WETLAND DISCIPLINE REPORT

Westport Golf Links
Westport Light State Park

Westport, Grays Harbor County, Washington

AECOM Project Number:60654963

Prepared By
AECOM
Seattle, Washington

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Executive Summary

Washington State Parks and Recreation Commission (WSPRC), which manages the Westport Light State Park within the City of Westport, Washington, is considering a third-party proposal to establish an 18-hole links-style golf course within the park. The proposal, known as Westport Golf Links, would also include a clubhouse and maintenance and lodging facilities.

The purpose of this report is to evaluate potential direct and indirect impacts to wetlands from construction and operation of the proposed golf course and associated facilities. Impacts are assessed based on preliminary conceptual designs provided by the golf course proponent, which include two alternative footprints. The report also summarizes proposed or recommended mitigation measures to avoid, minimize, or restore in place wetland impacts, as well as opportunities for off-site compensatory mitigation.

Existing environmental conditions are summarized based on recent wetland delineations, vegetation surveys, wildlife habitat assessments, and surface and groundwater investigations. Approximately 346 acres of wetland mosaic, 26 acres of coastal willow swamp, 21 acres of red alder wetland forest, and 5 acres of small individual wetlands occur in the project area. The mosaic area is predominantly forested with shore pine and is estimated at 68 percent wetland and 32 percent upland based on transect surveys conducted during the delineations. Mosaic wetlands and associated coastal willow and red alder wetlands are rated as Category I based on special characteristics (larger interdunal wetlands with high habitat functions). Individual interdunal wetlands are rated as Category III or IV depending on their size.

The wetlands and buffers are generally in good condition in the southern half of the park. Large portions of the northern half of the park were cleared and graded approximately 15 years ago for the initial development of a golf course. Disturbed buffers have been invaded by Scotch broom, and some of the wetlands continue to show evidence of clearing or grading.

The Westport Golf Links development will potentially impact up to 53.3 acres of interdunal wetlands, including:

- 26.4 acres for the 18-hole golf course
- 17.3 acres for the par-3 course
- 4.3 acres for the practice range
- 2.9 acres for golf operations
- 2.4 acres for interior trails

This includes approximately 20 percent of the wetland mosaic, 100 percent of the Category III individual wetlands, 82 percent of the Category IV individual wetlands, 0.1 percent of the coastal willow swamp, and less than 0.1 percent of the red alder wetland forest. In addition, 111 acres of wetland buffer would be permanently impacted for construction.

Potential indirect impacts and operational impacts associated with the development include:

- Lowering of the wetland water table during the wet season and associated shifts in vegetation
- Water quality impacts associated with fertilizer and pesticide applications
- Fragmentation and impairment of wildlife habitat

The project will need to be designed to meet mitigation sequencing criteria. Several significant location and design alternatives will allow for avoidance, minimization, and restoration in-place of wetlands in the project area. Monitoring will also be critical in identifying and avoiding or minimizing indirect hydrology, water quality, and habitat impacts.

The Restoration Feasibility Study prepared for the project outlines some important steps that can be taken to incorporate wetland preservation, creation, restoration, and enhancement into the golf course design and operation, some of which may generate wetland or buffer mitigation credit. However, off-site compensatory mitigation will be required to mitigate for the direct and indirect wetland and buffer impacts. Use of wetland mitigation bank credits is one option, but the mitigation bank in Ocean Shores will not have sufficient credits for this project. Permittee-responsible mitigation would be the only other alternative. Based on published agency guidance a combination of mitigation methods, potentially including onsite and offsite wetland preservation and wetland creation or re-establishment, would be necessary to compensate for impacts to existing wetlands.

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Acronyms and Abbreviations

Ecology	Washington State Department of Ecology
GPS	global positioning system
GIS	geographic information system
HGM	hydrogeomorphic [wetland classification]
PEM	palustrine emergent
PFO	palustrine forested
PSS	palustrine scrub-shrub
RCA	Recreation Concession Area
USACE	US Army Corps of Engineers
WSPRC	Washington State Parks and Recreation Commission
WMC	Westport Municipal Code

1. Introduction

Washington State Parks and Recreation Commission (WSPRC), which manages the Westport Light State Park in the city of Westport, Washington, is considering a third-party proposal to establish an 18-hole links-style golf course in the park. The approximately 600-acre park is mostly undeveloped and considered underused. The proposal, known as Westport Golf Links, would also include a clubhouse and maintenance and lodging facilities on an adjacent 23-acre parcel owned by the City.

In 2016, WSPRC approved development of Recreation Concession Areas (RCAs) at the park and is currently developing a Master Plan to guide development, which includes extensive coastal sand dunes and interdunal wetlands. AECOM previously prepared wetland assessment reports for both the park (AECOM 2021a) and the city parcel (AECOM 2022a).

The purpose of this report is to evaluate potential direct and indirect impacts to wetlands from construction and operation of the proposed golf course and associated facilities. Impacts are assessed based on preliminary conceptual designs provided by the golf course proponent, which include two alternative footprints. A summary of proposed or recommended mitigation measures to avoid, minimize, or restore temporary or permanent wetland impacts is also provided in this report.

2. Project Description

2.1. Purpose and Need

According to the project proponent, Westport Golf, Inc., the project purpose is to construct a championship level Scottish links-style golf course and hotel in the park. A links golf course "applies explicitly to land in seaside areas that features sandy soil, dunes, and undulating topography" (Westport Golf 2022).

The project would meet the need for an authentic links golf course on the Washington coast. Currently, the only true links courses on the West Coast are in Bandon, Oregon, 300 miles south of the project site.

2.2. Project Location

The proposed project is within the park and an adjacent City-owned parcel, in the city of Westport, Grays Harbor County, Washington. The site is at the northern end of a narrow peninsula, with the Pacific Ocean to the west and Grays Harbor to the north and east (**Figure 1**).

2.3. Proposed Alternatives

Westport Golf, Inc. has provided a preliminary conceptual design prepared by David McLay Kidd at DMK Golf Design. DMK Golf Design also designed the Scottish links course at Bandon Dunes on the Oregon Coast. The philosophy behind the current design is to attempt to create a course as natural and sustainable as possible within the given landscape. In a traditional links course, the design seeks to minimize alterations to the existing coastal dune landscape and vegetation. Westport Golf Links attempts to focus most disturbance to either previously disturbed areas in the northern half of the park, or in uplands on either side of the large wetland mosaic.

Figure 1. Vicinity Map

The design was guided by several constraints, identified in the Restoration Feasibility Study (Rossman and Dunwiddie 2021):

- Minimal filling of wetlands – WSPRC has indicated that any impacts to wetlands must be unavoidable, capable of being mitigated, and consistent with the adopted park plan. As a result, the design maximizes the use of uplands for the golf course.
- Need 18 holes of golf – according to the project proponent, a smaller course would not be financially viable.
- Year-round play – the course needs to provide year-round play in order to be financially viable.
- No removal of beachside foredune stabilized by European beachgrass – removal or destabilization of the foredune could result in increased ocean flooding, blowing sand, and sand deposition in the deflation plain (with potential impacts to wetlands).

There are two alternative designs; however, they are exactly the same with respect to the layout of the golf courses and most associated facilities. The main components of the development include:

- Main links 18-hole golf course (160 acres)
- Par-3 golf course (40 acres)
- Practice range (10.5 acres)
- Expanded parking areas on northern side of park
- Upgraded paved trail along top of primary dune (1.3 miles)
- Comfort stations
- “Surf Shack” hangout structure
- Golf operation facilities, including clubhouse, maintenance building, and lodging (10 to 15 acres) on City of Westport parcel

The two alternatives differ only on the extent of interior connector trails. The trails are 8-foot wide earthen footpaths that connect parts of the golf course with parking, lodging facilities, and restrooms. The “small footprint” option has approximately 1.87 miles (1.8 acres) of interior footpaths, while the “large footprint” option has approximately 3.53 miles (3.4 acres) of interior footpaths. For purposes of calculating wetland and buffer impacts (Section 4), the “large footprint” design was used.

2.4. Map of Alternatives

Preliminary conceptual designs of the two project alternatives are provided in **Appendix A**.

3. Existing Conditions

A summary of information contained in the wetland assessment reports (AECOM 2021a, 2022a), vegetation surveys (AECOM 2017; 2021b), wildlife habitat assessment (AECOM 2021c) is provided in this section.

3.1. Study Area

The study area includes the park east of the primary dune and paved footpath and south of Jetty Haul Road (State Park Access Road), which is approximately 560 acres. It also includes a 23-acre parcel on the east side of the park that is owned by the City of Westport (**Figure 2**). The study area is bordered by Jetty Haul Road (State Park Access Road) on the north; West Ocean Avenue on the south; North Forrest Street and West Wilson Road along the northeast; and Grays Harbor Lighthouse along the southeast.

The study area is mostly undeveloped. However, the northern half of the park includes extensive areas that were disturbed approximately 15 years ago (prior to inclusion in the park) for the development of a golf course. The project, known as Links at Half Moon Bay, was abandoned prior to completion.

3.2. Landscape Setting

The study area is near the Pacific Ocean, where westerly winds and storms have created an extensive system of sand dunes. The dunes have taken on their own unique morphology depending on sediment sources and sizes, wind patterns, and degree of stabilization of the dunes (Wiedemann 1984; Schultz 1990). This section of the coast is very dynamic, with extensive periods of both accretion and erosion. When the Grays Harbor Lighthouse was constructed in 1898, it was 300 feet from the water's edge (Westport South Beach Historical Society 2022). In 1990, it was approximately 3,000 from the high tide line. Today it is approximately 2,500 from the high tide line. The interdunal ecosystems are relatively young, especially those closest to the shoreline. The introduction of European beachgrass (*Ammophila arenaria* ssp. *arenaria*) and American beachgrass (*Ammophila breviligulata* ssp. *breviligulata*) has influenced the stabilization of the dunes and subsequent colonization by woody plants, especially shore pine (*Pinus contorta* var. *contorta*).

The primary dune east of the beach (foredune) is approximately 20 to 30 feet high in the study area. Sand accumulates in the vegetated parts of the foredune. The largest wetlands in this system occur as a result of wind erosion on the leeward side of the foredune in the area known as the deflation plain. Erosion generally occurs to the elevation of the seasonal high water table because moist sands are less susceptible to erosion and vegetation can colonize these areas. Wetlands also occur in swales between dune ridges, which are remnants of other dune forms, such as successive foredunes (Wiedemann 1984).

Figure 2. Project Area Map

The dunal landscape in the northern half of the park has been significantly altered by clearing and other disturbances associated with initial development of a golf course approximately 15 years ago. Portions of some interdunal wetlands were filled for road/path access; some of the uplands were cleared and graded; and some wetlands were created or deepened. The development was abandoned, but the disturbances degraded the general habitat suitability of the area because Scotch broom (*Cytisus scoparius*) has invaded almost all of the upland areas and hydrologic connections between some wetlands have been altered. In addition, abandoned silt fencing remains around many of the wetlands.

3.3. Climate

Climatic conditions for the study area are characterized by 69 inches of average annual rainfall and a 28-degree growing season of about 319 days per year (NRCS 2021a). As with most of Western Washington, the highest monthly precipitation occurs between October 1 and March 31, with precipitation between June and September accounting for only about 10 percent of annual precipitation. Wetlands in the area typically have a prolonged dry period during this time. The water table normally recharges during October and November and remains high from December through March, with drawdown occurring in April or May.

3.4. Vegetation

Vegetation in the southern half and northeastern portions of the park is dominated by shore pine forest both in drier wetland areas and in uplands. In wetlands, the dominant plant association is **shore pine/slough sedge swamp forest** (AECOM 2017, 2021b; Morrison and Smith 2007). The shore pine are approximately 25 to 40 years old. Some stands contain minor components of Sitka spruce (*Picea sitchensis*). Western crabapple (*Malus fusca*) and black twinberry (*Lonicera involucrata* var. *involucrata*) are scattered throughout the community. Slough sedge (*Carex obnupta*) is the dominant herbaceous species. Evergreen huckleberry (*Vaccinium ovatum*), Pacific bayberry (*Morella californica*), and sword fern (*Polystichum munitum*) are present on small hummocks. In uplands, the woody understory is dominated by salal (*Gaultheria shallon*), red huckleberry (*Vaccinium parvifolium*), evergreen huckleberry, Pacific bayberry, salmonberry (*Rubus spectabilis*), Pacific dewberry *(Rubus ursinus*), and red elderberry (*Sambucus racemosa*). Scotch broom is locally prevalent in disturbed areas. There is normally very little herbaceous cover except in transitional areas where slough sedge occurs. Sword fern and rattlesnake plantain (*Goodyera oblongifolia*) are uncommon, although patches of lily-of-the-valley (*Maianthemum dilatatum*) were frequently encountered in the southern half of the park. European beachgrass occurs in open canopies on the west side of the park. Scotch broom shrubland occurs in some upland patches.

Some wetlands in the northeast part of the park are dominated by **red alder/slough sedge forest**. Red alder (*Alnus rubra*) is the dominant tree. These are approximately 30 to 50 years old. The woody understory is dominated by salmonberry, black twinberry, Pacific crabapple (*Malus fusca*), and Douglas spiraea (*Spiraea douglasii* var. *douglasii*). Slough sedge dominates the herbaceous layer.

Scrub-shrub wetlands are predominant in the interior of the southern half of the park but are also scattered throughout the study area. The dominant scrub-shrub plant association is the **coastal willow/slough sedge shrub swamp** (AECOM 2017, 2021b; Morrison and Smith 2007). This community contains almost pure stands of coastal willow (*Salix hookeriana*), with a large proportion of decadent or dead material. Pacific crabapple, Douglas spiraea, and

black twinberry are sometimes present in small amounts. The herbaceous layer is dominated by slough sedge, with minor components of marsh speedwell (*Veronica scutellata*), purslane speedwell (*Veronica peregrina* var. *xalapensis*), small bedstraw (*Galium trifidum*), and marsh violet (*Viola palustris*). A Douglas spiraea shrub community of minor extent is situated in the northern half of the study area.

Emergent wetlands occur both as small, scattered openings within the forest and shrub communities and as discreet wetlands in seasonally ponded depressions and swales in the northern half of the park. The dominant emergent community type in the northern half of the park is the **falcate rush/dune rush wet meadow** (AECOM 2017). The dominant herbaceous species are slough sedge, falcate rush (*Juncus falcatus*), Brewer's rush (*J. breweri*), and dune rush (*J. nevadensis*). Marsh speedwell is also common. Upland areas in the northern half of the park that were cleared and graded approximately 15 years ago are dominated by Scotch broom and beachgrass. Beachgrass with varying amounts of Scotch broom, shore pine saplings, and evergreen huckleberry is predominant on the west side of the project area (east side of the primary dune).

3.5. Soils

Soils in the project area are mapped as Dune land (78 percent); Yaquina loamy fine sand (15 percent); Westport fine sand, 3 to 10 percent slopes (6 percent); and Udorthents, level (1 percent) (NRCS 2021b).

Dune land is a miscellaneous land type that occurs in deep eolian sands on recently formed dunes. It lacks horizon development.

Yaquina soils are mapped in the main deflation plain east of the primary dune. They are very deep, somewhat poorly drained soils formed in eolian sands in depressions. Permeability is high. Depth to seasonal high water table is at the soil surface. They are frequently ponded. Yaquina is listed as a hydric soil (NRCS 2021b, c).

Westport soils are mapped in the large transverse dune in the southeastern corner of the park. They are very deep, excessively drained soils formed in eolian sands on dunes. Permeability is very high. Depth to seasonal high water table is greater than 80 inches. The map unit includes 6 percent hydric soil inclusions in depressions.

Udorthents are mapped in the extreme northeast corner of the park along Montesano Road. They occur in sandy or loamy fill material from dredging and are very deep and moderately well drained. Permeability is high. Depth to a seasonal high water table is 24 to 72 inches.

3.6. Hydrology

Primary hydrologic inputs to the wetlands in the study area come from a seasonally high water table, precipitation, and surface runoff. Conditions of surface saturation and/or inundation are estimated to occur from November through April or May in a typical year. The sandy soils are highly permeable and the water table drops quickly once precipitation drops off. Ponding up to 2 to 3 feet occurs in the coastal willow swamps and some of the wet meadows. A culvert under West Ocean Avenue is elevated approximately 2 feet above the adjacent willow swamp. During periods of high water, there is discharge to the south into an excavated channel. Surface and groundwater conditions at the project area are described in more detail in the hydrologic report for this project (AECOM 2022b).

3.7. Wildlife Habitat

A general assessment of wildlife habitat in the project area occurred in 2021 (AECOM 2021c). **Mixed conifer forest** (shore pine) rated medium-high for habitat due to the presence of water and food resources, high amount of cover, low disturbance, and large contiguous patches. **Mixed open wet areas** rated high for habitat. This habitat contains areas of seasonal open water, highly interspersed with patches of herbaceous and low woody vegetation. **Coastal shrublands** along the primary dune rated low for habitat because they lack water, have limited food resources, preponderance of invasive species, limited cover and interspersion, and high human disturbance (adjacent to the paved recreation trail). However, this habitat was also noted and potentially important for shorebirds and burrowing animals. **Riparian shrub** rated medium for habitat. Coastal willow, the dominant species, provides high-quality bird habitat. These habitats are often highly interspersed with the mixed conifer forest. **Mixed deciduous forest** (red alder) rated high for habitat. This habitat is limited within the park, and provides structure and function not provided by conifer forests. This habitat is particularly important for numerous bird species. **Disturbed open grasslands** in the northwest corner of the park rated low for habitat. These are predominantly uplands dominated by invasive European beachgrass and Scotch broom that provide little diversity or structure.

No rare fish or wildlife species were observed in the study area. Seven Endangered Species Act-listed species are listed as potentially present in the park (USFWS 2021). All these species are either not expected or very unlikely to occur within the terrestrial habitats of the park, and no critical habitat for these species occurs in the park (AECOM 2021c).

3.8. Wetlands

One large wetland mosaic (Wetland A), two constructed ponds (Wetlands B and C) and 34 individual wetlands (Wetlands D to Z, and AA to Ak) were identified in the study area (**Table 1**). All of the wetlands would likely be considered jurisdictional, with the exception of the two ponds constructed in uplands. The single large wetland mosaic and adjacent nonmosaic coastal willow swamp and red alder wetland forest account for 395 acres, which include 346 acres of wetland mosaic, 28 acres of willow swamp, and 21 acres of red alder/slough sedge forest. The wetland mosaic was determined to be approximately 68 percent wetland and 32 percent upland. Wetlands are all classified as interdunal per the Washington State Department of Ecology (Ecology) rating system, which is also used by the City of Westport. Wetlands are palustrine forested (PFO), palustrine scrub-shrub (PSS), and palustrine emergent (PEM) according to the US Fish and Wildlife Service/Cowardin System, and depressional (interdunal) according to the hydrogeomorphic (HGM) classification. Wetlands are shown on **Figure 3.**

Table 1. Wetlands in the Study Area

Wetland Identifier	Wetland Classification				Wetland Size (acre)	Buffer Width (feet)[c]
	Cowardin[a]	HGM	Wetland Rating[b]	Habitat Score		
A Wetland mosaic	Forested/Scrub-Shrub/Emergent	Depressional (Interdunal)	I	9-high	395	225-300
B	Open Water/ Emergent	Depressional	N/A	N/A	1.27	Non-jurisdictional; constructed pond
C	Open Water/ Emergent	Depressional	N/A	N/A	0.88	Non-jurisdictional; constructed pond
D	Forested	Depressional (Interdunal)	IV	N/A	0.07	40-50
E	Forested/ Emergent	Depressional (Interdunal)	III	5-low	0.19	60-80
F	Forested/ Emergent	Depressional (Interdunal)	III	5-low	0.43	60-80
G	Emergent	Depressional (Interdunal)	III	5-low	0.13	60-80
H	Emergent	Depressional (Interdunal)	IV	N/A	0.05	40-50
I	Emergent	Depressional (Interdunal)	IV	N/A	0.06	40-50
J	Emergent	Depressional (Interdunal)	III	4-low	0.11	60-80
K	Emergent	Depressional (Interdunal)	IV	N/A	0.01	40-50
L	Emergent	Depressional (Interdunal)	IV	N/A	0.02	40-50
M	Emergent	Depressional (Interdunal)	IV	N/A	0.05	40-50
N	Forested	Depressional (Interdunal)	IV	N/A	0.08	40-50
O	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.03	40-50
P	Emergent	Depressional (Interdunal)	IV	N/A	0.02	40-50
Q	Emergent	Depressional (Interdunal)	IV	N/A	0.03	40-50
R	Scrub-Shrub /Emergent	Depressional (Interdunal)	III	4-low	0.27	60-80
S	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.08	40-50
T	Scrub-Shrub/ Emergent	Depressional (Interdunal)	III	4-low	0.12	60-80

Wetland Identifier	Wetland Classification				Wetland Size (acre)	Buffer Width (feet)[c]
	Cowardin[a]	HGM	Wetland Rating[b]	Habitat Score		
U	Scrub-Shrub/ Emergent	Depressional (Interdunal)	IV	N/A	0.05	40-50
V	Emergent	Depressional (Interdunal)	IV	N/A	0.02	40-50
W	Forested	Depressional (Interdunal)	IV	N/A	0.07	40-50
X	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.04	40-50
Y	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.04	40-50
Z	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.04	40-50
AA	Scrub-Shrub/ Emergent	Depressional (Interdunal)	IV	N/A	0.08	40-50
AB	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.06	40-50
AC	Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.07	40-50
AD	Forested/Scrub-Shrub	Depressional (Interdunal)	III	4-low	0.17	60-80
AE	Forested	Depressional (Interdunal)	IV	N/A	0.01	40-50
AF	Forested/Scrub-Shrub	Depressional (Interdunal)	IV	N/A	0.06	40-50
AG	Forested	Depressional (Interdunal)	IV	N/A	0.01	40-50
AH	Forested	Depressional (Interdunal)	IV	N/A	0.03	40-50
AI	Forested	Depressional (Interdunal)	IV	N/A	0.04	40-50
AJ	Forested	Depressional (Interdunal)	IV	N/A	0.03	40-50
AK	Forested	Depressional (Interdunal)	IV	N/A	0.02	40-50
Total					**400**	

Notes:

[a] National Wetland Inventory class based on vegetation (Cowardin et al. 1979). All wetland systems are palustrine.

[b] City of Westport classifies wetlands based on the Washington State Wetland Rating System (Hruby 2014).

[c] City of Westport wetland buffer widths based on wetland category and habitat score, with and without implementation of measures to minimize wetland impacts (Tables 15.34-2 and 15.34-3 of the Westport Municipal Code) (City of Westport 2022).

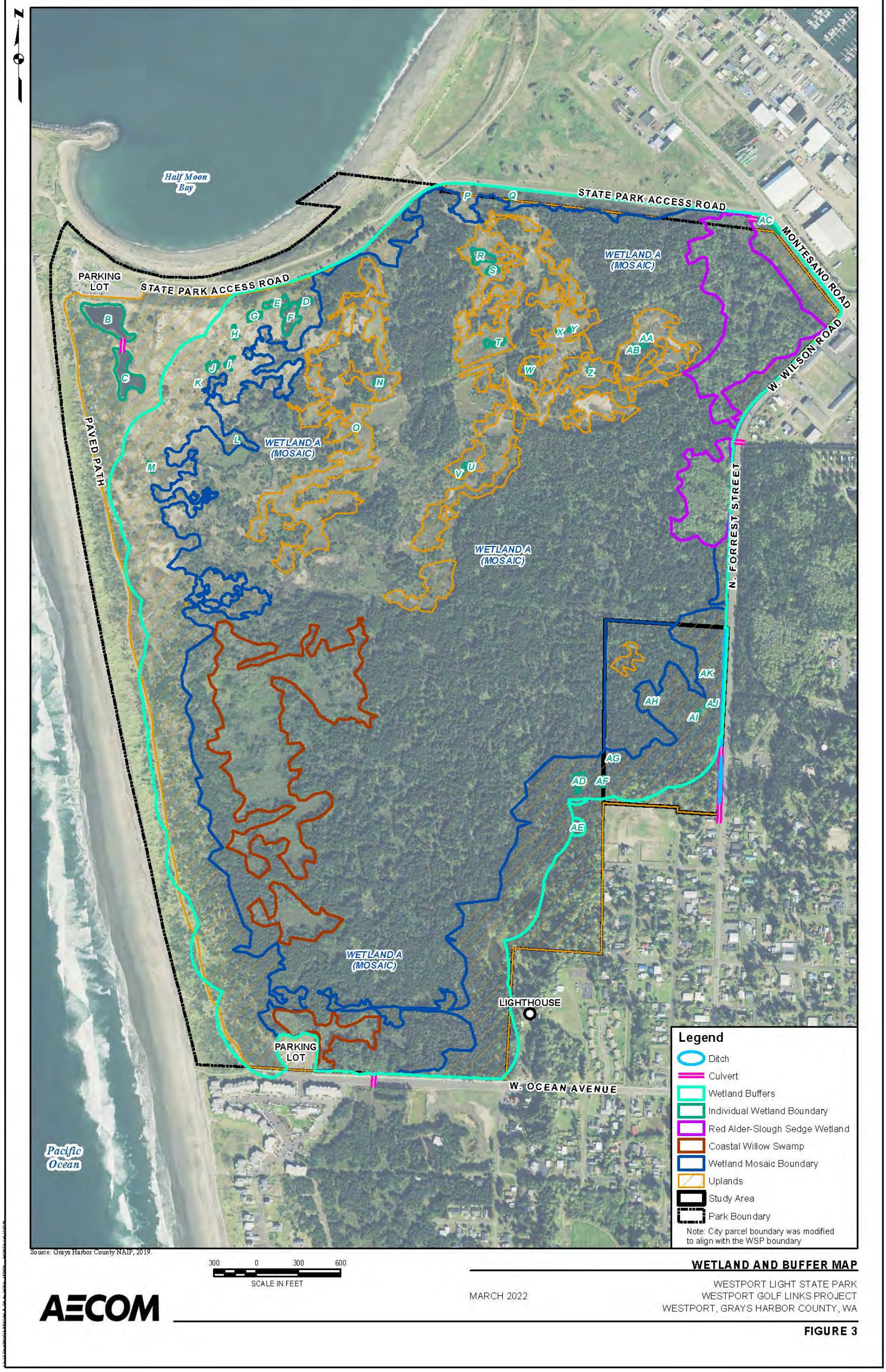

Figure 3. Wetland and Buffer Map

3.9. Wetland Functions

Interdunal wetlands are unique wetland systems that have a very limited range on the Pacific coast. They also tend to occur in coastal areas subject to development pressures. The interdunal wetlands at the park represent the second largest expanse of such wetlands in Washington. The functions that these wetlands play in the ecosystem is not well understood (Hruby 2014). They are recognized as a special category of wetlands. Large (i.e., greater than 1 acre) interdunal wetlands that have high habitat scores (8 or 9 points) provide critical habitat functions in this ecosystem. Such wetlands are now rated as Category I, which was a change from the previous rating system. A very general assessment of wetland functions and values is provided in **Table 2**. Individual wetlands are lumped as either Category III or Category IV depending on their size. Habitat scores for Category III wetlands are provided in **Table 1**.

Table 2. Functions and Values of Wetlands in the Study Area

Function/Value	Wetland		
	A[a]	Category III Individual Wetlands	Category IV Individual Wetlands
Water Quality Functions			
Sediment Removal	X	X*	X*
Nutrient and Toxicant Removal	X	X	X
Hydrologic Functions			
Flood Flow Alteration	-	-	-
Erosion Control and Shoreline Stabilization	-	-	-
Habitat Functions			
Production of Organic Matter	X	X	X
General Habitat Suitability	X*	X*	X
Habitat for Aquatic Invertebrates	X*	X	-
Habitat for Amphibians	X*	X	-
Habitat for Wetland-Associated Mammals	-	-	-
Habitat for Wetland-Associated Birds	X	-	-
General Fish Habitat	-	-	-
Native Plant Richness	X	-	-
Special Characteristics			
Educational or Scientific Value	X	-	-
Uniqueness and Heritage	X*	-	-

Notes:
[a] For purposes of functional assessment and rating, Wetland A includes the area mapped as wetland mosaic, as well as the adjacent coastal willow swamp and red alder/slough sedge wetlands.
"X" = function is present; "*" = principal function of wetland; "-" = function is not present.

4. Wetland and Buffer Impacts

4.1. Methods

Wetlands in the project area were delineated with a global positioning system (GPS) unit in March/April 2021 (park) and February 2022 (City of Westport parcel). Wetland and buffer impacts were then analyzed using geographic information system (GIS) (ArcMap) by overlaying the preliminary conceptual golf course designs on the wetland and buffer areas. Direct wetland and buffer impact areas were calculated to the nearest 0.1 acre. Where proposed golf course impacts occurred within the wetland/upland mosaic portion of Wetland A, the wetland impacts were assessed at 68 percent of the area. This was based on the transect data obtained during the delineation.

4.2. Direct Impacts

A detailed construction design is not available for this project. The preliminary conceptual designs provided in **Appendix A** were used to determine direct wetland impacts. The preliminary conceptual design represents the outer limits of disturbance which gives maximum flexibility to the golf course and park infrastructure design team. As the golf course design progresses, it is possible that some of the wetland impacts assessed here may be avoided or minimized. Therefore, it is likely that the current impact assessment based on the coarse design represents a maximum area of impacts. Temporary impacts cannot be assessed at this time due to the conceptual nature of the design, but will need to be addressed as the design progresses.

4.2.1. Construction

Development of a golf course will involve clearing approximately 230 acres of the 600 acre project site. An undetermined percentage of this area will also be graded, filled, or excavated to create the playing surfaces (greens, fairways, bunkers, etc.) and trails. A small percentage (approximately 10 to 15 acres) will also be built up for the clubhouse, maintenance, and lodging facilities.

The design will minimize the amount of clearing and grading of native vegetation by fully using the previously cleared and graded areas in the northern half of the park. The links course may also require less grading than a typical course since the ridge and swale topography of the coastal dunes is part of the appeal of such courses. The Scottish links course at Bandon Dunes (**Figure 4**) provides an example of such a course in the Oregon coastal dunes.

Nevertheless, the proposed course extends around the entire west and south sides and much of the east side of the park. The course varies in width from approximately 400 to 700 feet. The course will directly impact most of the periphery of Wetland A (wetland/upland mosaic), and most of the individual wetlands in the northern half of the park. A summary of wetland impacts is provided in **Table 3.** Maps of project wetland and buffer impacts are provided in **Appendix B**.

The Westport Golf Links development may impact up to **53.3 acres** of interdunal wetlands, including:

- 26.4 acres for the 18-hole golf course
- 17.3 acres for the par-3 course
- 4.3 acres for the practice range
- 2.9 acres for golf operations
- 2.4 acres for interior trails

Figure 4: Scottish Links Style Golf Course at Bandon Dunes, Oregon

Source: Evan Schiller at dmkgolfdesign.com

4.2.2. Operations

Year-round operations of the golf course and associated facilities would have ongoing direct impacts on surface and groundwater quantities and quality, as well as wildlife habitat.

Surface Water

The surface water investigation for the proposed golf course design (AECOM 2022b) indicates that peak flows compared to existing conditions will increase sufficiently that some low-lying areas in the northeast corner of the site would overtop the surrounding roadway without

additional stormwater detention. The increased peak flows would occur as a result of replacing native forest and shrub areas with grass or less pervious surfaces, along with removing flood storage currently provided by wetlands. Peak flows would also be exacerbated due to projected changes in climate. Stormwater detention and treatment facilities will need to be incorporated into the golf course design, which can include either underground vaults, detention ponds, or constructed wetlands. No stormwater design is currently available.

Groundwater

Groundwater investigations were carried out with the intention of estimating the impacts of the golf course development on groundwater levels, groundwater contribution to wetlands, water quality, and saltwater intrusion potential (AECOM 2022b). The principal source of groundwater is recharge from direct precipitation. Based on local well measurements, water levels peak around the end of February. Seasonal fluctuations of as much as 8 feet were observed near the lighthouse. Tidal fluctuations also influence groundwater levels in the project area. Tidal efficiency was estimated at 10 to 30 percent, meaning a tidal fluctuation of 8 feet would result in 0.8 to 2.4 feet of groundwater fluctuations. The influence of tides is more pronounced for sites nearer to the shoreline. Based on previous studies, there was no evidence of saltwater intrusion near Westport. However, increased pumping withdrawals could increase the risk of saltwater intrusion. The project proponent does not intend to withdraw groundwater for golf course irrigation.

According to the groundwater study, “the biggest change to the hydrologic system would likely occur from irrigation of maintained grass areas and reduction in recharge where new facilities are constructed” (AECOM 2022b). The study assumed irrigation of 500,000 gallons per day from June to August. Modeling of water table fluctuation assumed that groundwater recharge would be reduced in dense grass areas (fairways and greens), and essentially eliminated at structures, asphalt areas, and trails. The reduction in recharge rate would be mostly offset in the summer due to irrigation inputs. The resulting simulated change in groundwater levels from mid-June through October is less than 0.2 foot throughout the project area.

During peak groundwater fluxes to the wetlands at the end of February, the model estimates that groundwater fluxes would be reduced by approximately 10 percent, with a corresponding lowering of groundwater levels from a range of 0.2 to 1.2 feet (AECOM 2022b). The majority of the impacts would occur near the golf course or structures, diminishing with distance. Wet season groundwater levels in most of the wetlands would be expected to be lowered by less than 0.5 foot. It is not expected that this level of groundwater change would have significant impacts over most of the wetlands. The majority of wetlands at the site are forested, with the dominant species (shore pine or red alder) able to grow in a wide range of water levels. The coastal willow scrub-shrub wetlands occur in depressions and swales that are deeply ponded in the wet season. A few inches change in water level is not likely to cause a vegetation change in these communities.

The wetlands most sensitive to changes in groundwater levels are the emergent wetlands in the north half of the site, where a large part of the golf course will be sited. The falcate rush (Brewer’s rush, dune rush) wet meadow in particular has a narrow range of hydroperiods during which it can be sustained. A drop in groundwater levels of a few inches or earlier drawdown in the spring could eliminate this community from small shallow swales, or cause shifts downslope in larger or deeper swales.

Water Quality

The groundwater flow model was also used in conjunction with a particle tracking program to predict potential flow pathways from areas of the course where fertilizers or herbicides could be applied (AECOM 2022b). Fertilization plans for Bandon Dunes golf course were used as a template for the proposed course. Management practices to reduce water quality impacts from fertilizers include: targeted applications with highest amount applied to the greens, with the tees, fairways, and rough receiving progressively less fertilizer; fall and winter applications performed cautiously; periodic soil testing to avoid excessive fertilization; and where possible the use of slow-release fertilizers to maximize plant uptake. The analysis showed that in the unlikely case of over-application of fertilizers, the excess nutrients would likely travel to the ocean or Grays Harbor rather than impacting adjacent wetlands.

Habitat

The Wildlife Habitat Assessment for the park (AECOM 2021c) identified numerous wildlife species (either observed or with potential range in the park) and their associated habitats. Note that this one-time survey was not intended to be a complete survey of all species, and further wildlife surveys and/or monitoring may be warranted. Currently, these habitats are generally intact throughout the 600+ acre park, despite previous clearing activities in portions of the northern half, and invasion by nonnative plant species. Most of the public use in the park occurs along the foredune, beach, and bay, with relatively little use in the interior. The interior provides dense hiding, nesting, and bedding structure and cover, as well as seasonal food and water sources. Although much of this interior habitat will remain intact after development, existing connections to adjacent upland forest, shrub, herbaceous, and dune habitats would be further degraded or truncated.

Depending on the extent and placement of the interior trails, human use and noise associated with the trails would lower the habitat quality of adjacent areas.

No special status fish or wildlife species are known or likely to occur within the interior of the park (special status shorebirds are associated with beach or intertidal habitat). However, numerous Birds of Conservation Concern are either know to occur or have potential to occur within the park (AECOM 2021c). Many of these species would be sensitive to increased noise and human activity within the park, as well as habitat fragmentation. Different species are likely to have minimum habitat patch sizes below which they may not be supported.

4.3. Indirect Impacts

There is not a clear divide between impacts associated with operation of the golf course (identified above), and indirect impacts. None of these impacts are limited to the project construction footprint, although they are a direct result of the development.

With respect to water quality impacts associated with golf course maintenance, surface runoff and infiltration of chemical fertilizers and pesticides into the water table could have potential long-term detrimental effects on the wetland ecosystem. Although the groundwater model suggested that excess nutrients would likely move away from the wetlands, there is at least an inherent risk over time for localized impacts adjacent to the course given the sandy nature of the soils (with high infiltration and permeability) and the sensitivity of the wetlands to excess nutrients. The wetlands in the project area are generally adapted to the rather nutrient-poor sandy soils, and additional nutrients could shift the vegetation to more weedy species. In

addition, higher levels of nutrients may result in increased area and thickness of algal mats, with the potential of smothering native herbaceous plants in the wetlands (Rossman and Dunwiddie 2021).

Best management practices have been developed around the world for successfully managing water quantity and quality for golf courses; their application at Westport Golf Links would help minimize the risks for hydrology and water quality impacts to wetlands. However, at this early stage in project design, there are not enough details on course layout; stormwater storage and treatment; and management practices to determine how probable these indirect impacts are.

Habitat fragmentation resulting from construction of the project could also have long-term adverse effects on wildlife. Interior trails, especially in the large footprint option, could disrupt hydrologic and habitat connectivity within the large wetland mosaic, including within the coastal willow swamp, which could adversely affect amphibians. Although the trails are narrow (8 feet) and earthen, their present location would require fill materials to be brought in, especially through the coastal willow swamps in the southern half of the park that are inundated during the wet season. Culvert or boardwalk/bridge locations on the trails have not been identified. The trail system would also be associated with an increase in recreational use within the wetland mosaic. The additional noise and human use would negatively impact the habitat value of the wetlands.

Destabilization of the dunes during construction could lead to excess blowing sand which could bury small or shallow wetlands over time. This phenomenon was observed in some previously disturbed areas in the northern half of the park.

4.4. Cumulative Impacts

Westport Golf Links is intended to be a world-class course that attracts golfers and tourists from beyond the local area. The modest-sized lodge that would be built as part of the development is not intended to completely meet the expected lodging demands. Lodging, restaurants, and other tourist and recreational facilities at Westport would be reasonably foreseeable developments with potential environmental effects (including to wetlands) that would be cumulative along with the current golf course development and other past and present developments in the area.

A cumulative impacts analysis will require additional information such as future development plans, and review of existing natural resource plans, local comprehensive plans, zoning, building permits, and interviews with local governments. This analysis is not in the scope of this report.

4.5. Summary of Potential Direct Impacts to Wetlands

Table 3. Wetland Impacts Summary

Interdunal Wetland	Total Area (acres)	Cowardin Class	Permanent Impact Area (acres)	Percent of Wetland Impacted	Wetland Rating
A (wetland mosaic)	346[1]	Scrub-Shrub/Forested/Emergent (northern half of park)	49.8[2]	20	I
		Scrub-Shrub/Forested (southern half of park)	20.7[3]		I
A (coastal willow swamp)	28	Scrub-Shrub	2.8	0.1	I
A (red alder wetland)	21	Forested	0.2	<0.1	I
Individual Category III Wetlands	1.4	Forested, Scrub-Shrub, Emergent	1.4	100	III
Individual Category IV Wetlands	1.1	Forested, Scrub-Shrub, Emergent	0.9	82	IV
Total	**398**	--	**76[4]**	**19**	--

Notes:
[1]This is the total mosaic area, including on average 68% wetlands and 32% uplands.
[2]Equals 33.9 wetland acres
[3]Equals 14.1 wetland acres
[4]Equals 53.3 wetland acres

4.6. Buffer Impacts

Approximately 111 acres of wetland buffers would be permanently impacted for the proposed project. Additional buffers would likely be temporarily impacted during construction. Developments in the southern half of the park and the City of Westport parcel will disturb mostly young intact shore pine forest, as well as the shrubland on the east side of the foredune dominated by evergreen huckleberry, Scotch broom, Pacific crabapple, American dunegrass, and European beachgrass (AECOM 2021b). Developments in the northern half of the park would primarily impact previously disturbed buffers dominated either by Scotch broom shrubland, or shore pine/Scotch broom/European beachgrass shrubland (AECOM 2017).

Permanent buffer impacts by project component include:

- 81.7 acres for the 18-hole golf course
- 16.7 acres for the par-3 course
- 9.7 acres for golf course operations
- 2.6 acres for the practice range
- 0.1 acre for interior trails
- 0.1 acre for expanding parking on the northern side of the park
- 0.1 acre for the upgraded dunes trail

5. Mitigation

5.1. Mitigation Sequencing

Federal, state, and local wetland regulations require that a proposed project avoid, minimize, and restore in-place wetland impacts to the greatest degree practicable. Only unavoidable wetland impacts may be offset through compensatory mitigation. The process of wetland impact avoidance, minimization, restoration in-place, and compensation is known as mitigation sequencing. The following location and design alternatives and best management practices have been identified by the project proponent as well a Restoration Feasibility Study prepared by a third party (Rossman and Dunwiddie 2021). The study assesses the feasibility of improving the ecological condition of the park in conjunction with golf course development.

- Avoids golf course impacts to most of the large contiguous coastal willow swamps in the southern half of the park. This habitat and adjacent upland areas was identified as particularly valuable for riparian-associated bird in the park (AECOM 2021c).
- Avoids impacts to the red alder-slough sedge wetland in the northeastern part of the park. This habitat was also identified as important for numerous bird species that use the park (AECOM 2021c) and it is of limited extent in the project area.
- Minimizes impacts to the primary dune which could otherwise lead to indirect impacts to wetlands in the deflation plane (e.g., burial by blowing sand) (Rossman and Dunwiddie 2021).
- Minimizes fragmentation of wetland habitat by designing the course around the periphery of the wetland. Habitat connectivity throughout the large central wetland mosaic will be maintained. This will result in retention of a high-quality interconnecting wetland and upland habitats.
- Minimizes clearing and grading of the intact wetland areas in the southern half of the park by targeting impacts for the previously disturbed areas in the northern half of the park.
- Minimizes earth moving and grading by developing a links-style course that is more integrated into the natural topography than a typical parkland course.
- A links course also minimizes indirect hydrology and water quality impacts to wetlands because it is less manicured than a typical course, requiring less irrigation and chemical fertilizers.
- The golf course development will allow for on-site restoration of previously disturbed wetland and buffer areas. Further design of the course will allow for integration of restored and created wetland swales (Section 5.3.2 On-site Mitigation Opportunities).

Recommended Measures for Emergent Wetlands

To avoid or minimize impacts to the emergent wetlands, it may be possible to direct treated stormwater into these areas. However, these communities are also sensitive to too much water and nutrient loading. Therefore, it is suggested that stormwater introductions be initiated on an experimental basis and the results monitored before widespread adoption.

Recommended Monitoring

If incorporated into golf course operations, the following recommendations from the Hydrologic Report (AECOM 2022b) would help identify and minimize potential hydrology and water quality impacts analyzed in the report.

- Prepare and initiate irrigation and fertilization plans to minimize risk of water quality impacts in adjacent wetlands
- Conduct routine groundwater monitoring through installation of shallow wells in and around the golf course (including between the course and wetlands) for both water levels and water quality
- Monitor soil moisture and soil chemistry to avoid over irrigation and fertilization

5.2. Compensatory Mitigation Options

The design is not advanced enough for a compensatory mitigation plan to be prepared; therefore, only a very general discussion of potential compensatory mitigation options is provided below.

5.2.1. Mitigation Bank Credits

The 2008 Federal Compensatory Mitigation Rule (33 Code of Federal Regulations 332) established a hierarchy of preferred compensatory mitigation types. Where wetland impacts occur in the service area of an approved wetland mitigation bank, a project proponent should assess whether purchase of bank credits is a viable option to meet their compensatory mitigation obligations. The project site occurs in the service area of the Weatherwax Wetland and Habitat Bank in Ocean Shores. The bank occurs in an environment similar to the project impact area. The bank provides mitigation credits for impacts to interdunal wetlands within the service area by preserving approximately 46 acres of Category I wetland mosaic, 40 acres of old growth and mature forested uplands, 11 acres of lacustrine fringe wetlands, and 7 acres of enhanced uplands per the Mitigation Banking Instrument (City of Ocean Shores and Ecological Land Services 2015).

The bank was approved in 2016. According to the US Army Corps of Engineers (USACE) Regulatory In-Lieu Fee and Bank Information Tracking System, 8.6 credits have been released to date, and 8.31 credits are available for purchase. At full credit release by year 10, an additional 3.17 credits would be available (a total of 11.77 credits). Bank credits may be used to compensate for both permanent and temporary wetland impacts, subject to agency approval. Permanent impacts typically require bank credits based on the ratios provided in **Table 4**. As an example, 1 acre of impacts to a Category III wetland would be offset by 1 bank credit. The actual number of credits will need to be negotiated with the regulatory agencies with jurisdiction. For compensation for impacts to Category I wetlands and wetland buffers, bank credits will need to be determined by the regulatory agencies on a case-by-case basis.

Table 4. Typical Credit-Debit Ratios, Weatherwax Mitigation Bank

Resource Impact	Bank Credits: Impact Acreage
Wetland, Category I	Case-by-Case
Wetland, Category II	1.2:1
Wetland, Category III	1:1
Wetland, Category IV	0.85:1
Critical Area Buffer	Case-by-Case

Source: City of Ocean Shores and Ecological Land Services 2015

5.3. Permittee-Responsible Mitigation

5.3.1. Mitigation Types and Compensation Ratios

Given the current golf course design, Weatherwax Mitigation Bank would have less than a quarter of the number of credits needed to compensate for the proposed wetland and buffer impacts. There is currently no in-lieu fee mitigation program in Grays Harbor County. Therefore, the only viable mitigation option is permittee-responsible mitigation, either alone or in combination with the use of bank credits.

Policies and guidance for permittee-responsible mitigation in Washington state are provided in an interagency publication (Guidance) (WDOE et al. 2021), from which the information below is sourced. Determining wetland mitigation needs is normally done by using either the “Credit-Debit” method produced by Ecology, or by following the mitigation ratio method provided in the Guidance. However, because the interdunal wetlands at the project site meet the rating criteria for “Special Characteristics,” use of the Credit-Debit method would not be appropriate. Rather, the Guidance provides unique mitigation ratios for interdunal wetlands (**Table 5**). “The proposed compensatory mitigation must result in an interdunal wetland. The agencies consider creation/re-establishment of an interdunal wetland, landward of the secondary dune, a viable option.” Such actions have proven very successful in the Washington coast dune landscapes where the seasonal water table is close to the soil surface. The corresponding relatively low mitigation ratios reflect the high likelihood of mitigation success. Wetland rehabilitation may be an option in limited cases, where removal of a barrier such as a road would restore hydrologic connectivity of previously connected interdunal wetlands. Wetland enhancement is not considered an appropriate mitigation action given the dynamic nature of interdunal systems.

Table 5. Compensation Ratios for Interdunal Wetlands

Category of Impacted Wetland	Re-establishment or creation	Rehabilitation	Preservation
Category I	4:1	8:1	16:1
Category II	2:1	4:1	8:1
Category III	1.5:1	3:1	6:1
Category IV	1.5:1	3:1	6:1

Source: WDOE et al. 2021

“The agencies consider preservation of existing, high-quality interdunal wetlands to be another option.” The agency preference is that preservation be done in combination with wetland creation or re-establishment where possible. In order to meet the criteria for preservation, the interdunal wetlands proposed for preservation must be at-risk and high-quality. Detailed criteria are provided in the Guidance. Demonstrable threats of destruction, modification, or degradation may include those associated with filling, draining/ditching, vegetation clearing, habitat fragmentation, intensive human use, etc. High quality interdunal wetlands are generally large diverse systems dominated by native vegetation, with undisturbed connections to other high quality terrestrial or aquatic habitats. Generally, they would rate as Category I or II interdunal wetlands and/or provide habitat for rare species.

The amount of compensatory mitigation required for permanent direct wetland impacts will be determined after the site design has been refined. Permanent indirect impacts or temporary impacts will also need to be evaluated. These impacts are generally compensated at one-half to one-quarter of the ratio for permanent direct impacts. In addition, the City of Westport will likely require compensatory mitigation for permanently impacted wetland buffers per their Critical Areas Ordinance (Westport Municipal Code [WMC] 15.34.550). Impacts to buffers are to be mitigated at a 1:1 ratio (WMC 15.34.570.10) and must replace the buffer functions lost from development.

5.3.2. On-site Mitigation Opportunities

The vegetation survey of the northern half of the park (AECOM 2017) identified an emergent wetland community dominated by rushes (Juncus falcatus – Juncus [*lesueurii, nevadensis*] Wet Meadow) (**Figure 5**). This community is rare in Washington State. Its state ranking is S1, which indicates the rarest type. This community occurs in shallow swales throughout the northern half of the park, both as individual wetlands and as interspersed among shrub and forest communities within the large wetland mosaic. In areas of deeper ponding, the rush community transitions to a slough sedge-dominated community (Rossman and Dunwiddie 2021) (also rare but ranked S2). Both of these early-seral herbaceous wetland communities occur naturally in the deflation plain where wind has recently scoured the sandy soils to intersect with the groundwater table. These communities were also observed where grading and scraping from the 2006 golf course construction had either intentionally or unintentionally created shallow swales.

The rush-dominated communities in the northern half of the park tend to occur in the smaller wetland swales and on the periphery of larger swales dominated by slough sedge or coastal willow. Approximately 12 acres of this community were mapped in the northern half of the park (AECOM 2017); however, this does not include smaller patches that are interspersed with other community types. The rush and sedge-dominated communities succeed to coastal willow swamp or shore pine swamp forest. These herbaceous communities are also susceptible to multiple threats, including burial by blowing sand; physical trampling or crushing by pedestrians or equipment; encroachment by nonnative species; and degradation of water quality and associated species shifts.

Figure 5: Rush-Dominated Wet Meadow Community in the Northern Half of the Park

The Restoration Feasibility Study (Rossman and Dunwiddie 2021) further investigated these communities and provides detailed information on their composition and characteristics. Given their rarity in the state and the apparent ease with which they can be created or re-established in the project area, the study suggests that improving or restoring these communities, along with the associated coastal willow swamp community, would be the most significant ecological enhancements to consider for the park. Creating or re-establishing these rare wetland communities could also potentially provide onsite compensatory mitigation credits to partially offset wetland impacts from the golf course. Specific recommended restoration actions are provided in the study.

The study also recommends preserving the highest quality and oldest examples of the shore pine swamp forest. However, it is not clear if this would generate any mitigation credits. A USACE Freedom of Information Act request made by WSPRC staff has disclosed a legal covenant associated with the former Links at Half Moon Bay development, which was mandated by USACE as result of a permit violation. A deed restriction was filed with the Grays Harbor County in December 2010, but never signed by the agency. As such the document has been determined invalid by the WSPRC's assistant attorney general. WSPRC staff are currently seeking clarification on any potential ramification of the document from USACE and what, if any, relevance it may have on this or any other future proposed development within the park.

The study also recommends some limited actions to restore upland vegetation communities at the project site. It is possible that this could generate a limited amount of wetland mitigation credit if acceptable as a “resource tradeoff.” It may be considered for buffer mitigation depending on its location. The other activities recommended in the study (enhancing species diversity, reducing invasive species, and enhancing wildlife habitat), while valuable for their own sake or in conjunction with wetland creation or re-establishment, would not on their own likely generate wetland mitigation credit because enhancement alone is not considered appropriate mitigation for interdunal wetlands (WDOE et al. 2021).

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Appendix A. Project Alternatives

Preliminary Conceptual Design Alternatives

Source: David McLay Kidd, DMK Golf Design, November 2021

OPTION 1: SMALL FOOTPRINT

DAVID McLAY KIDD
DMK GOLF DESIGN

WESTPORT GOLF LINKS - LAND-USE/ SITE ANALYSIS

WESTPORT LIGHT STATE PARK, WASHINGTON, USA

SCALE: 1" = 200'

0 200 400 800 1200

OPTION 2: LARGE FOOTPRINT

DAVID McLAY KIDD
DMK GOLF DESIGN

WESTPORT GOLF LINKS - LAND-USE/ SITE ANALYSIS

WESTPORT LIGHT STATE PARK, WASHINGTON, USA

SCALE: 1" = 200'

0 200 400 800 1200

Appendix B. Wetland and Buffer Impacts Maps

Source: Spokane County NAIP, 2017.

150 0 150 300

SCALE IN FEET

AECOM

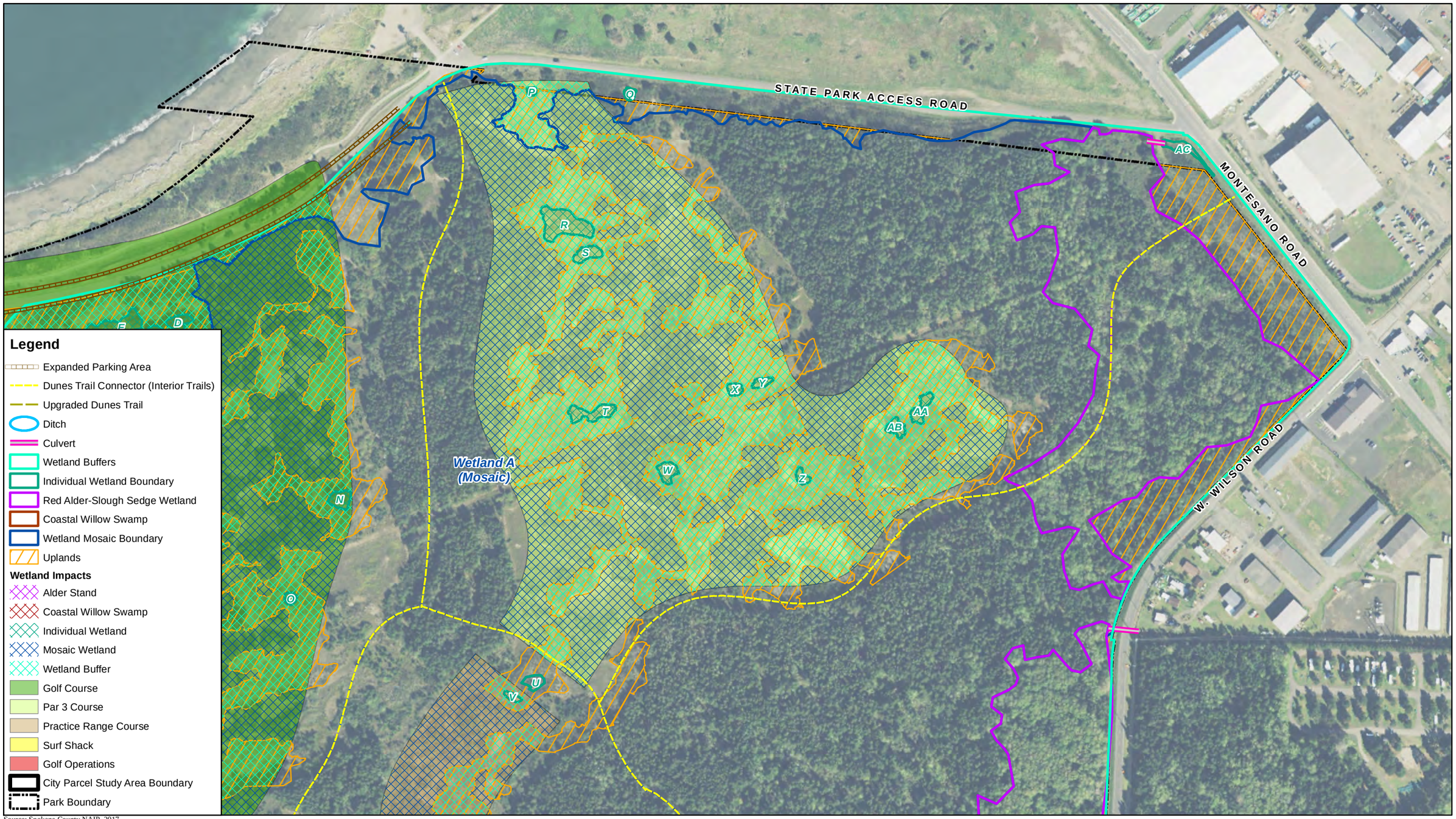
WETLAND AND BUFFER IMPACTS MAP

MAY 2022

WESTPORT LIGHT STATE PARK
WESTPORT GOLF LINKS PROJECT
WESTPORT, GRAYS HARBOR COUNTY, WA

APPENDIX B-1

K:\Westport\MXD\Fig 2 Wetland Delineation Map - Golf Course Impacts.mxd



Source: Spokane County NAIP, 2017.

150 0 150 300

SCALE IN FEET

AECOM

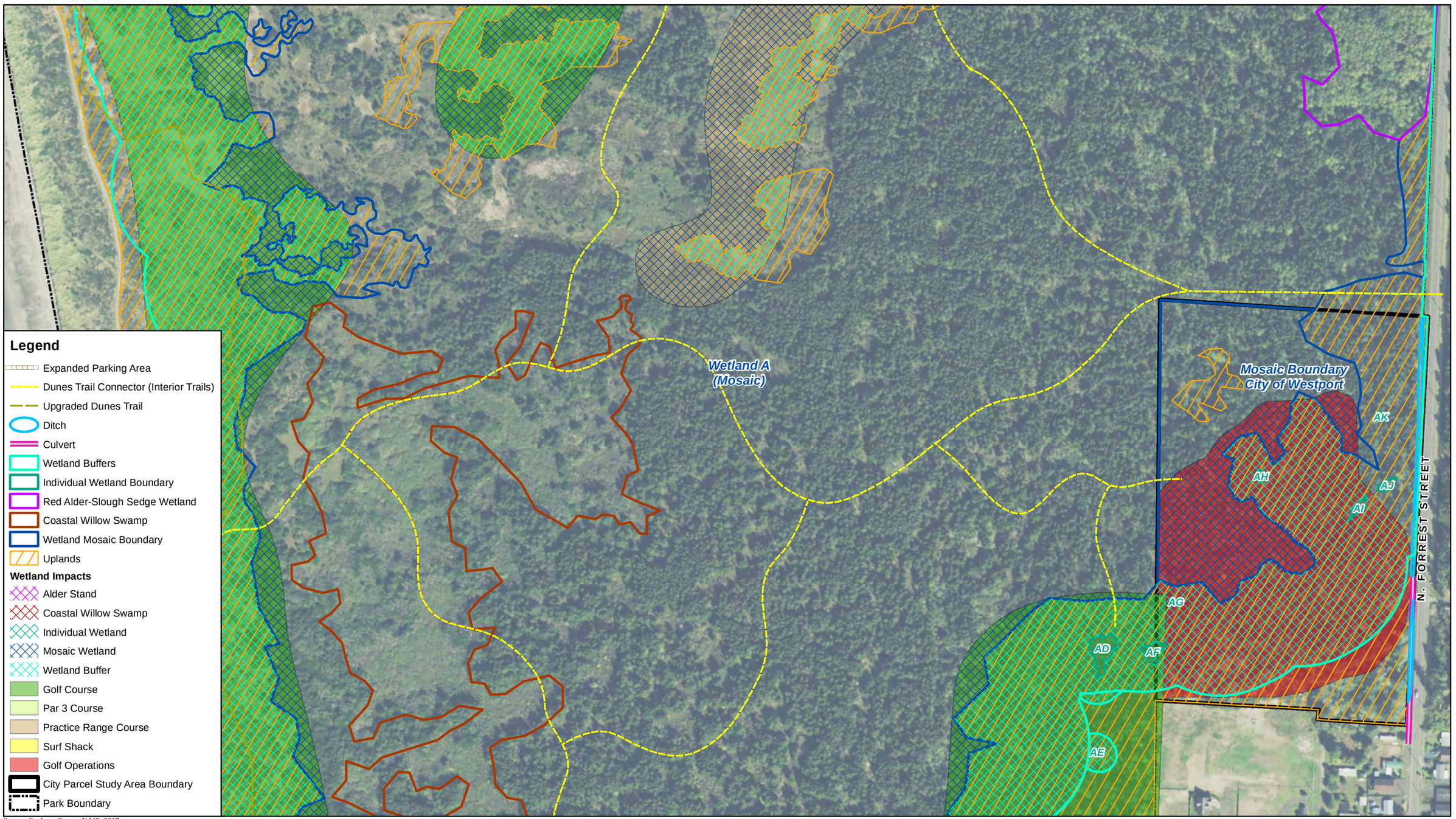
WETLAND AND BUFFER IMPACTS MAP

MAY 2022

WESTPORT LIGHT STATE PARK
WESTPORT GOLF LINKS PROJECT
WESTPORT, GRAYS HARBOR COUNTY, WA

APPENDIX B-2

K:\Westport\MXD\Fig 2 Wetland Delineation Map - Golf Course Impacts.mxd



Source: Spokane County NAIP, 2017.

150 0 150 300
SCALE IN FEET

AECOM

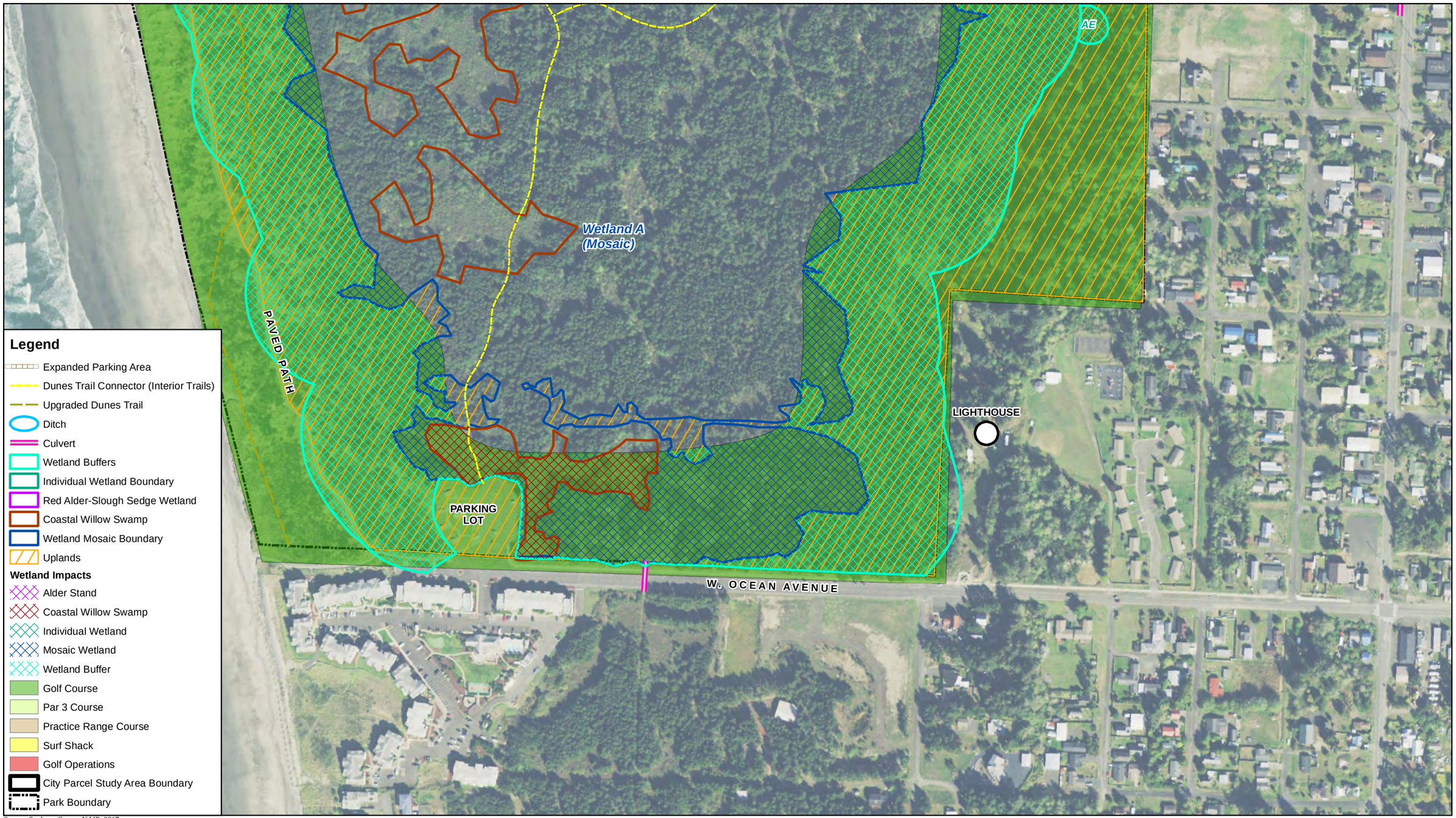
WETLAND AND BUFFER IMPACTS MAP

MAY 2022

WESTPORT LIGHT STATE PARK
WESTPORT GOLF LINKS PROJECT
WESTPORT, GRAYS HARBOR COUNTY, WA

APPENDIX B-3

K:\Westport\MXD\Fig 2 Wetland Delineation Map - Golf Course Impacts.mxd



Source: Spokane County NAIP, 2017.

150 0 150 300

SCALE IN FEET

AECOM

K:\Westport\MXD\Fig 2 Wetland Delineation Map - Golf Course Impacts.mxd

WETLAND AND BUFFER IMPACTS MAP

MAY 2022

WESTPORT LIGHT STATE PARK
WESTPORT GOLF LINKS PROJECT
WESTPORT, GRAYS HARBOR COUNTY, WA

APPENDIX B-4