusing attention on the portions of the site providing the most suitable habitat for the target survey species. Habitat exhibiting shrub-steppe characteristics of one or more layers of native perennial grasses and a distinct layer of shrubs including big sagebrush (*Artemisia tridentata*) was surveyed more intensively than habitat lacking native grass species and a distinct sagebrush component. In the vicinity of the historical sighting of gray cryptantha, a complete survey (100 percent coverage)

was conducted. A list of native and non-native plant species encountered during the survey was recorded.

The survey was conducted primarily during the morning hours, when wind speeds were less than 10 mph. Wildlife sign, including trails, scat, burrows and dens, was recorded in addition to sightings of live wildlife. Particular attention was paid to locating large burrows, such as those dug by badger, that may be used by burrowing owls, and smaller holes in loamy soil potentially used by Washington ground squirrel. The survey included listening for ground squirrel whistle calls.

3.4 Survey Results

3.4.1 Special Status Plants

Figure 2 displays the survey subareas and the locations of special status plants and selected weeds observed during the survey. A list of plant species observed during the field survey is presented in Table 2. Table 3 summarizes the vegetation types and acreage of each subarea. Appendix 2 includes a list of plants observed by survey subarea. The survey form is presented in Appendix 3 and photos of selected subareas are presented in Appendix 5.

One special status plant species, yellow wildrye (*Leymus flavescens*), was documented during the survey. A substantial population of this rhizomatous grass, occupying approximately 0.89 acres, is present in Subarea 1 in the southern portion of the Project site. A total of approximately 1,200 shoots were tallied in shrub-steppe habitat in five locations. Species associated with yellow wildrye include: cheatgrass (*Bromus tectorum*), big sage brush, Russian thistle (*Salsola tragus*), and green rabbitbrush (*Chrysothamnus viscidiflorus*).

Yellow wildrye is considered Endangered in Washington state, as its habitat, shifting sand dunes and disturbed sandy areas, has become greatly reduced due to transformation by human use and introduction of non-native weed species.

The location of a previous occurrence of gray cryptantha was thoroughly searched; no gray cryptantha plants were found. The area was described in 1980 as a sandy *Artemisia tridentata* community; currently the site supports a ground cover of dense cheatgrass, other non-native grasses and forbs, with scattered big sagebrush, green rabbitbrush, and gray rabbitbrush (*Ericameria nauseosa*).

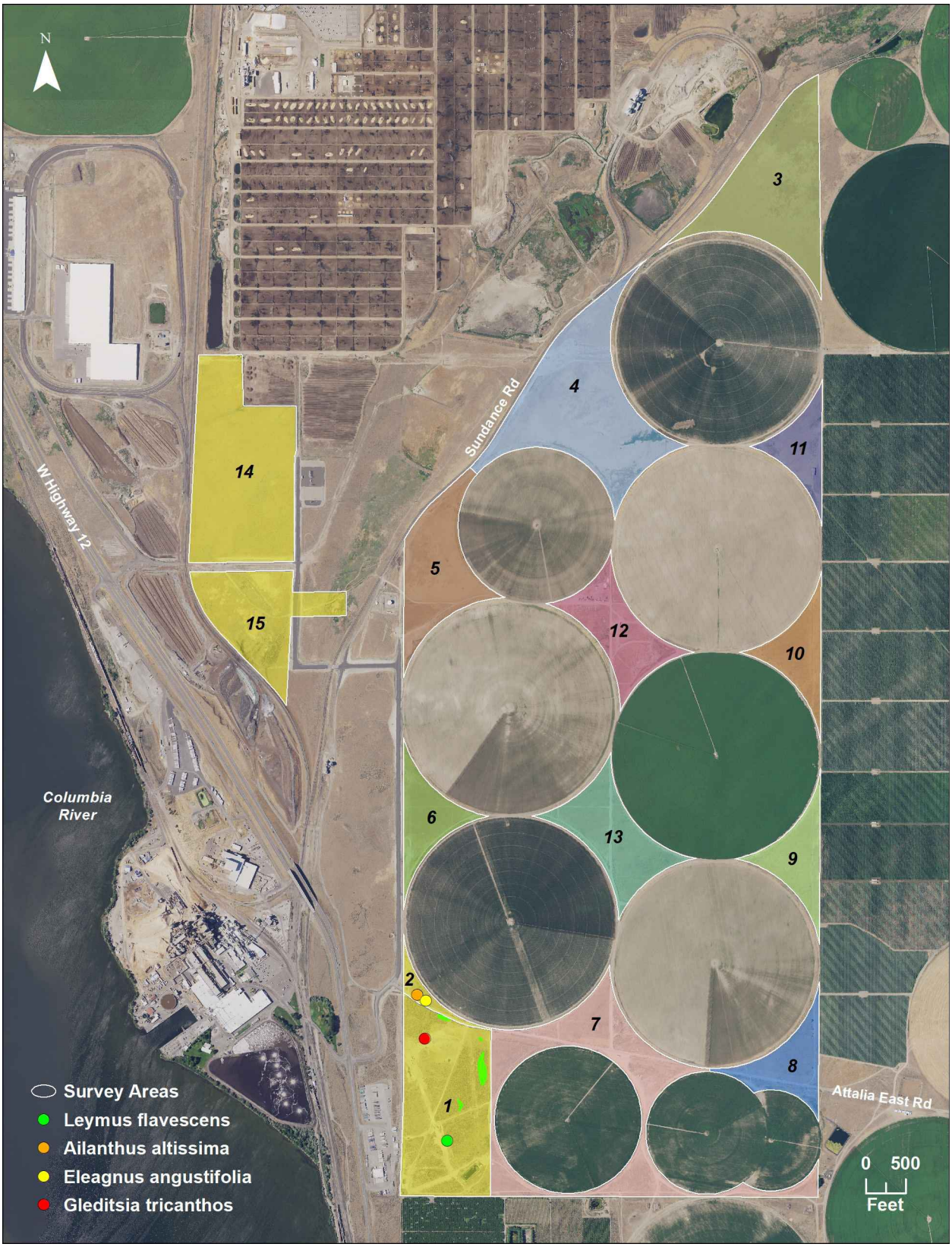

Figure 2. Special Status Plants and Weeds Observed in Survey Area

Table 2. Plant Species List for the Wallula Gap Business Park Survey Area

Scientific Name	Common Name	Introduced Species	Noxious Weed Class	Rare Plant Status
Achillea millefolium	common yarrow			
Achnatherum hymenoides	Indian ricegrass			
Agoseris heterophylla	annual agoseris			
Ailanthus altissima	**tree-of-heaven**	**I**	**C**	
Ambrosia acanthicarpa	bur ragweed			
Amsinckia lycopsoides	tarweed fiddleneck	I		
Artemisia dranunculus	tarragon			
Artemisia tridentata	big sagebrush			
Asclepias speciosa	showy milkweed			
Asparagus officinalis	asparagus			
Astragalus sclerocarpus	Dalles milk-vetch			
Astragalus succumbens	crouching milk-vetch			
Bromus tectorum	cheatgrass	I		
Centaurea diffusa	**diffuse knapweed**	**I**	**B-NonD**	
Centaurea solstitialis	**yellow starthistle**	**I**	**B-NonD**	
Chaenactis douglasii var. douglasii	hoary chaenactis			
Chenopodium album	lamb's quarters	I		
Chondrilla juncea	**rush skeletonweed**	**I**	**B-NonD**	
Chrysothamnus viscidiflorus	green rabbitbrush			
Clematis ligusticifolia	western clematis			
Crepis atribarba	slender hawksbeard			
Cymopteris terebinthina	turpentine wave-wing			
Dalea ornata	western prairie-clover			
Descurainia longipedicellata	narrow tansymustard			
Descurainia sophia	flixweed	I		
Dieteria canescens	hoary-aster			
Draba verna	spring whitlow-grass			
Eleagnus angustifolia	**Russian olive**	**I**	**C**	
Ericameria nauseosa	gray rabbitbrush			
Eriogonum niveum	snow desert buckwheat			
Erodium cicutarium	redstem filaree	I		
Gleditsia tricanthos	honey-locust	I		
Hesperostipa comata	needle and thread grass			
Holosteum umbellatum	jagged chickweed	I		
Hordeum murinum	smooth barley	I		
Lactuca serriola	prickly lettuce	I		
Ladeania lanceolata	scurf-pea			

Scientific Name	Common Name	Introduced Species	Noxious Weed Class	Rare Plant Status
Leymus flavescens	yellow wildrye			WA - Endangered
Lupinus pusillus	low lupine			
Oenothera pallida	pale evening primrose			
Onopordum acanthium	**Scotch thistle**	**I**	**B-NonD**	
Opuntia xcolumbiana	Columbia gorge pricklypear cactus			
Phacelia hastata var. hastata	silver-leaf phacelia			
Phlox longifolia	long-leaf phlox			
Plantago patagonica	woolly plantain			
Poa bulbosa	bulbous bluegrass	I		
Poa secunda	Sandberg's bluegrass			
Populus sp.	hybrid poplar	I		
Pseudoroegneria spicata	bluebunch wheatgrass			
Purshia tridentata	bitterbrush			
Rumex acetosella	sheep sorrel	I		
Rumex venosus	winged dock			
Salsola tragus	Russian thistle	I		
Secale cereale	**cereal rye**	**I**	**C**	
Sisymbrium altissimum	tumble mustard	I		
Sisymbrium loeselii	Loesel tumblemustard	I		
Sphaeralcea munroana	globe-mallow			
Sporobolus cryptandrus	sand dropseed			
Tragopogon dubius	western salsify	I		
Triteleia grandiflora var. grandiflora	Douglas' triteleia			
Vulpia bromoides	brome fescue	I		

Noxious weed species shown in **bold** typeface.

3.4.2 Priority Habitats

Two of the 15 subareas surveyed exhibit shrub-steppe characteristics (Table 3). A third subarea supports a variety of native species but lacks a well-developed shrub cover and native grass understory. The remaining subareas are dominated by non-native species and lack both a well-developed shrub cover and native grass understory.

Subarea 1, in the southwestern corner of the Project site, has the highest density of big sagebrush, the greatest cover of native grasses, and the highest number of species of native grasses and forbs in the Survey Area (Appendix 2). This subarea meets the WDFW definition of disturbed shrub-steppe, as numerous native perennial grasses and forbs are present in the understory of a conspicuous but discontinuous layer of sagebrush. Native grasses in the subarea include yellow wildrye, ricegrass (*Achnatherum hymenoides*), needle and thread grass

(*Hesperostipa comata*), Sandberg's bluegrass (*Poa secunda*), bluebunch wheatgrass (*Pseudoroegneria spicata*), and sand dropseed (*Sporobolus cryptandrus*). In addition to big sagebrush, native shrubs present in the subarea include both green and gray rabbitbrush and bitterbrush (*Purshia tridentata*). Native forbs in Subarea 1 include yarrow (*Achillea millefolium*), hoary chaenactis (*Chaenactis douglasii var. douglasii*), turpentine wave-wing *Cymopteris terebinthinus*), western prairie clover (*Dalea ornata*), spring whitlow-grass (*Draba verna*), pale evening primrose (*Oenothera pallida*), long-leaf phlox (*Phlox longifolia*), woolly plantain (*Plantago patagonica*), and winged dock (*Rumex venosus*). The non-native grasses cheatgrass and bulbous bluegrass, and several non-native weeds are also dominant components of the vegetation. This subarea appears to have received the least human disturbance of any location within the Survey Area. There is no evidence of recent irrigated farming and limited remains of building foundations. An irrigation pond is present in the southeast corner of the subarea and several unimproved roads are present.

In addition to its shrub-steppe characteristics, Subarea 1 has numerous small- to medium-sized patches of open sand habitat, consistent with its underlying sandy soils.

Table 3. Dominant Vegetative Cover and Area of Survey Subareas

Subarea	Dominant Vegetative Cover	Acres
1	Disturbed shrub-steppe	57.9
2	Non-native grasses and forbs	4.2
3	Non-native grasses and forbs	48.9
4	Non-native grasses and forbs	62.8
5	Non-native grasses and forbs	30.8
6	Non-native grasses and forbs	15.6
7	Non-native grasses and forbs	53.5
8	Non-native grasses and forbs	16.3
9	Non-native grasses and forbs	15.3
10	Non-native grasses and forbs	14.9
11	Non-native grasses and forbs	12.7
12	Non-native grasses and forbs	23.1
13	Non-native grasses and forbs	26.9
14	Remnant, highly disturbed shrub-steppe	66.4
15	Disturbed shrub-steppe	34.0

Subarea 15 is located in the western portion of the Survey Area. Although much of this subarea lacks cover of sagebrush, substantial patches of big sagebrush are present along the railroad tracks on the west side, near concrete foundations in the northeast portion of the subarea, and at the borrow pit in the southern portion of the subarea. Several species of native grasses and forbs are present. Along the north rim of the borrow pit, native grasses form a distinct layer alongside big sagebrush and both green and gray rabbitbrush. At this location, small areas of open sand are present and patches of moss-lichen crust have developed. Cheatgrass and non-native weedy species are common across the subarea.

Subarea 14, located south of the JR Simplot Company feedlot, is dominated by cheatgrass, bulbous bluegrass (*Poa bulbosa*), and non-native grasses and weeds. It also supports

gray and green rabbitbrush, Sandberg's bluegrass, bluebunch wheatgrass, and trace amounts of big sagebrush. Native forbs including prickly pear cactus (*Opuntia xcolumbiana*), long-leaf phlox, and globe-mallow (*Sphaeralcea munroana*) are present in small numbers. The majority of this subarea, with the exception of the southeast corner, appears to have burned within the last 10 years. The subarea does not appear to have been cultivated. The shrub-steppe habitat in this subarea has been extensively altered but not completely eliminated.

Subareas 3 and 4 at the north end of the Project site consist of former shrub-steppe habitat currently dominated by non-native weeds and forbs. Cheatgrass, yellow starthistle (*Centaurea solstitialis*), bulbous bluegrass, and cereal rye (*Secale cereale*) are the dominant species. Shrub cover is sparse and consists primarily of scattered gray and green rabbitbrush. Sandberg's bluegrass is present in scattered patches.

The remaining subareas surveyed at the Project site are corners between irrigated circles and are dominated by non-native species of grasses and forbs. Most of these subareas lacked a shrub component or supported sparse cover of green and gray rabbitbrush with infrequent big sagebrush. The dominant species in these subareas included cheatgrass, bulbous bluegrass, cereal rye, yellow starthistle, tumble mustards (*Sisymbrium altissimum and S. loeselii*) and Russian thistle.

Duneland and duneland complex soils are present at the Project site, particularly in Subarea 1. Historically, much of the Project site was likely covered by active to partially stabilized sand dunes. Large expanses of open, unstabilized sand are no longer present as irrigated agriculture and other land uses have contributed to stabilization of the dunes over time. In particular, the introduction of the invasive annual cheatgrass has resulted in the formation of a thick layer of 'thatch' over the sand surface, stabilizing the sand and modifying the vegetative community. Subarea 1, and to a lesser extent Subarea 15, still exhibit small- to medium-sized patches of open sand and support many native plant and wildlife species characteristic of inland dunes.

3.4.3 Noxious Weeds

No Class A or Class B noxious weeds designated for control were recorded during the survey. Several Class B non-designate weeds and Class C weeds were observed (Table 2 and Appendix 2).

Class B non-designate weeds at the Project site included yellow starthistle, which is widespread and dominant across the Survey Area. Rush skeletonweed (*Chondrilla juncea*) and diffuse knapweed (*Centaurea diffusa*) were present in several locations. Scotch thistle (*Onopordum acanthium*) was present in subareas 1, 14, and 15, as well as along adjacent roadsides.

Class C weeds in the Survey Area include cereal rye, which was present in every subarea, and the dominant in most of the small 'corner' subareas surrounding irrigated crops. Cereal rye appeared to be invading into disturbed shrub-steppe habitats, as large patches were observed hundreds of feet from cultivated lands. Two Class C tree species were observed, both in Subarea

2, located just north of Attalia Road (Figure 2). A small group of Russian olive (*Eleagnus angustifolia*) seedlings was present; this is a non-native weedy small tree that is invasive in riparian areas. A single sapling of tree of heaven (*Ailanthus altissima*) was observed; this species has become an invasive dominant along many reaches of the mid- and lower Columbia River in recent years.

A seedling honey locust (*Gleditsia tricanthos*) was observed in the northern part of Subarea 1 (Figure 2). This species is not classified as a noxious weed in Washington, but has the potential to become invasive.

3.4.4. Wildlife

A list of wildlife species and wildlife sign observed during the field surveys is presented in Table 4. Appendix 4 presents field notes regarding wildlife observations.

Meadowlark, California quail, mourning dove, and common raven were present across the Project site, flying, on the ground, and/or perched on utility lines. A kestrel was observed in the vicinity of an installed nest box in Subarea 10. A lark sparrow was observed singing at the top of a sagebrush and a single ring-necked pheasant was heard calling in Subarea 1. Barn and bank swallows were actively foraging across the Project site, particularly over the irrigated crops. The steep excavated banks of the borrow pit supported numerous bank swallow nest cavities and large rocks on a ledge below the rim of the west wall were heavily whitewashed, and appear to be used by raptors or other large birds. The majority of birds observed at the site, including unidentified species of gulls, American white pelicans, Canada geese, and red-tailed hawk, were flying over the Project site, but not landing.

Mammals and mammal sign observed at the site included numerous Ord's kangaroo rat burrows in open, sandy soil patches of Subarea 1. A single kangaroo rat was unintentionally flushed from its burrow at the south end of the subarea. Kangaroo rat burrows were also numerous in Subarea 15 in the vicinity of the borrow pit, and were commonly observed along the edges of unsurfaced roads within the Project site. A single rabbit, presumably a Nuttall's cottontail by the size, was flushed in Subarea 1; pellets of this species were observed in the subarea as well. Coyote scat and numerous trails were observed in Subarea 1. No fresh or recent badger dens or ground squirrel dens were observed at the Project site, and surprisingly little sign of mammalian wildlife was observed.

One small unidentified lizard was flushed in Subarea 1.

Table 4. Wildlife Species Observed on or adjacent to the Wallula Gap Business Park

Common Name	***Scientific Name***
American crow	*Corvus brachyrhynchos*
American goldfinch	*Spinus tristis*
American kestrel	*Falco sparverius*
American robin	*Turdus migratorius*

Common Name	***Scientific Name***
American white pelican	*Pelecanus erythrorhynchos*
Bank swallow	*Riparia riparia*
Barn swallow	*Hirundo rustica*
California quail	*Callipepla californica*
Common raven	*Corvus corax*
Canada goose	*Branta canadensis*
Coyote*	*Canis latrans*
Dark-eyed junco	*Junco hyemalis*
European starling	*Sturnus vulgaris*
Killdeer	*Charadrius vociferus*
Lark sparrow	*Chondestes grammacus*
Mourning dove	*Zenaida macroura*
Nuttall's cottontail*	*Sylvilagus nuttallii*
Ord's kangaroo rat	*Dipodomys ordii*
Red-tailed hawk	*Buteo jamaicensis*
Ring-necked pheasant	*Phasianus colchicus*
Song sparrow	*Melospiza melodia*
Unidentified gulls	*Larus sp.*
Western meadowlark	*Sturnella neglecta*
Unidentified lizard	-

* sign observed only

4. Summary of Botanical and Wildlife Resources

4.1 Botanical Resources and Priority Habitats

The botanical resources of the Project site reflect the prevalent land use - irrigated agriculture - of the past several decades. Approximately 977 acres of the site is currently used for center-pivot irrigation. The remaining 483 acres are comprised of the corners adjacent and between the irrigated lands and disturbed shrub-steppe habitats that do not appear to have been cultivated. Approximately 92 acres of the disturbed shrub-steppe habitats still exhibit the shrub-steppe characteristics of one or more layers of native perennial grasses and a layer of open sagebrush.

Yellow wildrye, a Washington State Endangered plant species, was documented at the Project site, occupying an area of approximately 0.89 acres in Subarea 1. This species is associated with sandy soils and sand dunes.

Shrub-steppe habitat, considered a priority habitat by the state, is present in subareas 1 (58 acres) and 15 (34 acres). Shrub-steppe habitat in Subarea 14 (66 acres) is extensively disturbed and modified but exhibits remnant populations of native shrubs and forbs. Subareas 3 and 4 are extensively disturbed shrub-steppe habitat dominated by non-native weeds and forbs, lacking a well-developed native grass understory and supporting very sparse cover of shrubs

(112 acres). The remaining subareas in the Survey Area (213 acres) do not exhibit shrub-steppe characteristics.

Inland dunes are also a state priority habitat. Duneland and duneland complex soils are present at the Project site. Although large expanses of shifting dunes are not present at the Project site, areas of open, sandy soil remain, particularly in subareas 1 and 15.

No Class A or Class B-designate noxious weed species were observed during the survey. Four Class B non-designate and three Class C noxious weed species were recorded. Management of these species is coordinated by the Walla Walla County Noxious Weed Control Board (WWNWCB 2023).

4.2 Wildlife Resources

Wildlife use of the Project site during the survey was dominated by avian species common to agricultural and shrub-steppe habitats. Two species of raptors were observed. Several bird species from the nearby Columbia River were observed flying over the site. Mammalian use of the site included numerous burrows of Ord's kangaroo rat, particularly in subareas 1 and 15, but absence of American badger, which would be expected to occur in the locale. Coyote trails and scat were observed, primarily in the shrub-steppe habitat in Subarea 1.

The borrow pit in Subarea 15 supported a substantial array of bank swallow nesting cavities; no birds were observed entering or leaving the cavities and it is unknown whether the site is active at this time.

Two wildlife species listed as priority species by WDFW were documented. American white pelican were observed flying over the site. This species nests on islands in Lake Wallula on the Columbia River, but does not directly use the Project site. Ring-necked pheasant was detected in Subarea 1. This non-native species is PHS-listed for its game value; no WDFW management areas for pheasant are located on or near the Project site. No other PHS-listed wildlife species were observed during the survey.

4.3 Notable Botanical and Wildlife Habitats

The majority of the Project site is currently used for irrigated agriculture and/or has been modified by adjacent agricultural activities and other land uses. Two subareas, discussed below, exhibit relatively high quality for botanical and wildlife resources. A third subarea, Subarea 14, has been greatly altered, but retains remnant shrub-steppe characteristics that give it increased quality for botanical and wildlife resources compared to the agriculturally-modified areas.

Subarea 1 is notable for several reasons. It supports shrub-steppe habitat with many native species of grasses, forbs and shrubs, including the state Endangered plant yellow wildrye. In addition, it retains numerous small- to medium-sized open sandy soil patches, with associated plants and wildlife. The subarea supported the highest diversity of native plant species and wildlife observed during the survey.

Subarea 15 is notable for its shrub-steppe habitat with many native grasses, forbs and shrubs and exposed patches of sandy soil. In addition, the walls of the borrow pit support raptors and a substantial bank swallow colony. The borrow pit may also provide good habitat for reptiles.

Subareas 1 and 15 provide the highest wildlife and botanical habitat values at the Project site. These two subareas are the highest priority for protection and/or enhancement in the future, in relation to the Washington Natural Heritage Program and Washington Department of Fish and Wildlife Priority Habitats and Species Program.

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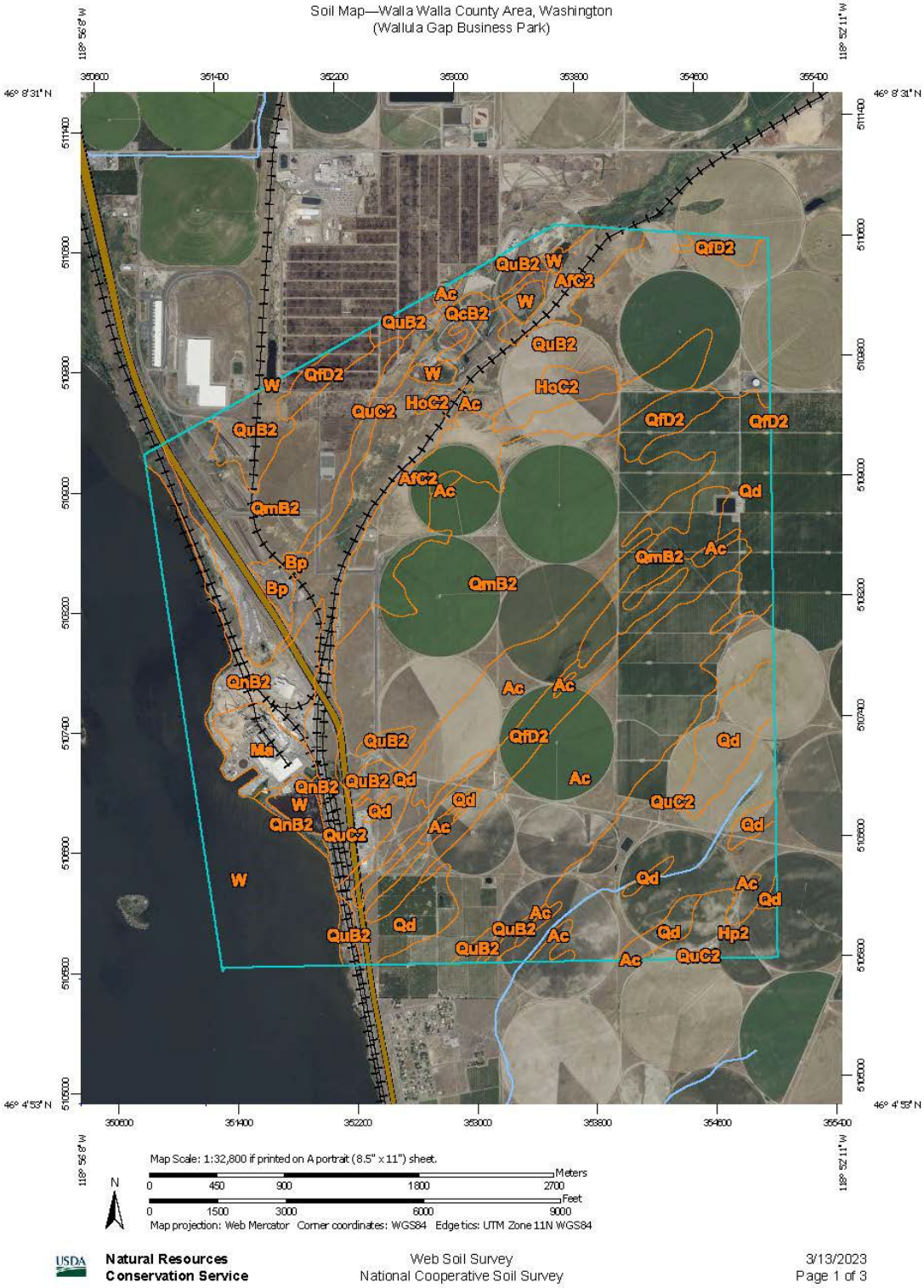
Appendix 1. Soil Survey map



Soil Map—Walla Walla County Area, Washington
(Wallula Gap Business Park)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:31,700.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Walla Walla County Area, Washington
Survey Area Data: Version 7, Sep 8, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 25, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Ac	Active dune land	641.6	14.7%
AfC2	Adkins loamy fine sand, 0 to 15 percent slopes, eroded	271.8	6.2%
Bp	Borrow pits	20.7	0.5%
HoC2	Hezel loamy fine sand, 0 to 15 percent slopes, eroded	43.1	1.0%
Hp2	Hezel-Quincy complex, eroded	56.9	1.3%
Ma	Made land	63.7	1.5%
QcB2	Quincy complex, 0 to 8 percent slopes, eroded	22.9	0.5%
Qd	Quincy-Duneland complex	388.4	8.9%
QfD2	Quincy fine sand, 0 to 30 percent slopes, eroded	239.4	5.5%
QmB2	Quincy loamy fine sand, moderately deep over coarse sand, 0 to 8 percent, eroded	955.4	21.9%
QnB2	Quincy loamy fine sand, moderately deep over gravel, 0 to 8 percent slopes, eroded	131.3	3.0%
QuB2	Quincy loamy fine sand, 0 to 8 percent slopes, eroded	658.3	15.1%
QuC2	Quincy loamy fine sand, 8 to 15 percent slopes, eroded	487.9	11.2%
W	Water	386.7	8.9%
Totals for Area of Interest		**4,368.1**	**100.0%**

Appendix 2. Plant Species List, Wallula Gap Business Park Survey Area

Scientific Name	Common Name	Introduced Species	Noxious Weed Class	Rare Plant Status	1-Former BC Office Site	2	3	4	5	6	7	8	9	10	11	12	13	14	15-Borrow Pit vicinity
Achillea millefolium	common yarrow				x													x	x
Achnatherum hymenoides	Indian ricegrass				x														
Agoseris heterophylla	annual agoseris				x														
Ailanthus altissima	**tree-of-heaven**	I	C			x													
Ambrosia acanthicarpa	bur ragweed				x														
Amsinckia lycopsoides	tarweed fiddleneck	I			x				x								x	x	x
Artemisia dranunculus	tarragon				x														
Artemisia tridentata	big sagebrush				x		x											x	x
Asclepias speciosa	showy milkweed				x														
Asparagus officinalis	asparagus				x														
Astragalus sclerocarpus	Dalles milk-vetch				x														x
Astragalus succumbens	crouching milk-vetch				x													x	x
Bromus tectorum	cheatgrass	I			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Centaurea diffusa	**diffuse knapweed**	I	B-NonD									x							
Centaurea solstitialis	**yellow starthistle**	I	B-NonD		x		x	x	x	x		x	x	x	x			x	x
Chaenactis douglasii var. douglasii	hoary chaenactis				x														x
Chenopodium album	lamb's quarters	I			x														
Chondrilla juncea	**rush skeletonweed**	I	B-NonD		x													x	x
Chrysothamnus viscidiflorum	green rabbitbrush				x		x											x	x
Clematis ligusticifolia	western clematis					x													
Crepis atribarba	slender hawksbeard				x														
Cymopteris terebinthina	turpentine wave-wing				x														
Dalea ornata	western prairie-clover				x														
Descurainia longipedicellata	narrow tansymustard				x														
Descurainia sophia	flixweed	I																	
Dieteria canescens	hoary-aster				x														
Draba verna	spring whitlow-grass				x														
Eleagnus angustifolia	**Russian olive**	I	C			x													x
Ericameria nauseosa	gray rabbitbrush				x		x											x	x
Eriogonum niveum	snow desert buckwheat				x														
Erodium cicutarium	redstem filaree	I			x		x	x	x		x	x	x	x	x	x		x	x

Scientific Name	Common Name	Introduced Species	Noxious Weed Class	Rare Plant Status	1- Former BC Office Site	2	3	4	5	6	7	8	9	10	11	12	13	14	15- Borrow Pit vicinity
Gleditsia tricanthos	honey-locust	I			x														
Hesperostipa comata	needle and thread grass				x														x
Holosteum umbellatum	jagged chickweed	I			x														
Hordeum murinum	smooth barley	I																x	x
Lactuca serriola	prickly lettuce	I			x														
Ladeania lanceolata	scurf-pea				x														
Leymus flavescens	yellow wildrye			WA - Endangered	x														
Lupinus pusillus	low lupine				x														
Oenothera pallida	pale evening primrose				x														x
Onopordum acanthium	**Scotch thistle**	I	B-NonD		x													x	x
Opuntia xcolumbiana	Columbia gorge pricklypear cactus																	x	
Phacelia hastata var. hastata	silver-leaf phacelia				x														
Phlox longifolia	long-leaf phlox				x		x											x	x
Plantago patagonica	woolly plantain				x														x
Poa bulbosa	bulbous bluegrass	I			x		x	x	x	x	x	x	x	x	x			x	x
Poa secunda	Sandberg's bluegrass				x						x							x	x
Populus sp.	hybrid poplar	I										x	x	x	x				
Pseudoroegneria spicata	bluebunch wheatgrass				x													x	x
Purshia tridentata	bitterbrush				x		x												
Rumex acetosella	sheep sorrel	I			x													x	
Rumex venosus	winged dock				x														
Salsola tragus	Russian thistle	I			x							x					x	x	x
Secale cereale	**cereal rye**	I	C		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Sisymbrium altissimum	tumble mustard	I			x				x								x	x	x
Sisymbrium loeselii	Loesel tumblemustard	I			x														
Sphaeralcea munroana	globe-mallow																	x	x
Sporobolus cryptandrus	sand dropseed				x														
Tragopogon dubius	western salsify	I			x													x	x
Triteleia grandiflora var. grandiflora	Douglas' triteleia				x														x
Vulpia bromoides	brome fescue	I			x														

Appendix 3. Special Status Plant Daily Survey Form

Special Status Plant Daily Survey Form

Project/Site Name: Wallula Gap Bus. Park Survey Date (mm/dd/yyyy): 16+17 May 2023

Subarea Name: Parcels 1-16 USGS Quad Name: WA Wallula, WA Humorist

Surveyor(s): K. Smayda, K. Beck Legal: T 7N R 31E S (1/41/4) 11, 2

Estimate of survey area size: _____ T 7N R 31E S (1/41/4) NE¼ 10

Survey Intensity: Int. controlled T 7N R 31E S (1/41/4) E½ 3

Total time spent on site: 10.5 hrs T 8N R 31E S (1/41/4) 35

Attach map/aerial photo of survey site and route followed.

Check one:

____ The following special status plants were located (list by species and Site ID's):

Leymus flavescens	Parcel 1 - former Boise Cascade office

____ No special status plants were found.

Check one:

✓ Today's survey was conducted at the proper time of year to identify ALL potential special status plant species. The route indicated in bold on the attached survey map has been fully surveyed at the intensity level indicated above. See Fig 1 of Report - 15 subareas surveyed.
OR...

____ Additional surveys of this area are needed. The following habitats were located that need to be surveyed at a different time of year (Note - this is not a list of all habitats on the site):

Habitat	Potential Species	Time Identifiable
dry, open areas in S-S	Astragalus misellus v. pauper	April - June
sandy soils + dunes	Cryptantha leucophaea	May - June
sand dunes, dist. sand	Leymus flavescens	May - July

COMMENTS: (threats, "unique habitats", uncommon or special interest plants, forage, weeds, revegetation, cultural resources, etc.)

1980 occurrence of Cryptantha leucophaea revisited. No plants found. Habitat lacking unstabilized sandy soils; dominated by cheatgrass-thatch (Bromus tectorum) and the cleabo weed Salsola tragus, non-native Amsinckia lycopsoides.

For each Plant Association or Non-Forested Habitat, list up to six of the dominant tree, shrub and herb species.

Plant Association _____ **or Non-Forested Habitat** Dist. areas in corners outside
Special Features (wetlands, streams, legacy trees, etc.): _____ Irrigated Ag.
Approximate Time in Habitat 3.0

Tree Species	Shrub Species	Herb Species	Non-Vasc. Species
—	Trace cover:	Secale cereale (I)	—
	Ericameria nauseosum	Bromus tectorum (I)	
	Chrysothamnus viscid.	Centaurea solstitialis (I)	
		Poa bulbosa (I)	

I = introduced species

Plant Association _____ **or Non-Forested Habitat** Disturbed Shrubsteppe
Special Features (wetlands, streams, legacy trees, etc.): _____
Approximate Time in Habitat 7.5

Tree Species	Shrub Species	Herb Species	Non-Vasc. Species
—	Artemisia tridentata	Bromus tectorum (I)	
	Purshia tridentata	Secale cereale (I)	
	Ericameria nauseosus.	Salsola tragus (I)	
	Chrysothamnus viscid.	Centaurea solst. (I)	
			Small patches cryptobiotic mat - Parcels 1, 15

Plant Association _____ **or Non-Forested Habitat** _____
Special Features (wetlands, streams, legacy trees, etc.): _____
Approximate Time in Habitat _____

Tree Species	Shrub Species	Herb Species	Non-Vasc. Species

Plant Association _____ **or Non-Forested Habitat** _____
Special Features (wetlands, streams, legacy trees, etc.): _____
Approximate Time in Habitat _____

Tree Species	Shrub Species	Herb Species	Non-Vasc. Species

Special Status Plant Daily Survey Form, Site/Subarea: Wallula Gap Business Park date: 5/16+17/2023 p.2

Appendix 4. Wildlife Observations

Incidental Wildlife Observation Form Project: WALLULA GAP BUSINESS PARK Sheet 1 of 2

Date: 5/16/2023 Temperature: 80-90° Cloud cover %: — Observer(s): K. SMAYDA, K. BECK

Wind speed / direction: 5-10 SSW Precip.: — Location: Parcels 1-13

Time	Species	No.	Age	Sex	Behavior	Sign	Habitat	Notes:
					hunting foraging/feeding territorial calling flyover / flyin aggressive interactions perching other	tracks scat feathers eggshells prey remains seed/plant remains runways/trails	Ag DSS OTHER	
07:55	Cal quail	2	A		foraging		Road	Parcel 1; BC towers office
	Red tail hawk	1	A		flying		DSS/Ag	"
08:10	Kang. Rat	—	—		—	burrows, tracks	DSS	- sand patches; common open patches ~2x3'
08:57	Meadow lark	1	A		singing, perched		DSS	
09:12	Mourn. dove	1	A		flying		DSS	- flyover
09:35	Kang Rat	—	—			burrows, tracks	DSS	burrows sand patches, S end 50-100'
09:35	W. Pelican	3	A		flying		DSS	flyover
10:02	N. cottontail	1	UNK		disturbed		DSS	Sagebrush
10:30	Barn swallows	15	A		foraging		DSS	group of swallows feeding
11:45	unk gulls	5	A		flying		DSS+Ag	flyover
11:45	raven	1	A		flying		DSS+Ag	flyover
12:35	raven	2	A		flying		DSS/Ag	flyover
12:42	unk gulls	3	A		flying		DSS/Ag	flyover
13:20	kestrel	1	A		perched		Ag	Parcel 10; kestrel + nest box
								Parcel 11; 2nd kestrel box, no birds
14:00	bank swall.	10	A		foraging			Parcel 11; bank swallows
14:15	END				several doves	mourning doves		
						ravens		
						w pelican	flyover	
						unk. gulls		
						cal quail	- roadside	

Incidental Wildlife Observation Form Project: WALLULA GAP BUSINESS PARK Sheet 2 of 2

Date: 5/17/2023 Temperature: 74-95 Cloud cover %: 1-10% Observer(s): K. Smayda, K. Beck

Wind speed / direction: 5-10, S Precip.: ——— Location: Parcels 14 – 16, W. side Parcel 1 – revisit

Time	Species	No.	Age	Sex	Behavior (hunting, foraging/feeding, territorial calling, flyover / flyin, aggressive interactions, perching, other)	Sign (tracks, scat, feathers, eggshells, prey remains, seed/plant remains, runways/trails)	Habitat (Ag, DSS, OTHER)	Notes:
7:50	unk gulls	10			flying		DSS	flyover
	circling	2			flying		DSS	flyover
	Canada geese	10			flying		DSS	flyover
	meadowlark	1			singing		DSS	perched on wire, rd
08:42	bee/fly or bee?	1			foraging		DSS	unk species of bee/fly or bee foraging w/in Sphaeralcea blooms.
								Very few insects observed –
08:55	k-rat	—			—	dens, tracks	DSS	S. end of 14, near SDO ARTRI
09:05	bank swallow				—			Presumed bank swallow burrows in N + W walls of borrow pit on parcel 15
								no birds observed.
9:05	unk raptor					white wash		Rocks + cliff wall w/ heavy white wash; west wall of borrow pit.
	Several	2105			raven			
					mourning dove			
					meadowlark			
					W. pelican: flyover			
10:10								Parcel 1 Revisit
10:53	Pheasant	1	A		calling/ flushed			N ½ of parcel; bird not obs.
11:10	Kang. Rat	1	A					1 k-rat flushed from den;
11:42	coyote	—				scat?		S. of cross road.
11:35	cat-dom.				deceased —	→		central portion of parcel; 1 location
10:58	lark sparrow	1	A		singing		DSS	in sagebrush; auditory obs.

Appendix 5. Site Photos

Subarea 1-01. Overview, south to north

Subarea 1-02. Native big sagebrush, native winged dock, cheatgrass and open sandy soil

Subarea 1-03. Yellow wildrye with native big sagebrush and cheatgrass

Subarea 1-04. Ord's kangaroo rat burrows and tracks in open sand

Subarea 1-05. Moderate sized patch of open, unstabilized sand

Subarea 1-06. Native big sagebrush and bunchgrasses, cheatgrass, and open sand along power line ROW

Subarea 3-01. Yellow starthistle, cheatgrass, bulbous bluegrass and scattered rabbitbrush

Subarea 6-01. Cereal rye

Subarea 8-01. Cereal rye, tarweed fiddleneck, cheatgrass, and hybrid poplar in distance

Subarea 14-01. Highly altered shrub-steppe habitat dominated by non-native grasses with scattered native forbs and rabbitbrush

Subarea 15-01. Borrow pit overview with cheatgrass and native shrubs

Subarea 15-02. Shrub-steppe habitat with native forbs and shrubs, north of borrow pit

Subarea 15-03. Native *Astragalus, Chaenactis*, and *Sphaeralcea* with cryptobiotic soil crust, north of borrow pit

Subarea 15-04. Bank swallow nest cavities and whitewashed rocks on borrow pit wall