



# APPENDIX 4

## DESCHUTES RIVER HABITAT INVENTORY SUMMARY REPORT, FEBRUARY 2020



# 2017 Deschutes River Habitat Inventory

February 2020

## Final Summary Report





## Introduction

While the Deschutes River is an iconic recreation amenity for river users, it is also vital to the ecological diversity and aesthetic appeal of Bend. The Bend Park and Recreation District (district) owns approximately eight miles of river park frontage along the river corridor. As population, tourism, and recreational use of the river has increased over the recent years, the district is recognizing the increasing challenges of balancing river recreation demands with aesthetic and environmental protection of the riparian areas along the river.

In late 2017 and into early 2018, the district partnered with the Upper Deschutes Watershed Council (UDWC) to evaluate the condition of river banks, riparian areas, and upland areas. Through this effort, in addition to identifying existing conditions, staff developed site-specific recommendations to improve habitat and recreational access. The long-term goals of this initiative were to protect and restore the habitat along the river's riparian corridor and identify and create sustainable access points to the river.

This report summarizes the results of the condition assessment and identifies project priorities. Appendix A contains the condition assessment worksheets. Appendix B – UDWC Board Presentation 2-13-18 includes a map of the reaches and photos documenting the conditions in each reach.

## Methodology

### Process for Data Collection

Expertise from UDWC staff was instrumental in development of the process and products for the assessment.

In partnership with UDWC staff, BPRD staff identified 10 reaches along the eight miles of district-owned property that would be subject to this evaluation. Reaches were further divided into 50- to 300-foot-long sections within those reaches. BPRD staff collected field data in December 2017 and January 2018 using a reach condition assessment scoring sheet. This allowed staff to document the condition of the riparian areas in and adjacent to the river and better understand the existing habitat and ecological value. Each of these scoring sheets are included in Appendix A and provide critical details to inform this report.



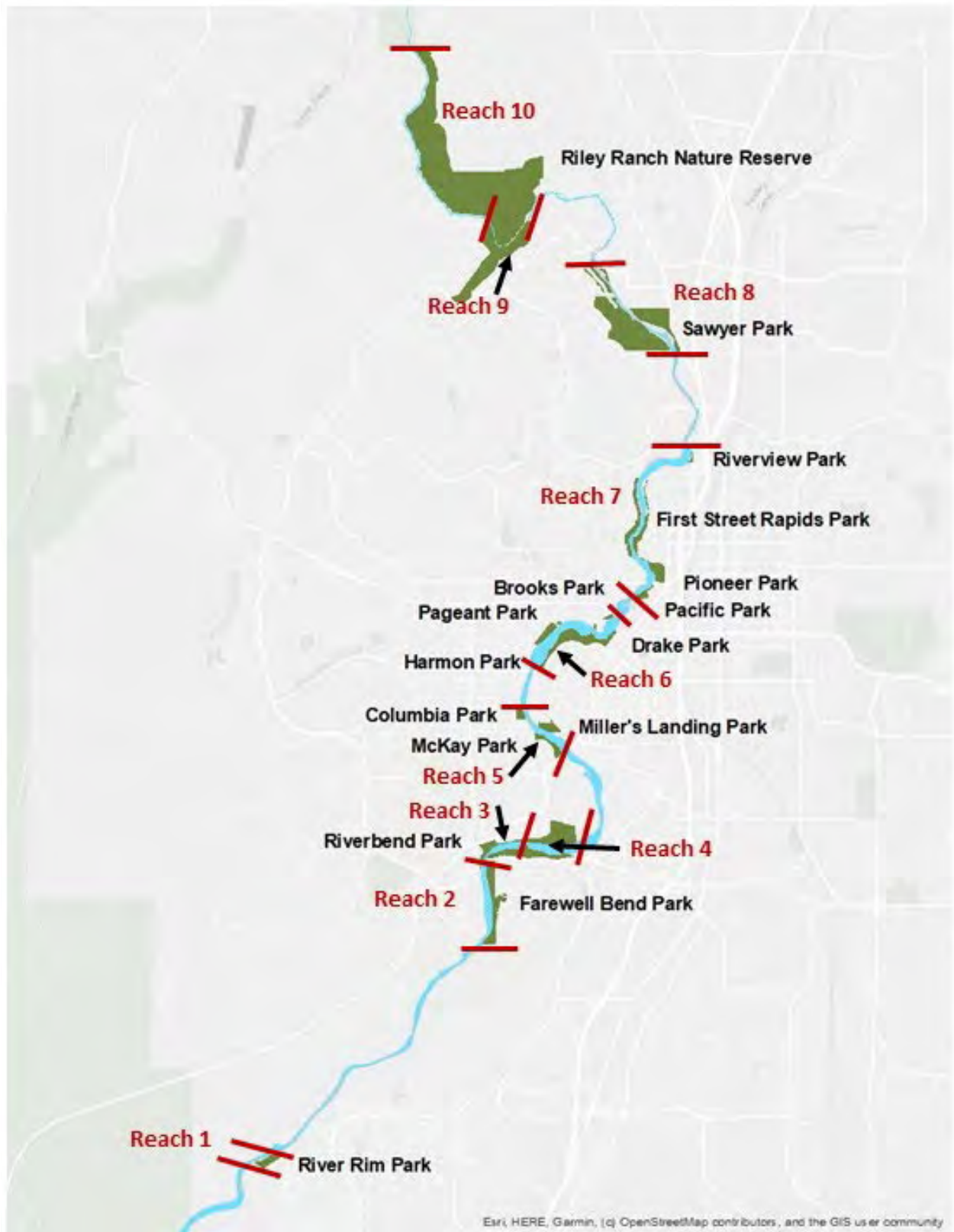


Figure 1: Map of Reaches and Parks



Table 1: Park properties by reach number

Reach	Park(s)
1	River Rim Park
2	Farewell Bend Park (upriver of Bill Healy Bridge)
3	Farewell Bend Park (between the footbridge and Bill Healy Bridge) Riverbend Park (between the footbridge and Bill Healy Bridge)
4	Farewell Bend Park (downriver of the footbridge) Riverbend Park (downriver of the footbridge) Off-leash Dog Area (note that this is private property, BPRD holds an easement)
5	McKay Park Miller's Landing Columbia Park
6	Drake Park Harmon Park Pageant Park (note that Pageant Park is not named separately from Harmon Park in the analysis) Brooks Park
7	Pacific Park Pioneer Park First Street Rapids Park (Note that Riverside Natural Area and Riverview Park were not assessed)
8	Sawyer Park
9	River Canyon (Archie Briggs Natural Area)
10	Riley Ranch Nature Reserve

### Analysis Methodology

BPRD and UDWC identified conceptual projects that would improve habitat conditions and consolidate and improve recreational access. The conceptual park projects include site development or repair at river access points (e.g., rebuilding beaches, placing rocks or logs to better define access sites), riparian protection (e.g., fencing to limit the growth of informal access points) and other measures to protect the river ecology.

In addition, BPRD and UDWC collaborated to prioritize projects according to the expected level of benefit, and whether the projects would be suitable for grant funding. Order of magnitude costs were also estimated.



## Reach Condition Assessment Components

Reach condition assessment scoring sheets were utilized to evaluate the 10 study areas along the Deschutes River. Each scoring sheet includes details regarding the reach, environmental conditions experienced during the data collection and specific data collected during the site visits. The specific data is divided into seven categories, each of which has sub categories. These categories and subcategories are further described and explained below.

*Table 2: Definition of terms found in the reach condition assessment scoring sheets*

Term	Description
<b>Channel Condition</b>	
Channel type	<p>Channel type describes the velocity of the water in the river.</p> <p><b>Slack water:</b> no perceivable movement or flow. In a river this usually only occurs near the bank or on the downstream side of an obstruction.</p> <p><b>Slow water:</b> barely perceivable movement.</p> <p><b>Run:</b> area of increased velocity from constriction of the channel or gradient.</p> <p><b>Riffle:</b> an area of increased velocity over a shallow bottom. Imagine fast, thin water ‘riffing’ over small rocks.</p> <p><b>Rapid:</b> defined as the presence of whitewater. Aeration caused by disruption makes the water appear white.</p>
Pool types	<p>Describing a pool of calm water. Significant for habitat.</p> <p><b>Dam pool:</b> a pool created on the upstream side of an obstruction.</p> <p><b>Scour pool:</b> a pool created on the downstream side of an obstruction, from scour effect.</p> <p><b>Riffle pool:</b> a pool created on the upstream side of a riffle.</p>
In-water habitat	Indicates significant presence of any of the listed types: rocks, wetlands, large woody debris (LWD) or undercut bank.
<b>Bank Condition</b>	
Length of segment	Segments were determined in the field based on a transition of characteristics such as an abrupt change in topography, vegetation, or visible markers such as bridges.
Presence of wetlands	Wetland is used here generically to refer to <b>aquatic habitats</b> , independent of any local/national wetland inventory or official wetland delineation.



Manmade structures	Manmade structures are listed.
Erosion	Existing erosion on riverbanks.
Stability	Bank stability indicates potential for further erosion.
Width of bank	Measured in feet perpendicular to the river's edge.
Compaction	Level of soil compaction. Indicates potential for further erosion.
<b>Riparian Vegetation (Riparian Zone)</b>	
Percent coverage of viable	An estimate of the actual riparian area out of the total area that could be riparian. For example, 100 ft of river bank has 50 ft of riparian habitat and 50 ft of mud. This would be 50%. If a 100ft section of river had 50 ft of riparian habitat and 50 ft of sheer cliffs, it would be 100%.
In-water vegetation	Count of the following species: cattail, grasses, lily, rush and sedge.
Ground cover	Count of the following species: forget me not, golden rod, grass, strawberry.
Trees/shrubs	Count of the following species: ash, birch, bitterbrush, cherry, chokecherry, cottonwood, currant, dogwood, elderberry, huckleberry, juniper, locust, manzanita, maple, mountain alder, Oregon grape, ponderosa, rose, raspberry, rabbitbrush, sage, serviceberry, snowberry, spirea, sumac, willow, yarrow, developed (note that "developed" indicates planted and irrigated areas such as lawns and landscaping).
<b>Upland Vegetation (Upland Zone)</b>	
Percent coverage of viable	An estimate of the actual upland vegetation coverage for the entire area that could have upland vegetation.
Ground cover	Count of species (same species as above in Riparian Vegetation).
Trees/shrubs	Count of species (same species as above in Riparian Vegetation).
<b>Access Points</b>	
Quantity	Total quantity of access points, including both designated and user created. An access point includes anything from hardened deliberate access point to a narrow trail. Please note that the number of access points does not match those found in the <i>Inventory of Recreational Use at Parks on the Deschutes River</i> , due to differences in methodology.
<b>Large Woody Debris (LWD) Detail</b>	
Number of	Total quantity of tightly packed clusters of trees (such as a large log and smaller pieces together), many have been placed deliberately and anchored.
<b>River Bank</b>	
River Right (RR)/River Left (LL)	Facing downstream, river left is on your left and vice versa.







## Data Analysis

### Findings for all Reaches

The assessment gave rise to the following key themes:

- Impact areas tell us where people access the river.
- Foot traffic from humans and canines degrades habitat.
- The rate of impact to vegetation is outpacing the rate of recovery.
- Good fencing makes a substantial difference: double-rail fencing is much more effective than single-rail fencing.
- The stewardship solution is clear: Durable access sites at strategic locations, double-rail fencing, dense plantings, signage to direct traffic, and public outreach to educate the community about sustainable access.

### Findings by Reach

This section includes a summary of the reach condition assessment results. The data recorded for each reach is summarized below and includes conditions, restoration opportunities, and project priority.

#### Reach 1 - River Rim Park

Reach 1 is 686 feet long and includes River Rim Park.

#### *Conditions*

**The following conditions were recorded:**

- **Channel condition.** In-water habitat includes rocks and large woody debris.
- **Bank condition.** Wetlands are present in this reach. Erosion is moderate, bank stability is bad, soil is somewhat compacted.
- **Riparian area.** Riparian vegetation covers 50% of viable area.
- **Upland area.** Upland vegetation covers 25% of viable area.
- **Access.** Manmade structures include an irrigation pump. There are nine access points in the reach. The reach is used as a put in for kayakers.

#### *Restoration Opportunities*

**The following restoration opportunities were identified:**

- Armor access points for kayak launch.
- Revegetate riparian zone with trees and shrubs.
- Safety signage for downstream rapids.
- Build steps from entry down hillside to prevent erosion.
- Signage for restoration interpretation/access points.
- Fencing.

#### *Project Priority*

**Reach 1 was identified as a medium priority project, with strong ecological benefits and suitable for external grant funding.**



## Reach 2 – Farewell Bend Park, upriver of Bill Healy Bridge

Reach 2 is 4,907 feet long. The reach is segmented into seven sections. The reach covers the southern portion of Farewell Bend Park, upriver of the Bill Healy bridge.

### *Conditions*

**The following conditions were recorded:**

- **Channel condition.** Presence of beaver activity and damming in the reach.
- **Bank condition.** Wetlands are present in much of the reach. Erosion ranges from minimal to moderate in the reach. Bank stability is good throughout the reach. Soil is somewhat compact in most of the reach, with one segment being very compact.
- **Riparian area.** When compared with other reaches this reach has a large abundance of horsetail in the riparian zone. Riparian vegetation covers 70% to 85% of viable area for most segments, however, one segment has 0% coverage, and one has 50% coverage.
- **Upland area.** Upland vegetation covers between 60% and 100% of viable area for this reach.
- **Access.** Manmade structures include boardwalk upstream of reach and Bill Healy bridge. The reach has 36 access points.

### *Restoration Opportunities*

**The following restoration opportunities were identified:**

- Eliminate access points
- Armor five to six access points, for example, by securing large rocks to create an access point resistant to erosion
- Fence key areas
- Revegetate riparian zone with trees and shrubs
- Relocate trail higher up on bank in certain areas
- Signage for restoration interpretation/access points

### *Project Priority*

**Reach 2 was identified as a high priority project, with strong ecological benefits and suitable for external grant funding.**

## Reach 3 – Riverbend Park on river left and Farewell Bend Park, between the Bill Healy Bridge and the Farewell Bend Footbridge

Reach 3 is 2,374 feet long on river left (Riverbend Park) and 615 feet long on river right (Farewell Bend Park), for a total of 4,220 feet. The reach is segmented into six sections. The reach covers the park property between the Bill Healy Bridge and the Farewell Bend Footbridge. This includes the western/upriver portion of Riverbend Park and a central portion of Farewell Bend Park.

### *Conditions*

**The following conditions were recorded on river left:**

- **Channel condition.** River flows in this reach are categorized as slack water. In water habitat includes rocks, wetlands, large woody debris (LWD), and undercut banks.
- **Bank condition.** Wetlands are present in two of three segments. Erosion ranges from moderate to severe. Bank stability is bad throughout. Soil is somewhat compact for all segments.



- **Riparian area.** Riparian vegetation covers 20% of viable area for two segments, and 40% of the viable area for the remaining segment.
- **Upland area.** Upland vegetation covers between 10% and 40% of viable area for this reach.
- **Access.** River left has 35 access points.

**The following conditions were recorded on river right:**

- **Channel condition.** Channel conditions are similar to river left conditions, LWD does not exist on river right.
- **Bank condition.** Wetlands are present in all three segments. Erosion ranges from moderate to severe. Bank stability is bad throughout. Soil is very compact in two sections and somewhat compact in one section.
- **Riparian area.** Riparian vegetation covers 0% to 40% of viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** The reach has 14 access points. The area with single rail fencing has many access points, where double rail fencing exists, the number of access points is greatly reduced.

*Restoration Opportunities*

**The following restoration opportunities were identified for river left:**

- Lay back bank in certain locations
- Install in water habitat such as LWD and boulders
- Create bench areas for Oregon Spotted Frog habitat
- Install double rail fence along entire reach
- Create armored access area and fencing for dogs

**The following restoration opportunities were identified for river right:**

- Rebuild/armor beach
- Transition single rail to double rail fencing
- Install signage for restoration interpretation/access points
- Revegetate riparian zone with trees and shrubs
- Eliminate user created access points to prevent erosion

*Project Priority*

**Reach 3 river left was identified as a high priority project, with strong ecological benefits and suitable for external grant funding.**

**Reach 3 river right was identified as a low priority project, as a maintenance project with no available grant funding.**

Reach 4 –Farewell Bend Park and Riverbend Park from the Farewell Bend Footbridge to the downriver edges of the parks, and the dog off leash area

Reach 4 is 2,005 feet long on river left (Riverbend Park) and 1,554 feet long on river right (Farewell Bend Park), for a total of 3,559 feet. The reach is segmented into five sections. The reach covers the park property from the Farewell Bend Footbridge and downriver to the edge of Farewell Bend Park. For river



left, Riverbend Park is included downriver from the footbridge, as well as the dog off leash park (which is not BPRD property). This includes the eastern portions of Riverbend Park and Farewell Bend Park and the dog off leash park.

#### *Conditions*

##### **The following conditions were recorded on river left:**

- **Channel condition.** River flows in this reach are categorized as slack water. In water habitat includes rocks, wetlands, and undercut banks.
- **Bank condition.** Wetlands are present in two of three segments. Erosion ranges from minimal to moderate. Bank stability is good in two segments and bad in one. Soil is loose for all segments.
- **Riparian area.** Riparian vegetation covers 65%, 10%, and 0% of viable area for segments 1, 2, and 3, respectively.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** River left has 17 access points. Sections with double rail fencing have few access points, the section with single rail fencing has many access points given its length (5 access points in 475 feet).

##### **The following conditions were recorded on river right:**

- **Channel condition.** River flows in this reach are categorized as slack water. In water habitat includes rocks, wetlands, and LWD.
- **Bank condition.** Wetlands are present in both segments. Erosion is minimal. Bank stability is good throughout. Soil is somewhat compact.
- **Riparian area.** Riparian vegetation covers 25% to 50% of viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** The reach has seven access points, with six falling within the area with single rail fencing.

#### *Restoration Opportunities*

##### **The following restoration opportunities were identified for river left:**

- Transition single rail to double rail fencing
- Rebuild and armor beach
- Revegetate areas around bridge abutment
- Rebuild and armor existing off leash dog access (note that the dog access exists on private property, with an easement held by BPRD)

##### **The following restoration opportunities were identified for river right:**

- Transition single rail to double rail fencing
- Replace interpretive signage
- Armor access point where concrete abutment is
- Evaluate "mudflat" for possible wetland revegetation

#### *Project Priority*

**Reach 4 river left was identified as a low priority project, as a maintenance project with no available grant funding.**



**Reach 4 river right was identified as a low priority project, as a maintenance project with no available grant funding.**

#### Reach 5 – McKay Park, Columbia Park and Miller’s Landing Park

Reach 5 is 1,100 feet long at McKay Park, 375 feet long at Columbia Park, and 555 feet long at Miller’s Landing Park. The reach is segmented into ten sections.

#### *Conditions*

##### **The following conditions were recorded at McKay Park:**

- **Channel condition.** Channel type includes rapids and slow water. In water habitat includes rocks, wetlands, and LWD.
- **Bank condition.** Wetlands are only present in the last segments. Erosion ranges from minimal to moderate. Bank stability is good. Soil is somewhat compact in three segments and loose in one segment.
- **Riparian area.** Riparian vegetation covers 75% of one segment and 0% of viable area for the other three segments.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** Access covers the entirety of the fish ladder/floater rapids area and the beach area, with zero access points in the remaining section, which has double rail fencing.

##### **The following conditions were recorded for Columbia Park:**

- **Channel condition.** The channel is slack water in this section. In water habitat includes rocks, wetlands, and LWD.
- **Bank condition.** Wetlands are present in one segment. Erosion is moderate. Bank stability is good in two sections and bad in one section. Soil is loose and somewhat compact.
- **Riparian area.** Riparian vegetation covers 5% to 35% of viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** The park has five access points.

##### **The following conditions were recorded for Miller’s Landing Park:**

- **Channel condition.** The channel is slack water in this section. In water habitat includes rocks, wetlands, LWD, and undercut bank.
- **Bank condition.** Wetlands are present in two segments. Erosion is minimal in two sections and severe in one section. Bank stability is good in two sections and severe in one section. Soil is loose and somewhat compact.
- **Riparian area.** Riparian vegetation covers 0% to 75% of viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** The park has two access points.

#### *Restoration Opportunities*

##### **The following restoration opportunities were identified for McKay Park:**

- Revegetate center island/passageway

##### **The following restoration opportunities were identified for Columbia Park:**



- Revegetate riparian zone with trees and shrubs
- Transition single rail to double rail fencing
- Armor the designated access point

**The following restoration opportunities were identified for Miller's Landing Park:**

- Eliminate access point on most northern property line due to erosion (downstream edge of park)
- Revegetate riparian zone with trees and shrubs
- Modify access from the existing boardwalk
- Eliminate access at Old Mill property line (upstream edge of park)

*Project Priority*

**Reach 5 McKay Park was identified as a low priority project, as a maintenance project with no available grant funding.**

**Reach 5 Miller's Landing was identified as a high priority project, having potential for partnership, strong benefits, and suitable for external grant funding.**

**Reach 5 Columbia Park was not prioritized.**

*Reach 6 – Harmon Park, Pageant Park, Drake Park and Brooks Park*

Reach 6 is 5,386 feet long in total, with 1,162 feet at Harmon and Pageant parks, 317 feet long at Brooks Park and 3,907 feet long at Drake Park. The reach is segmented into six sections.

*Conditions*

**The following conditions were recorded at Harmon and Pageant parks:**

- **Channel condition.** Channel type is slack water. In water habitat includes rocks, wetlands, LWD and undercut bank.
- **Bank condition.** Wetlands are present. Erosion ranges from minimal to moderate. Bank stability is good to bad. Soil is somewhat compact. Seawall forms the bank for one segment.
- **Riparian area.** Riparian vegetation covers 0% to 65% of viable area.
- **Upland area.** Upland vegetation coverage is 0% of viable.
- **Access.** There are six access points.

**The following conditions were recorded for Brooks Park:**

- **Channel condition.** The channel is slack water in this section. In water habitat includes rocks.
- **Bank condition.** Wetlands are present. Erosion is moderate. Bank stability is bad. Soil is somewhat compact. Seawall is present along the park.
- **Riparian area.** Riparian vegetation covers 10% of the viable area.
- **Upland area.** Upland vegetation coverage is 0%.
- **Access.** Access exists for the entire park.

**The following conditions were recorded for Drake Park:**



- **Channel condition.** The channel is slack water in this section. In water habitat includes rocks, wetlands, LWD, and undercut bank. One segment has presence of LWD overhanging trees and three small islands in the middle of the river.
- **Bank condition.** Wetlands are present in one segment. Erosion is moderate to severe. Bank stability is bad to severe. Soil is somewhat compact. Seawall is present in all three sections.
- **Riparian area.** Riparian vegetation covers 0% to 10% of viable area.
- **Upland area.** Upland vegetation coverage is 0%.
- **Access.** Access exists for the entirety of two sections. In the third section, five access points exist.

#### *Restoration Opportunities*

**The following restoration opportunities were identified for Brooks Park:**

- In- water revegetation
- Remove seawall and lay back banks
- Fencing to minimize habitat degradation

**Restoration opportunities were not identified for Drake, Harmon or Pageant parks.**

#### *Project Priority*

**Reach 6 was identified as a high priority project, with potential partnership, strong benefits, and suitable for external grant funding.**

#### *Reach 7 – Pacific Park, Pioneer Park and First Street Rapids Park*

Reach 7 is 4,592 feet long in total, with 844 feet at Pacific Park, 739 feet at Pioneer Park and 3,009 feet long at First Street Rapids Park. The reach is segmented into eight sections. Riverview Park is part of this reach, but was not assessed.

#### *Conditions*

**The following conditions were recorded at Pacific Park:**

- **Channel condition.** Channel type is riffle. In water habitat includes rocks.
- **Bank condition.** Wetlands are not present. Erosion is minimal. Bank stability is good. Soil is very compact. Seawall is present along the entire bank.
- **Riparian area.** Riparian vegetation covers 0% of viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** River access is available along the entire bank.

**The following conditions were recorded for Pioneer Park:**

- **Channel condition.** Channel type is riffle. In water habitat includes rocks.
- **Bank condition.** Wetlands are not present. Erosion is minimal. Bank stability is bad. Soil is somewhat compact. Seawall is present along the entire bank.
- **Riparian area.** Riparian vegetation covers 0% of the viable area.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** River access exists for the entire park.



**The following conditions were recorded for First Street Rapids Park:**

- **Channel condition.** The channel has rapids, a run, and slow water in this section. In water habitat includes rocks, wetlands, LWD, and undercut bank.
- **Bank condition.** Wetlands are present. Erosion is minimal to severe. Bank stability is good to bad. Soil is somewhat compact and very compact in sections.
- **Riparian area.** Riparian vegetation covers 5% of viable area in two sections, 10% of viable area in two sections, and 75% of viable in one section.
- **Upland area.** Upland vegetation coverage data was not collected.
- **Access.** First Street Rapids Park has 45 access points. A small section of double rail fencing is ineffective along river left. Two segments, while having few access points, were highly impacted.

*Restoration Opportunities*

**The following restoration opportunities were identified for Pacific Park**

- Remove seawall and lay back bank
- Revegetate bank

**The following restoration opportunities were identified for Pioneer Park**

- Remove seawall and lay back bank
- Create side channel habitat in mud flat
- Install LWD to slow water movement and decrease erosion
- Install fencing to help protect habitat

**The following restoration opportunities were identified for First Street Rapids river right, upstream of footbridge**

- Install fencing to help protect habitat
- Plant upland vegetation to decrease erosion
- Consolidate and improve access
- Improve kayak access

**The following restoration opportunities were identified for First Street Rapids river left, upstream of footbridge**

- Consolidate and improve access
- Install fencing to help protect habitat

**The following restoration opportunities were identified for First Street Rapids river right, downstream of footbridge**

- Install fencing to help protect habitat
- Consolidate and improve access

**The following restoration opportunities were identified for First Street Rapids river left, downstream of footbridge**

- Install fencing to help protect habitat
- Armor access points to minimize erosion
- Revegetate upland habitat to minimize erosion



- Install riparian vegetation to create in water habitat

#### *Project Priority*

**Reach 7, Pacific and Pioneer parks, were identified as a high priority projects, with potential partnership, strong benefits, and suitable for external grant funding.**

**Reach 7, First Street Rapids Park, was identified as a high priority project, with potential partnership, strong benefits, and suitable for external grant funding.**

#### *Reach 8 – Riverview Park and Sawyer Park*

Reach 8 is 6,542 feet long and includes Riverview Park and Sawyer Park. Data were collected for 11 sections within this reach. While data was not collected at Riverview Park, restoration opportunities were identified there.

#### *Conditions*

**The following conditions were recorded for Sawyer Park:**

- **Channel condition.** Channel types in this reach include rapids, riffles, runs and slow water. In-water habitat includes rocks, wetlands, large woody debris and undercut bank.
- **Bank condition.** Wetlands are present in every section. Erosion is minimal in five sections, moderate in four sections and severe in two sections. Bank stability is good in six sections and bad in five sections. Soil is loose in three sections, somewhat compact in three sections, and severe in five sections. River left below the footbridge is in very poor condition.
- **Riparian area.** Riparian vegetation coverage ranges from 30% to 100% of viable area.
- **Upland area.** Upland vegetation coverage was not measured for two sections, was 25% of viable area for two sections, and 100% of viable area for the remaining seven sections.
- **Access.** There are 45 access points in this reach.

#### *Restoration Opportunities*

**The following restoration opportunities were identified for Riverview Park:**

- Install fencing to help protect habitat
- Revegetate riparian and upland areas to create habitat and minimize erosion

**The following restoration opportunities were identified for Sawyer Park river right, upstream of footbridge**

- Install fencing to help protect habitat
- Revegetate riparian and upland areas to create habitat and minimize erosion

**The following restoration opportunities were identified for Sawyer Park river left, upstream of footbridge**

- Install fencing to help protect habitat
- Armor access points to minimize erosion
- Revegetate riparian and upland areas to create habitat and minimize erosion

**The following restoration opportunities were identified for Sawyer Park river right, downstream of footbridge**



- Remove stairs
- Install fencing

**The following restoration opportunities were identified for Sawyer Park river left, downstream of footbridge**

- Install fencing to help protect habitat
- Armor access points to minimize erosion
- Revegetate riparian and upland areas to create habitat and minimize erosion

#### *Project Priority*

**Reach 8 was identified as a medium priority project, with strong ecological benefits and suitable for external grant funding.**

#### *Reach 9 – River Canyon (Archie Briggs Natural Area)*

Reach 9 is 2,763 feet long and includes the Archie Briggs Natural Area. The reach was divided into five sections for analysis.

#### *Conditions*

**The following conditions were recorded:**

- **Channel condition.** Channel type includes rapids and riffles. In-water habitat includes rocks, wetlands and large woody debris.
- **Bank condition.** Wetlands are present in this reach. Erosion is minimal, bank stability is good, soil is somewhat compacted in one section, and very compacted in the remaining five sections.
- **Riparian area.** Riparian vegetation covers 20% to 35% of viable area.
- **Upland area.** Upland vegetation covers 75% to 100% of viable area.
- **Access.** There are three access points in the reach.

#### *Restoration Opportunities*

**Restoration opportunities were not identified for reach 9.**

#### *Project Priority*

**Reach 9 was identified as not needing a project.**

#### *Reach 10 – Riley Ranch Nature Reserve*

Reach 10 is 7,445 feet long and includes Riley Ranch Nature Reserve. The reach was divided into five sections for analysis.

#### *Conditions*

**The following conditions were recorded:**

- **Channel condition.** Channel type includes rapids, riffles, and runs. In-water habitat includes rocks, wetlands, large woody debris and undercut banks.
- **Bank condition.** Wetlands are present in this reach. Erosion is minimal, bank stability is good, soil is somewhat and very compacted.
- **Riparian area.** Riparian vegetation covers 100% of viable area.



- **Upland area.** Upland vegetation covers 100% of viable area.
- **Access.** There are 10 access points in the reach.

#### *Restoration Opportunities*

**Restoration opportunities were not identified for reach 10.**

#### *Project Priority*

**Reach 10 was identified as not needing a project.**



## Identified Projects and Prioritization

### Project Identification

As noted above under the data analysis section, there were restoration opportunities identified that would benefit all reaches, as well as specific restoration opportunities identified for most reaches. These specific restoration opportunities were prioritized using the following criteria:

- High priority – these projects include partnership opportunities, strong ecological benefits and are suitable for external grant funding.
- Medium priority – these projects include partnership opportunities, ecological benefits and are suitable for external grant funding.
- Maintenance projects – these projects fall into the operations and maintenance category, and would not be eligible for grant funding.
- No project needed – a number of locations were identified as not needing habitat restoration projects at the time the data was collected.

The identified projects, coupled with the prioritization criteria resulted in six high priority projects, two medium priority projects, four maintenance projects and two sites that require no projects. Of the six priority projects, portions of two of the projects have already begun the design process. This includes reach 3 RL – Riverbend Park: Southern Trail (RL) and Reach 6 – Drake Park (though this project doesn't include work at Harmon and Brooks Parks identified above).

The following table specifies the potential projects by priority and also provides rough order of magnitude cost estimates. It's important to note that these cost estimates are very high level in nature and should not be relied upon for an accurate reflection of current project costs. Once design level work commences for the identified projects new cost estimates will be necessary, along with applicable escalation for the anticipated construction year(s).

Reach	Name	High Priority	Medium Priority	Low Priority	Order of Magnitude	
Reach 3 RL	Riverbend Park - Southern Trail (RL)	X			\$ 80,000	\$ 175,000
Reach 5 RR	Miller's Landing (RR)	X			\$ 10,000	\$ 25,000
Reach 7a	Pacific Park and Pioneer Park (RR)	X			\$ 450,000	\$ 650,000
Reach 2	Bill Healy to Hydro Plant (RR)	X			\$ 30,000	\$ 75,000
Reach 6	Drake Park, Harmon Park & Brooks Park (RR & RL)	X			\$ 400,000	\$ 750,000
Reach 7b RR	First Street Rapids (RL) & downstream to golf course	X			\$ 750,000	\$ 150,000
Reach 8	Sawyer Park (RR & RL)		X		\$ 50,000	\$ 240,000
Reach 1	River Rim (RR)		X		\$ 10,000	\$ 50,000
Reach 4 RR	Farewell Bend Park - Downstream (RR)			X	\$ 20,000	\$ 50,000
Reach 3 RR	Farewell Bend Park - Upstream (RR)			X	\$ 150,000	\$ 250,000
Reach 4 RL	Riverbend Park (RL)			X	\$ 20,000	\$ 50,000
Reach 5 RL	McKay Park (RL)			X	\$ 20,000	\$ 50,000
Riley Ranch	Riley Ranch (RR & RL)			X	\$ -	\$ -
Reach 9	River Canyon (RR & RL)			X	\$ -	\$ -
					\$ 1,990,000	\$ 2,515,000
	High Priority Potential Partnership Projects - Strong benefits, suitable for external grant funding					
	Medium Priority Potential Partnership Projects - Strong benefits, suitable for external grant funding					
	Maintenance Projects - Not grant fundable					
	No project needed					



Appendix A: Reach Condition Assessments

Appendix B: Presentation to UDWC Board on February 13, 2018



Date: 01/17/2018				Reach #: 1		Overall length of reach: 686 ft				Flow direction: N				Weather conditions: Overcast									
Flow (BENOGauge / DEBOGauge):				749		Diversion totals upstream of reach: 0				Water temp (DEBOGauge): 38.4				Surveyed by: James Adams									
GENERAL NOTES:				Prominent user group is recreational kayakers that use this as a launch for rapids below. Further study needed to determine what other user groups frequent this park and access the river.										Total #		9							
														Access Pts:									
Channel Condition				Bank Condition:								Riparian Veg (riparian zone)				Upland Veg (upland zone)		Access Points		LWD		River bank	
	Channel type (1)	Pool Types (2)	In-water Habitat (3)	Length of Segment (FT)	Presence of Wetlands (Y/N)	Manmade Structures (Y/N) List Below	Erosion (4)	Stability (5)	Width of Bank (FT)	Compaction (6)	% Coverage of Viable	In-water Veg	Ground Cover	Trees/ Shrubs	% Coverage of Viable	Ground Cover	Trees/ Shrubs	Quantity	Number of:	RR/RL			
1	RU	N/A	1,3	686	Y	Y	2	2	25	2	50%	2,4	8	17,24,29	25%	8	20, 22, 26	9	21	RR			
2																							
3																							
4																							
5																							
<div>1 Channel Type: <b>SW</b>- Slack Water, <b>S</b>- Slow Water, <b>RU</b>- Run, <b>RI</b>- Riffle, <b>RA</b>- Rapid</div> <div>2 Pool Types: <b>DP</b>- Dam Pool <b>SS</b>- Scour Pool <b>RP</b>- Riffle pool</div> <div>3 In-water habitat: Rocks <b>1</b>, Wetlands <b>2</b>, LWD <b>3</b>, Undercut bank <b>4</b></div> <div>4 Erosion: Minimal (some cohesion) <b>1</b>, Moderate (fine soils) <b>2</b>, Severe (no root mass) <b>3</b></div> <div>5 Stability: Good <b>1</b>, Bad <b>2</b>, Severe <b>3</b></div> <div>6 Compaction: Very compact <b>1</b> , Somewhat compact <b>2</b>, Loose <b>3</b></div>										Detailed Description of Manmade Structures													
										Reach/Stretch		Notes:											
										R1S1		Center of reach there is some type of pump system. Irrigation perhaps.											
										General		LWD is teathered together with cable. Time of placement, unknown.											
Species List																							
In-water veg		Trees/Shrubs																					
1 cattail		10 Ash		20 Juniper		30 Sage																	
2 grasses		11 Birch		21 Locust		31 Serviceberry																	
3 lily		12 Bitterbrush		22 Manzanita		32 Snowberry																	
4 rush		13 Cherry		23 Maple		33 Spirea																	
5 sedge		14 Chockcherry		24 Mtn Alder		34 Sumac																	
Groundcover		15 Cottonwood		25 OR Grape		35 Willow																	
6 Forget me r		16 Currant		26 Pondo		36 Yarrow																	
7 Golden Rod		17 Dogwood		27 Rose		37 Developed																	
8 Grass		18 Elderberry		28 Raspberry																			
9 Strawberry		19 Huckleberry		29 Rabbitbrush																			



Date: 12/18/2017				Reach #: 2		Overall length of reach: 4907				Flow direction: N				Weather conditions: Overcast							
Flow (BENOGauge / DEBOGauge):				705				Diversion totals upstream of reach: 0.11				Water temp (DEBOGauge): 35.7				Surveyed by: James Adams					
GENERAL NOTES:				When compared to other reaches this reach has a large abundance of horsetail in the riparian zone. Presence of beaver activity/daming along R2S5												Total # Access Pts:		36			
Channel Condition		Bank Condition:								Riparian Veg (riparian zone)		Upland Veg (upland zone)		Access Points		LWD		River bank			
Channel type (1)	Pool Types (2)	In-water Habitat (3)	Length of Segment (FT)	Presence of Wetlands (Y/N)	Manmade Structures (Y/N) List Below	Erosion (4)	(5)	Stability (FT)	Width of Bank	Compaction (6)	% Coverage of Viable	In-water Veg	Ground Cover	Trees/ Shrubs	% Coverage of Viable	Ground Cover	Trees/ Shrubs	Quantity	Number of	RR/RL	
1	RI	RP, SP	1, 2, 4	1161	Y	Y	1	1	25	2	50%	2, 4, 5	8	17, 24, 25, 26, 27, 33	100%	8	20, 26	3	0	RR	
2	S	N/A	1, 2, 4	316	Y	Y	1	1	40	2	75%	2, 4, 5	8	17, 24, 25, 26, 27, 33	90%	8	20, 26	3	0	RR	
3	S	SP	1, 3	369	N	N	1	1	20	1	0%	N/A	N/A	24, 27, 32	75%	8	20, 26, 27, 32	3	4	RR	
4	RU	SP	1, 2, 3, 4	633	Y	N	2	1	15	2	85%	2, 4, 5	8	20, 24, 26, 27	60%	8	20, 26	9	8	RR	
5	RU	SP	1, 2, 3, 4	792	Y	N	2	1	40	2	85%	2, 4, 5	8	20, 24, 25, 26, 27, 32, 33	90%	8	20, 26, 29	7	4	RR	
6	RI	RP, SP	1, 2, 4	1003	Y	N	2	1	60	2	70%	2, 4, 5	8	20, 24, 25, 26, 27, 32	90%	8	20, 26, 29	7	0	RR	
7	S	SP	1, 2, 4	633	Y	Y	2	1	40	2	70%	2, 4, 5	8	20, 24, 25, 26	75%	8	20, 26, 29	4	0	RR	
8																					
9																					
10																					
1 Channel Type: <b>SW</b> - Slack Water, <b>S</b> - Slow Water, <b>RU</b> - Run, <b>RI</b> - Riffle, <b>RA</b> - Rapid 2 Pool Types: <b>DP</b> - Dam Pool <b>SS</b> - Scour Pool <b>RP</b> - Riffle pool 3 In-water habitat: Rocks 1, Wetlands 2, LWD 3, Undercut bank 4 4 Erosion: Minimal (some cohesion) 1, Moderate (fine soils) 2, Severe (no root mass) 3 5 Stability: Good 1, Bad 2, Severe 3 6 Compaction: Very compact 1, Somewhat compact 2, Loose 3											Detailed Description of Manmade Structures										
Species List																					
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7 Golden Rod	17 Dogwood	27 Rose	37 Developed																		
8 Grass	18 Elderberry	28 Raspberry																			
9 Strawberry	19 Huckleberry	29 Rabbitbrush																			



[illegible]



Date:		1/17/2018		Reach #:		4		Overall length of reach:		3559		Flow direction: N		Weathered conditions:										
Flow (BENOGauge / DEBOGauge): 749      Diversion totals upstream of reach: 0      Water temp (DEBOGauç 38.4      Surveyed by: James Adams																								
		GENERAL NOTES:															Total #		24					
																	Access Pts:							
																			Access Points		LWD		River bank	



Date: 1/26/2018		Reach #: 5		Overall length of reach: 2030		Flow direction: N S E W		Weather conditions: Overcast																																													
Flow (BENOGauge / DEBOGauge): 738		Diversion totals upstream of reach: 0		Water temp (DEBOGauge): 36.1		Surveyed by: James Adams																																															
GENERAL NOTES:						Total # Access Pts: 7																																															
Channel Condition		Bank Condition:		Riparian Veg (riparian zone)		Upland Veg (upland zone)		Location																																													
Channel type (1)	Pool Types (2)	In-water Habitat (3)	Length of Segment	Presence of Wetlands (Y/N)	Manmade Structures (Y/N) List Below	Erosion (4)	Stability (5)	Width of Bank	Compaction (6)																																												
1	RA	RP	1	80	N	Y	2	1	15																																												
2	RA	RP	1	195	N	Y	2	1	15																																												
3	RA	RP	1	375	N	Y	2	1	75																																												
4	S	SP	1, 2, 3	450	Y	Y	1	1	25																																												
5	SW	N/A	1, 3	60	N	Y	2	2	10																																												
6	SW	N/A	1	105	N	Y	2	1	10																																												
7	SW	N/A	1, 2	210	Y	Y	2	1	10																																												
8	S	SP	1, 2, 3, 4	240	Y	Y	1	1	20																																												
9	S	N/A	1	120	N	Y	1	1	1																																												
10	S	N/A	1, 2, 4	195	Y	Y	3	3	40																																												
11																																																					
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Date:	1/18/2018	Reach #:	6	Overall length of reach:	5386	Flow direction:	N S E W	Weather conditions:	Overcast																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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GENERAL NOTES:		R6S1 - Had presence of large woody debris, overhanging trees and three small islands in the middle of the river.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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1	SW	N/A	1, 3, 4	1848	N	Y	3	2	SEAWALL	2	0%	37	37	37	0%	37	37	100	4	RR	DRAKE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
2	SW	N/A	1, 4	1320	N	Y	3	2	SEAWALL	2	0%	37	37	37	0%	37	37	100	0	RR	DRAKE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
3	SW	N/A	1, 2, 3, 4	739	Y	Y	2	3	SEAWALL	2	10%	1, 5	N/A	24, 27	0%	37	37	5	3	RR	DRAKE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
4	SW	N/A	1, 2, 3, 4	898	Y	Y	1	1	5	2	65%	1, 4, 5	8	11, 15, 24	0%	37	37	1	1	RL	HARMON																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
5	SW	N/A	1,	264	N	Y	2	2	SEAWALL	2	0%	37	37	37	0%	37	37	5	0	RL	HARMON																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
6	SW	N/A	1,	317	Y	Y	2	2	SEAWALL	2	10%	5	N/A	24	0%	37	37	100	0	RL	BROOKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Seawall along entire stretch</td></tr><tr><td>R6S2</td><td>Footbridge at start and seawall along entire stretch</td></tr><tr><td>R6S3</td><td>Seawall along entire stretch and wooden elevated footbridge over portion of stretch</td></tr><tr><td>R6S4</td><td>~5ft chainlinked fencing along entire stretch. Dock on waterfront in the first third of stretch. Seawall along entire stretch.</td></tr><tr><td>R6S5</td><td>Pumphouse, Seawall along entire stretch. Footbridge. Floating dock.</td></tr><tr><td>R6S6</td><td>Newport Bridge at end of stretch and seawall along entire stretch.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><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Street bridge. Seawall along entire stretch	R6S2	Footbridge at start and seawall along entire stretch	R6S3	Seawall along entire stretch and wooden elevated footbridge over portion of stretch	R6S4	~5ft chainlinked fencing along entire stretch. Dock on waterfront in the first third of stretch. Seawall along entire stretch.	R6S5	Pumphouse, Seawall along entire stretch. Footbridge. Floating dock.	R6S6	Newport Bridge at end of stretch and seawall along entire stretch.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Date:		1/30/2018		Reach #:		8		Overall length of reach:				6542				Flow direction: N S E W				Weather conditions:				Overcast															
Flow (BENOGauge / DEBOGauge):																						738		Diversion totals upstream of reach:				0		Water temp (DEBOGauge):				39.6		Surveyed by:		J. Adams & R. Richard	
		GENERAL NOTES:		RL below footbridge is in very poor condition																																			
																						Total # Access Pts:		45															
		Channel Condition				Bank Condition:										Riprarian Veg (riparian zone)				Upland Veg (upland zone)		Access Points		LWD		River bank													
		Channel type (1)	Pool Types (2)	In-water Habitat (3)	Length of Segment	Presence of Wetlands (Y/N)	Manmade Structures (Y/N) List Below	Erosion (4)	Stability (5)	Width of Bank	Compaction (6)	% Coverage of Viable	In-water Veg	Ground Cover	Trees/Shrubs	% Coverage of Viable	Ground Cover	Trees/Shrubs	Quantity	Number of:	RR/RL																		
1	S	N/A	1, 2, 3	739	Y	N		1	1	200	3	100%	1, 2, 4, 5	8	18, 24, 33	N/A	37	37	6		RR																		
2	RU	N/A	1, 2, 3, 4	686	Y	N		1	1	125	3	100%	1, 2, 4, 5	8	18, 24, 33	25%	37	20, 25, 26, 29	3		RR																		
3	RA	SS, RP	1, 2, 3, 4	316	Y	Y		1	1	200	3	100%	1, 2, 4, 5	8	17, 24, 25	25%	37	20, 26	2		RR																		
4	RA	SS, RP	1, 2, 3, 4	680	Y	Y		1	1	25	1	65%	2, 5	8	17, 24, 25, 2	100%	8	20, 26, 30	4		RR																		
5	RI	SS	1, 2, 3	422	Y	N		1	1	10	1	30%	2, 5	N/A	17, 24, 33	100%	8	20, 26, 30	4		RR																		
6	RI/RU	SS	1, 2, 3	422	Y	N		2	1	50	2	65%	2, 5	8	17, 24	100%	8	20, 26, 29, 30	2		RR																		
7	S	N/A	1, 2, 4	897	Y	N		2	2	20	2	50%	1, 2, 4, 5	8	20, 24, 25, 2	N/A	37	37	2		RL																		
8	RU	SS	1, 2, 3, 4	950	Y	N		2	2	50	2	100%	1, 2, 4, 5	8	17, 24, 27,	100%	8	20, 26, 29, 30	7		RL																		
9	RA	SS, RP	1, 2, 3, 4	580	Y	Y		2	2	10	1	50%	2, 4, 5	8	24, 27, 33	100%	8	20, 26, 29, 30	5		RL																		
10	RI	SS	1, 2, 3, 4	425	Y	N		3	2	10	1	50%	2, 4, 5	8	24, 27, 29, 3	100%	8	20, 26, 29, 30	5		RL																		
11	RI/RU	SS	1, 2, 3, 4	425	Y	N		3	2	10	1	50%	2, 4, 5	8	17, 24, 27, 2	100%	8	20, 26, 29, 30	5		RL																		
12																																							
1 Channel Type: <b>SW</b> - Slack Water, <b>S</b> - Slow Water, <b>RU</b> - Run, <b>RI</b> - Riffle, <b>RA</b> - Rapid																																							
2 Pool Types: <b>DP</b> - Dam Pool <b>SS</b> - Scour Pool <b>RP</b> - Riffle pool																																							
3 In-water habitat: Rocks <b>1</b> , Wetlands <b>2</b> , LWD <b>3</b> , Undercut bank <b>4</b>																																							
4 Erosion: Minimal (some cohesion) <b>1</b> , Moderate (fine soils) <b>2</b> , Severe (no root mass) <b>3</b>																																							
5 Stability: Good <b>1</b> , Bad <b>2</b> , Severe <b>3</b>																																							
6 Compaction: Very compact <b>1</b> , Somewhat compact <b>2</b> , Loose <b>3</b>																																							
												Detailed Description of Manmade Structures																											
												Reach/Stretch		Notes:																									
												R8S2		Small seawall by grass edge apparently used to keep water out of park																									
												R8S4		Pedestrian footbridge																									
												R8S7		Homeowner appears to have mowed down riparian veg along this section.																									
												R8S8		Pedestrian footbridge																									



Date:	Reach #:		Overall length of reach:	2763 Flow direction: N S E W								Weather conditions:																																					
Flow (BENOGauge / DEBOGauge):																				Diversion totals upstream of reach:										Water temp (DEBOGauge):										Surveyed by: James Adams & Ryan Richard									
GENERAL NOTES:																				Total #										Access Pts: 3																			
Channel Condition			Bank Condition:									Riparian Veg (riparian zone)						Upland Veg (upland zone)			Access Points		LWD		River bank																								
Channel type (1)	Pool Types (2)	In-water Habitat (3)	Length of Segment	Presence of Wetlands (Y/N)	Manmade Structures (Y/N) List Below	Erosion (4)	Stability (5)	Width of Bank	Compaction (6)	% Coverage of Viable	In-water Veg	Ground Cover	Trees/Shrubs	% Coverage of Viable	Ground Cover	Trees/Shrubs	Quantity	Number of:	RR/RL																														
1	RI	SS	1, 2	234	Y	N	1	1	5	1	20%	2	8	17, 24, 27, 33, 35	75%	8		0	RL																														
2	RA	SS, RP	1, 2	525	Y	N	1	1	5	1	20%	2	8	17, 24, 27, 33, 35	75%	8		0	RL																														
3	RI	SS	1, 2	264	Y	N	1	1	25	2	35%	2	8	17, 24, 27, 33, 35	75%	8		0	RL																														
4	RI	SS	1, 2	474	Y	N	1	1	25	1	35%	2	8	17, 25, 33, 35	100%	8		0	RL																														
5	RA	SS, RP	1, 2, 3	1266	Y	N	1	1	5	1	20%	2	8	17, 24, 33, 35	100%	8		3	RL																														
6																																																	
7																																																	
8																																																	
9																																																	
10																																																	
<b>1</b> Channel Type: <b>SW-</b> Slack Water, <b>S-</b> Slow Water, <b>RU-</b> Run, <b>RI-</b> Riffle, <b>RA-</b> Rapid <b>2</b> Pool Types: <b>DP-</b> Dam Pool <b>SS-</b> Scour Pool <b>RP-</b> Riffle pool <b>3</b> In-water habitat: Rocks <b>1,</b> Wetlands <b>2,</b> LWD <b>3,</b> Undercut bank <b>4</b> <b>4</b> Erosion: Minimal (some cohesion) <b>1,</b> Moderate (fine soils) <b>2,</b> Severe (no root mass) <b>3</b> <b>5</b> Stability: Good <b>1,</b> Bad <b>2,</b> Severe <b>3</b> <b>6</b> Compaction: Very compact <b>1,</b> Somewhat compact <b>2,</b> Loose <b>3</b>										<b>Detailed Description of Manmade Structures</b> <b>Reach/Stretch</b> <b>Notes:</b>  <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>																																							
<b>Species List</b>																																																	
<b>In-water veg</b>					<b>Trees/Shrubs</b>																																												
<b>1</b> cattail					<b>10</b> Ash					<b>20</b> Juniper					<b>30</b> Sage																																		
<b>2</b> grasses					<b>11</b> Birch					<b>31</b> Locust					<b>31</b> Serviceberry																																		
<b>3</b> lily					<b>12</b> Bitterbrush					<b>22</b> Manzanita					<b>32</b> Snowberry																																		
<b>4</b> rush					<b>13</b> Cherry					<b>23</b> Maple					<b>33</b> Spirea																																		
<b>5</b> sedge					<b>14</b> Chockcherry					<b>24</b> Mtn Alder					<b>34</b> Sumac																																		
<b>Groundcover</b>					<b>15</b> Cottonwood					<b>25</b> OR Grape					<b>35</b> Willow																																		
<b>6</b> Forget me n					<b>16</b> Currant					<b>26</b> Pondo					<b>36</b> Yarrow																																		
<b>7</b> Golden Rod					<b>17</b> Dogwood					<b>27</b> Rose					<b>37</b> Developed																																		
<b>8</b> Grass					<b>18</b> Elderberry					<b>28</b> Raspber																																							
<b>9</b> Strawberry					<b>19</b> Huckleberry					<b>29</b> Rabbitbrush																																							



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<b>Reach 1</b>	Armor access points for kayak launch Revegetate riparian zone with trees and shrubs Safety signage for downstream rapids Build steps from entry down hillside to prevent erosion Signage for restoration interpretation/access points Fencing	frog ecological uplift complexity protection v restoration construction access
<b>Reach 2</b>	Eliminate access points Armor 5-6 access points Fence key areas Revegetate riparian zone with trees and shrubs Relocate trail higher up on bank in certain areas Signage for restoration interpretation/access points	fundable    fundable non-fundable  master planning
<b>Reach 3 RR</b>	Rebuild/armor beach Transition single rail to double rail fencing Signage for restoration interpretation/access points Revegetate riparian zone with trees and shrubs Eliminate access points to prevent erosion	ped planning  maintenance  uplift seawall rer reveg access
<b>Reach 3 RL</b>	Lay back bank in certain locations In water habitat LWD/Boulders Bench areas for OSF habitat Double split rail fence entire reach Create armored access points Create armored access area and fencing for dogs	
<b>Reach 4 RR</b>	Transition single rail to double rail fencing Replace interpretive signage Armor access point where concrete abutment is Evaluate "mudflat" for possible wetland revegetation	
<b>Reach 4 RL</b>	Transition single rail to double rail fencing Rebuild/armor beach Revegetate areas around bridge abutment Rebuild/armor existing off leash dog access	
<b>Reach 5 RR</b>	<b>Millers Landing</b> Cut off access to beach on most northern property line Revegetate riparian zone with trees and shrubs Modify access from boardwalk Eliminate access at Old Mill property line	
<b>Reach 5 RL</b>	<b>Whitewater Park</b> Revegetate center island/passageway  <b>Columbia Park</b> Revegetate riparian zone with trees and shrubs Transition single rail to double rail fencing Armor access point	
<b>Reach 6</b>	<b>Brooks Park</b> In- water revegetation Remove seawall lay back banks Fencing  <b>Harmon Park</b> N/A	

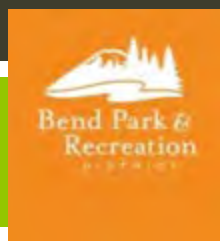


<b>Reach 7</b>	<p><b>Pacific Park</b> Remove seawall lay back bank Revegetate bank</p> <p><b>Pioneer Park</b> Remove seawall lay back bank Create side channel habitat in mud flat LWD Fencing</p> <p><b>First St. Rapids RR- upstream of footbridge</b> Fencing Upland revegetation Armor access point- pedestrian management plan Kayak access</p> <p><b>First St. Rapids RL-upstream of footbridge</b> Blocking access Fencing</p> <p><b>First St.Rapids RR- downstream of footbridge</b> Fencing Armor access points-pedestrian management plan</p> <p><b>First St.Rapids RL- downstream of footbridge</b> Fencing Armor access points Revegetate upland In water habitat</p>
<b>Reach 8</b>	<p><b>Riverview Park</b> Fencing Revegetate</p> <p><b>Sawyer Park RR- upstream of footbridge</b> Fencing Revegetate</p> <p><b>Sawyer Park RL- upstream of footbridge</b> Fencing Armor access points Revegetate</p> <p><b>Sawyer Park RR- downstream of footbridge</b> Removal of stairs Fencing</p> <p><b>Sawyer Park RL- downstream of footbridge</b> Fencing Armor access points Revegetate</p>
<b>Reach 9</b>	N/A
<b>Riley Ranch</b>	N/A





# RIVER ACCESS & STEWARDSHIP PLANNING



play for life



# Project Overview-

## River Access & Stewardship Planning



The long term goals of this initiative are to protect and restore the habitat along the river's riparian corridor and identify and create sustainable access points to the river.



# Riparian Zones



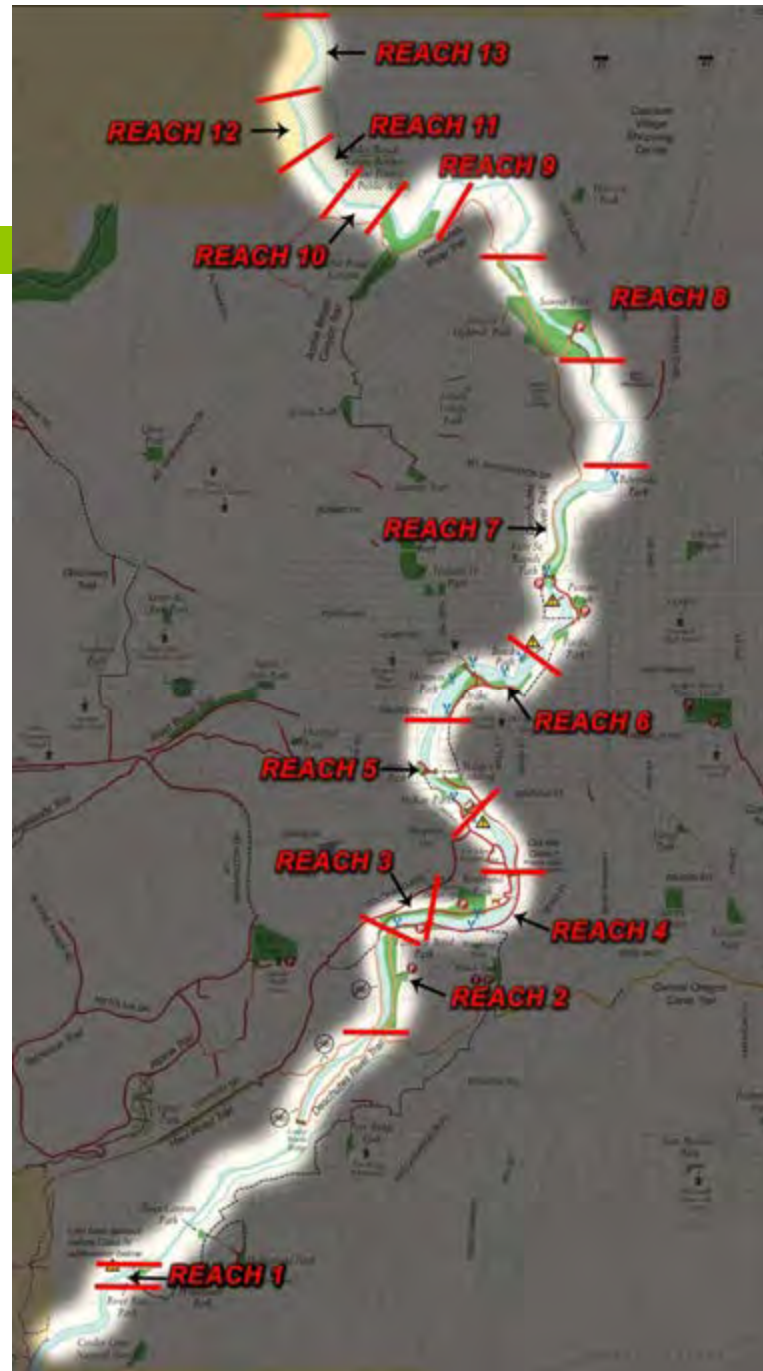
Functioning riparian zone  
Riley Ranch



Non-functioning riparian zone  
River left-Bill Healy bridge



# Reach Areas





\_\_\_\_\_

[illegible]



# Reach 1 Conditions

River Rim Park





# Reach 2 Conditions

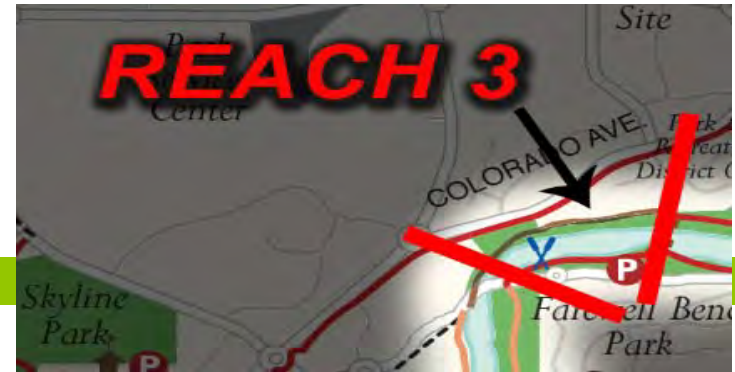
Deschutes River Trail





# Reach 3 RL Conditions

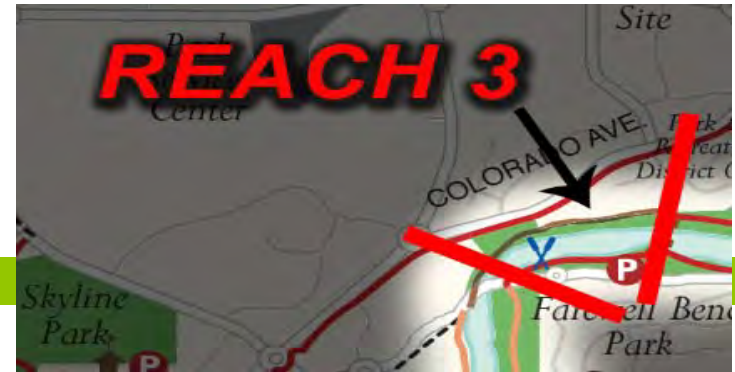
River Bend Park





# Reach 3 RR Conditions

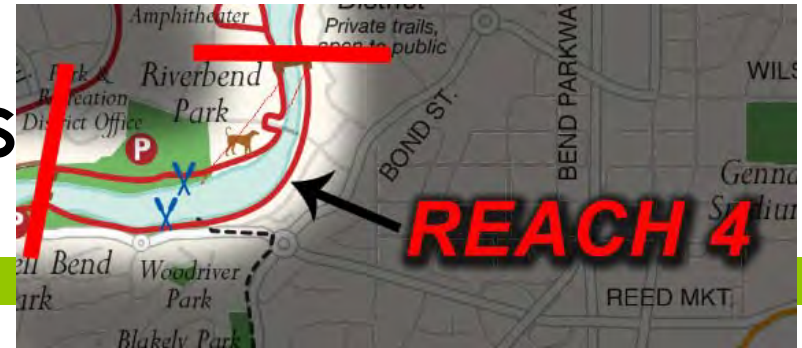
Farewell Bend Park





# Reach 4 RL Conditions

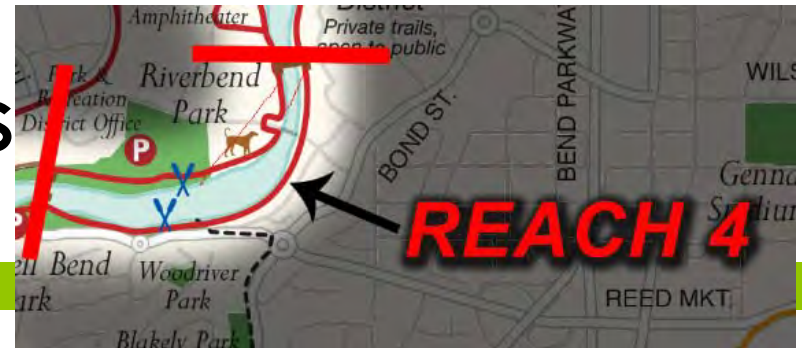
Riverbend Park





# Reach 4 RR Conditions

Farewell Bend Park





# Reach 5 RL Conditions

Whitewater Park/Columbia Park





# Reach 5 RR Conditions

Millers Landing

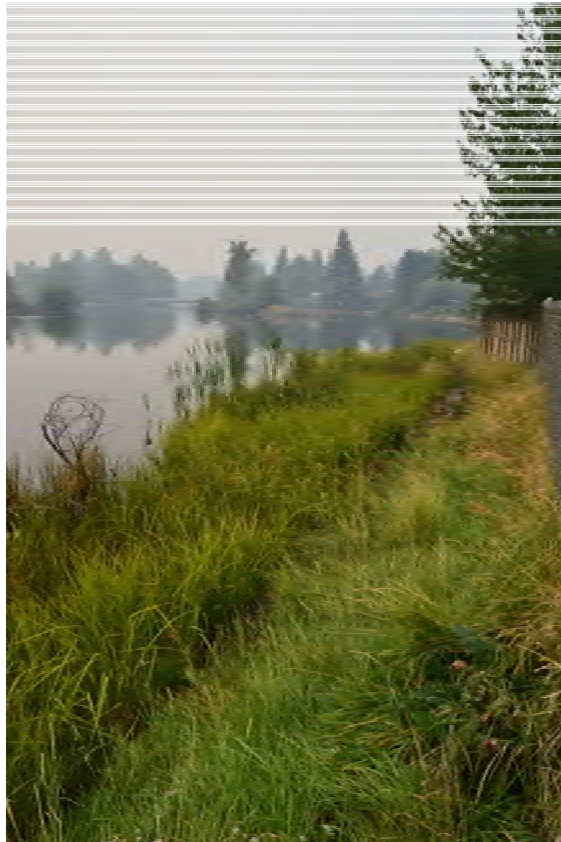




# Reach 6 RL Conditions



Harmon Park



Brooks Park





# Reach 6 RR Conditions

Drake Park





# Reach 7 Conditions



Pioneer Park



1<sup>st</sup> St. Rapids





# Reach 7 RL Conditions

Deschutes River Trail- downstream of 1<sup>st</sup> St. rapids





# Reach 8 Conditions

Sawyer Park





# Reach 9 Conditions





# Reach 10-13 Riley Ranch





# Summary of Concerns



- ❑ Multiple access points to river throughout
- ❑ Loss of riparian vegetation including groundcover, shrubs and overhead cover
- ❑ Lack of structural complexity in the water
- ❑ Erosion
- ❑ Lack of biological diversity
- ❑ Lack of off channel resting habitat
- ❑ Lack of overhead cover



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[illegible]



# Reach 3 Existing Conditions





# Restoration Opportunities-Reach 3



- Bank stabilization/laying back banks
- In water habitat- LWD, rocks, pool creation, wetland habitat
- Revegetation- riparian, upland, overhead cover
- Fencing
- Armored access points
- Educational opportunities



# Next Steps



- ❑ Establish Collaborative Agreement between BPRD and UDWC for future work on riparian protection and restoration.
- ❑ OWEB Technical Assistance application to help fund the design of the first priority reach on river left from Bill Healy bridge to the Farewell Bend footbridge.
- ❑ Continue collaboration on riparian restoration on Drake Park



# Questions?







# **APPENDIX 5**

## **COMMUNITY SURVEY SUMMARIES**



## **Deschutes River Access and Habitat Restoration Plan February 2020 Community Survey Results**

### **Introduction**

As part of the public engagement scope for the Deschutes River and Habitat Restoration Plan, the Bend Parks and Recreation District (BPRD) solicited input from the community regarding their current use of the rivers, as well as their desires related to access and habitat restoration. This input was gathered via a community survey that was available from February 10 through February 28, 2020. The survey was advertised on the BPRD website, BPRD social media pages, BPRD newsletters, stakeholder email list (reaching over 100 individuals and their associated organizations, as applicable) and focus group member outreach. After one week of the survey being open, a number of groups were identified as having more limited responses, including surfers and anglers. In addition, the Spanish language survey had a low number of responses. To address this, BPRD completed more targeted outreach to these groups including attending meetings frequented by these groups and requesting input, targeted outreach to individuals affiliated with these groups, targeted outreach on social media pages associated with these groups, and additional personal email outreach. This additional outreach did result in an increase in responses from these groups. It should also be noted that a number of Latino community members we spoke with indicated that they preferred to complete the survey in English.

Overall, BPRD received 712 responses to the survey. BPRD was pleased with the response – both the overall quantity of responses, as well as the breadth of user groups whom provided their feedback. BPRD believes the feedback received from this survey will be informative in the development of projects and related priorities for ultimate inclusion in the Deschutes River Access and Habitat Restoration Plan.

What follows is a summary of the survey results focused on key take-aways from the survey results.

### **Key Take-aways**

The survey included high level questions to ascertain most prevalent river use activities and to better understand perceptions, desire and concerns related to the Deschutes River parks. In addition, the survey also included more targeted questions associated with specific user groups. This section is focused on high level questions associated with river access and habitat restoration.

#### Top Three Activities

There are many uses along and within the river, and the survey inquired about the top three activities that people enjoy at the river. What follows is a summary of the top three uses, based upon the survey results.

<b>Use Type</b>	<b>Number of Respondents</b>	<b>Percentage of Total Respondents</b>
Trail walking, running or biking	592	83%
Paddling the river	307	43%
Floating the river	281	40%

As evidenced by the data, individuals enjoy activities at the bank edge, as well as activities within the water. Other popular activities included taking your dog swimming or wading along the river and visiting a park along the river. For the Spanish survey, sitting or standing on the river falls within the top three activities (instead of paddling, as seen with the overall results).



### Most used parks for the top three activities

As a follow-up question to the top three activities individuals enjoy at the river, the survey asked at which parks individuals enjoy these activities. What follows is a summary of the top three parks for the identified most prevalent activities, based upon the survey results.

<b>Park</b>	<b>Number of Respondents</b>	<b>Percentage of Total Respondents</b>
Farewell Bend	525	74%
Riverbend	466	69%
Drake	452	64%

The identified parks are consistent with the preferred activities noted in response to question 1 as they are popular locations for trail use, and paddling and floating the river. Other popular parks included McKay, Miller's Landing, Sawyer and First Street Rapids.

### River Access Satisfaction

The 2017 Community Needs survey completed for the BPRD comprehensive plan identified riverfront parks and areas to access the river as two of the seven highest priority needs. Given that the district has 16 parks along eight miles of the Deschutes River, as well as approximately 119 access points along this eight-mile stretch, BPRD is trying to better understand what is driving the requests for more riverfront parks and access points. Given that satisfaction with the existing river access may factor into the desires for additional river access, a survey question inquired about satisfaction with river access for desired activities. Below is a summary of the responses based upon the 694 people that answered this question:

<b>Satisfaction level</b>	<b>Number of Respondents</b>	<b>Percentage of Total Respondents*</b>
Very Satisfied	152	22%
Satisfied	300	43%
Neutral	135	19%
Dissatisfied	74	11%
Very Dissatisfied	33	5%

As illustrated in the table, the majority of respondents were either satisfied or neutral regarding existing river access, with approximately 16% of respondents dissatisfied. Lack of satisfaction by this minority of the population may have contributed to the Community Survey results that indicated that more river access is necessary.

### Top Three Concerns

Concerns or opportunities for improvements at the BPRD river parks may be another reason Community Survey results have previously indicated that riverfront parks and access to the river are an unmet need. To better understand current community concerns related to riverfront parks, the survey inquired about what concerns respondents had related to these parks. Below are the top six responses, which were concerns expressed by at least one-third of the respondents. Respondents could choose as many concerns as they desired.



Concerns	Number of Respondents	Percentage of Total Respondents
Bank Erosion	321	48%
Number of People	307	46%
Litter	289	43%
Vegetation being Trampled	286	43%
Parking Availability	272	41%
Behavior of People	254	40%

The top concerns include a focus on both access and habitat degradation, indicative of the communities' concerns related to both of these facets of the river. For the Spanish survey, the lack of trash can availability scored as the 2<sup>nd</sup> top concern and the number of people in the park was one of the lowest concerns.

#### Transportation Mode Choice

Given that BPRD has heard over time that parking is a challenge at some river parks, the survey included a question to understand how people get to the parks. Respondents were invited to identify all modes that apply to them. Below is a summary of the responses.

Mode Choice	Number of Respondents	Percentage of Total Respondents
Personal Vehicle	603	89%
Walk or Bike	346	51%
Carpool	121	18%
Ride the River Shuttle	63	9%
Other	8	1.2%
Other Public Transit	5	0.7%
I Don't go to the Deschutes	3	0.4%

As evidenced by the data, the large majority of respondents access the river parks via a single occupancy vehicle, which could be contributing to the parking challenges at river parks.

#### Importance of Improving Wildlife Habitat

In order to better understand the importance, the respondents placed upon the need for improving wildlife habitat along the Deschutes River, the survey included a question specific to this. As illustrated below, the vast majority of respondents (86%) felt that improving habitat was either very or somewhat important. This illustrates the need to focus on both habitat restoration, as well as access improvements.

Response	Number of Respondents	Percentage of Total Respondents
Very Important	429	63%
Somewhat Important	155	23%
Neutral	57	8%
Not Important	35	5%
Don't know	4	0.6%

\* Due to rounding, the total is off by 0.4 percent



**Deschutes River Access and Habitat Restoration Plan  
Draft Project List Community Survey Results Summary  
March 2021**

## **Introduction**

As part of the public engagement scope for the Deschutes River Access and Habitat Restoration Plan (Plan), the Bend Parks and Recreation District (BPRD) solicited input from the community regarding their current use of the river, as well as their opinions on the 33 projects included in the [Draft Project List](#). This input was gathered via a non-statistically valid community survey that was available from February 9<sup>th</sup> through February 28, 2021. The survey was advertised on the BPRD website, social media pages, newsletters, A-frame signs at three park locations, stakeholder email list (reaching nearly 300 individuals and organizations) and focus group (a group made up of 14 community members representing agency, recreational, environmental, business and educational interests who are helping inform plan development) member outreach. The survey was available in both English and Spanish, and 41 people either took the survey in Spanish or identified as Latinx in the English language survey. The Latinx and Spanish language responses remain low in relationship to Bend's overall population (4% of survey vs. 9% of the population) and BPRD will continue to strive for more representative engagement for the Plan and out other outreach efforts.

Overall, BPRD received 980 responses to the survey. The respondents represented residents of every Bend neighborhood and nearly half took the time to provide open ended comments. BPRD is utilizing these survey results as an additional data point to help inform and refine the draft project list.

The survey included 42 questions, including an open-ended question that received 435 responses. What follows is a high-level summary of the survey results focused on key take-aways. Unless specifically noted, survey responses from the Spanish language survey or those who identified as Latinx, generally align with the overall survey results.

## **Key Take-aways**

A number of questions in the survey were more general in nature. High level results from some key overarching questions include:

- Location of residence: Though survey respondents represented all 14 Bend neighborhoods, those who had the most respondents included River West (19%), Southwest Bend (12%) and Southern Crossing (10%). For the respondents who took the survey in Spanish or who identified as Latinx, the top three neighborhoods were Southwest Bend (17%), Old Farm District (12%) and Summit West (12%).
- Activities: When asked which top three activities respondents enjoyed at river parks, 84% choose trail walking, running or biking, 50% chose paddling the river and 31% chose visiting a park along the river. For the respondents who took the survey in Spanish or who identified as Latinx, the first and second choice activities were the same, while floating the river was the third most enjoyed activity.
- Parks visited: The Plan focuses on 14 riverfront parks and when asked which parks they frequent for the activities noted in the bullet above (and asked to check as many as apply), the top three most visited parks were Farewell Bend Park (77%), Riverbend Park (70%) and Drake Park (64%).
- River access satisfaction: When asked about satisfaction with river access, 75% indicated they were satisfied, 13% indicated they were dissatisfied and 12% had no opinion.

The remainder of the questions were specifically focused on the draft project list. Below are results from select projects where consensus by the Focus Group had not been achieved, projects that had significant public input in the comments section, and projects that received the most/least support from survey respondents.

- Cedarwood Trailhead, Parking Options: For Cedarwood trailhead, the survey asked respondents to identify their preferred project from four options. The responses were fairly split between options, specifically: 37%



preferred the addition of a few parking spaces, 31% didn't know or didn't have an opinion, 17% desired no changes at the trailhead and 15% preferred a short-term loading zone at the trailhead.

- Farewell Bend Park Parking: The potential project at Farewell Bend Park to add more parking was the most popular project based upon survey respondents' feedback, both in the positive nature of the responses to the question specifically about the project and as noted below, the responses to the question that asked people to select their top three projects. For the project specific question, 79% of respondents supported this project, 14% of respondents didn't support this project and 7% didn't know or had no opinion.
- Riverbend Park, Permanent Dog Off-leash Water Access: The survey inquired about the potential for an off-leash dog water access at Riverbend Park. Fifty-eight percent of respondents agreed with this project, 23% of respondents disagreed with this project and 20% were unsure or had no opinion. The permanent off-leash water access received more support than the seasonal off-leash dog water access points at Farewell Bend and Riverbend beaches. Respondents agreed with those two projects 42% and 46%, respectively. Correspondingly, 37% of respondents disagree with seasonal access at Farewell Bend Park and 34% of respondents disagree with seasonal access at Riverbend Park.
- Miller's Landing Park Access Points: The potential project at Miller's Landing Park includes closure of the downstream access point and associated habitat restoration, as well as improvement of the boardwalk access point. The majority of respondents agreed with this project. Specifically, 68% of respondents agreed with this project, 16% disagreed with this project and 16% had no opinion or didn't know.
- Columbia Park access points: The survey inquired about the potential to close both the designated and user created access points at Columbia Park and to complete habitat restoration. Fifty-four percent of respondents agreed with this project, 30% of respondents disagreed with the project and 16% had no opinion or were unsure.
- Pioneer Park rock wall: The potential project at Pioneer Park includes the removal of the rock wall and creation of a more natural riparian area. With the exception of the two seasonal off-leash dog water access areas, this project was the one that survey respondents disagreed with the most. Specifically, 40% of respondents agreed with this project, 31% of respondents disagreed with this project and 28% had no opinion or were unsure.
- Most supported projects: When questioned about the three projects that were most important to them, the following projects received the most support:
  1. Farewell Bend Park – installation of additional parking and a loading zone: 26%
  2. Spanning the River – installation of signage and kiosks: 15%
  3. Riverbend Park – permanent dog off-leash water access: 15%

For the respondents who took the survey in Spanish or who identified as Latinx, the top project was consistent with 22% support, however, the second most important project was Riverbend Park – improve beach to include accessible boat launch (22%) and Farewell Bend Park, South – consolidate and improve access points (19%).

The final question provided respondents the opportunity to share additional thoughts with the BPRD team. As noted previously, 435 people took the opportunity to share additional feedback with BPRD. Key highlights include:

- Columbia Park project – extensive comments on this project, with the majority expressing a desire to keep the designated access point open.
- Cedarwood Trailhead project – a number of comments were received about this project with the majority requesting that no parking be added.
- Off-leash dog water access – numerous comments on this topic were fairly evenly split between those advocating for off-leash dog water access and those opposed to off-leash dog water access.

As noted previously, this is a high-level summary of survey response data. A comprehensive packet of survey responses is available upon request from BPRD.





## **APPENDIX 6**

**PROJECT IDEAS CONSIDERED  
BUT DISMISSED**



## Project Ideas Considered but Dismissed

What follows are all projects that were suggested by the Focus Group, community or BPRD staff, and were subsequently dismissed for a variety of reasons. The list includes 60 projects, which are arranged by park. Each project includes the park name, project description and rationale for dismissal of the project. Note that in some cases, projects would still be completed, but they are not included within the plan (as they are considered maintenance). In addition, some projects may be considered as part of other development projects. Finally, just because a project is listed in this section does not mean that it will never happen, however, BPRD staff does not anticipate the potential for any of these projects to move forward during the development horizon for the plan.

1. Systemwide: Addition of educational signage at select access points to indicate if dog usage is or is not acceptable at that location. Just a “No Dogs, Please” or “Dogs OK” at popular access sites might help.
  - a. This project will be considered as part of the broader systemwide project to implement consistent signage throughout the river parks that aligns with existing BPRD sign guidelines.
2. River Rim Park: Permanent off-leash dog water access.
  - a. Dismissed due to the proximity to residential uses, healthy riparian vegetation, limited parking, danger associated with the rapids and steep slope that would foster erosion.
3. Farewell Bend Park, Cedarwood Trailhead: Permanent off-leash dog water access.
  - a. Dismissed due to proximity to residential uses, fast current, healthy riparian vegetation and limited parking.
4. Farewell Bend Park, Cedarwood Trailhead: Addition of restrooms at the Cedarwood Trailhead.
  - a. Dismissed because this project is outside of the scope of the plan.
5. Farewell Bend Park, Cedarwood Trailhead: Addition of a few parking spaces at the Cedarwood Trailhead to ease parking constraints.
  - a. Dismissed because the expressed community need focused on loading and unloading watercraft. A loading zone would better meet this need and complement the existing parking spaces.
6. Farewell Bend Park, Cedarwood Trailhead: Consider creation of accessible water access, including the addition of an accessible trail to the water.
  - a. Dismissed because no accessible parking exists, meeting grades would be challenging and would likely require switchbacks. Riverbend and Farewell Bend beaches were determined as more appropriate areas to focus on for accessible access.
7. Farewell Bend Park, Cedarwood Trailhead: Address parking concerns/neighborhood compatibility at Cedarwood Trailhead with one of the following three projects (a) no changes to the parking/loading at the trailhead (b) addition of a few parking space, or (c) development of a short-term loading zone only.
  - a. Dismissed because the community didn’t show strong support for changes to the parking at this location.
8. Farewell Bend Park, Upriver of Bill Healy: Permanent off-leash dog water access.
  - a. Dismissed because the site is adjacent to residential uses, healthy riparian vegetation, potential impacts to the Deschutes River Trail and proximity to the Riverbend South Restoration Project.



9. Farewell Bend Park. Under Bill Healy: Evaluate area under Healy Bridge for dedicated permanent off-leash dog swim area and potential improvements to safely facilitate that use.
  - a. Dismissed because the property is not owned by the district, it is an unwelcoming environment, the owner expressed desire to limit use due to bridge structural integrity considerations, danger associated with the fast current and proximity to the Riverbend South Restoration project.
10. Farewell Bend Park, Downstream of Bill Healy: Modify the dock to provide ADA access.
  - a. Dismissed because of potential challenges launching here due to existing mudflat. Accessibility improvements to be focused on Riverbend and Farewell Bend beaches.
11. Farewell Bend, Downstream of Bill Healy: Continue to remove debris—like cables and railroad ties—from river.
  - a. Dismissed because this work would be best considered in coordination with a project occurring proximate to such debris.
12. Farewell Bend Park, Downstream of Bill Healy: Create a swimming area between the boardwalk and footbridge. Use the existing boardwalk as part of the river access.
  - a. Dismissed because this was determined not to be a suitable swimming area given the mud flats and sensitive habitat.
13. Farewell Bend Park, Downstream of Bill Healy: Permanent off-leash dog water access at the existing canoe access.
  - a. Dismissed because concerns were expressed by regulatory bodies, the site is within a critical habitat area, there is private property downriver and the site has a steep slope that would make it prone to erosion.
14. Farewell Bend Park, Downstream of Bill Healy: Provide seasonal off-leash dog water access at the existing beach.
  - a. Dismissed due to minimal community support for this project.
15. Riverbend Park: Add sand volleyball courts.
  - a. Dismissed because this project is outside of the scope of the plan.
16. Riverbend Park, Near Bill Healy Bridge: Permanent off-leash dog water access.
  - a. Dismissed due to concerns regarding impacts to the Riverbend South Restoration project's habitat restoration long walk from parking, and user conflicts.
17. Riverbend Park: Locate a small access point downstream of the beach. This could help disperse users and provide a different experience. Would need to evaluate an appropriate location and use. Perhaps near the eastern/downriver edge of the park, where vegetation is not great.
  - a. Dismissed to focus on enlarging the existing beach to provide improved access.
18. Riverbend Park: Consider enhanced access between the river and the Haul Road Trail, including potential construction of an overlook.
  - a. Dismissed because this project is outside of the scope of the plan.
19. Riverbend Park: Provide seasonal off-leash dog water access at the existing beach. Could be used as a pilot project for permanent off-leash dog water access and then removed once permanent access is installed.
  - a. Dismissed due to minimal community support for this project.
20. McKay Park: Consider an extensive re-design. A radically more meandering fish passage channel and comprehensive park re-design could enable creation of a diversity of habitats, water access



areas for a variety of family recreation sites and safer and more recreationally successful whitewater features.

- a. Dismissed as substantial monies were just recently invested in the development of this park and BPRD continues to evaluate and address the performance of the park. A future plan could consider a more extensive redesign.
21. McKay Park: Evaluate alternative projects to protect vegetation on the river side of the path, given that the existing split rail fences at each fish channel drop are inadequate to protect vegetation.
  - a. Dismissed because it is challenging for vegetation to thrive in this location.
22. McKay Park Existing Beach: Seasonal off-leash dog water access
  - a. Dismissed due to potential downriver riparian area impacts, limited parking and user conflicts.
23. Miller's Landing Park: Armor existing downstream access point.
  - a. Given proximity to residential properties and the extreme degradation experienced at this access point, staff recommends closing it and enhancing the boardwalk access site to provide a consolidated, armored option for multiple user groups.
24. Miller's Landing Park: Coordinate with William Smith Properties Inc. to better secure the east side of the river/pathway to prevent habitat degradation.
  - a. Dismissed as this site is on private property and outside of the scope of this project.
25. Miller's Landing Park: Evaluate working with William Smith Properties Inc. on their property on the upstream side of park which would be a good location for boat launch. However, habitat concerns should be taken into account given the Whitewater park's habitat channel is immediately upstream.
  - a. Dismissed as this site is on private property and outside of the scope of this project.
26. Miller's Landing Park: Permanent off-leash dog water access at southern user-created access point.
  - a. Dismissed due to healthy riparian vegetation, potential impacts to the habitat channel, immediately adjacent to private property, and user conflicts.
27. South of Miller's Landing Park: Permanent off-leash dog water access.
  - a. Dismissed due to healthy riparian vegetation, potential impacts to the habitat channel, the site is on private property, and user conflicts.
28. Columbia Park: Add permanent restrooms to park.
  - a. Dismissed because this project is outside of the scope of the plan.
29. Columbia Park: Add ADA fishing spot.
  - a. Dismissed due to lack of sufficient space. Determined to be an infeasible project.
30. Columbia Park: Add bench/viewing spot upstream of bridge.
  - a. Dismissed as this project would negatively impact the healthy existing vegetation.
31. Columbia Park: Armor the existing access point
  - a. Dismissed due to safety concerns. This access point significantly contributes to bridge jumping at the adjacent bridge and closure will address this issue. Access continues to be provided at Miller's Landing Park.
32. Columbia Park: Permanent off-leash dog water access.
  - a. Dismissed due to healthy vegetation, limited parking, narrow river channel, classification as a neighborhood park, proximity to residential uses, space constraints and steep slope.



33. Drake Park Existing Beach: Seasonal off-leash dog water access
  - a. Dismissed as the project would conflict with adjacent uses, create additional erosion, limited parking exists, proximity to residential uses and user conflicts.
34. Harmon Park: Remove the chain link fence even if only portions of it.
  - a. Dismissed due to safety concerns given proximity to playground and existing ballfield use.
35. Harmon Park: Lay back the retaining wall and restore habitat. The area is already shallow, and dredging tailings could build up the land there. (FG)
  - a. Dismissed because this site is not BPRD property, this project would decrease the size of the park and would change the nature of the park.
36. Harmon Park: Repurpose the boat house for community usage rather than BPRD recreation program storage.
  - a. Dismissed because the boat house is used for community purposes including recreational programming and preschool.
37. Pageant Park: Improve ease of access to the water by widening the existing step and adding a second step to allow for use in the winter when the water is lower.
  - a. Dismissed as the dock is in good condition and works for most uses.
38. Pageant Park: Addition of an accessible boat access
  - a. Dismissed given the constraints associated with creating accessible access at this location and close proximity of new accessible access at Drake Park
39. Brooks Park: Consider modifications to the dock to provide ADA accessible boat access.
  - a. Dismissed as no accessible parking exists at this location and other parks such as Harmon and Pageant would be more suitable for this project.
40. Pacific Park: Provide a dog off-leash water access.
  - a. Dismissed due to proximity of residential uses, narrowness of property, high potential for user conflict, difficulty to retrieve dogs if swept downstream and moderate river width.
41. Pioneer Park: Construct a take-out here to allow for safe take-out prior to dam.
  - a. Dismissed due to safety concerns with dam.
42. Pioneer Park: Evaluate the south end of the park as a potential area for dog swimming.
  - a. Dismissed because the project would be costly and complicated, would conflict with neighboring uses and events, dam poses safety issue, impact to historical character of park, proximity to residential uses and user conflicts.
43. Pioneer Park: Add ADA fishing spot.
  - a. Dismissed due to shallow water levels and mudflats along the bank.
44. Pioneer Park: Remove the rock wall and create a more natural riparian area.
  - a. Dismissed due to minimal community support and because the construction of this project would likely fall outside of the time horizon for the plan.
45. First Street Rapids Park, River Right: Extend the fencing on the northern side of the BPRD property all the way to the river to prevent trespassing onto private property.
  - a. Dismissed as this access needs to be maintained as the only access point for maintenance, fire suppression and safety.
46. First Street Rapids Park: Install boat house for boat storage and a place to change and gather.



- a. Dismissed as there are space constraints, insufficient parking, and the site is not a high boat usage site per the community survey.
- 47. First Street Rapids Park: Remove parking on one side of First Street.
  - a. Dismissed as this is outside of the scope of the plan. City staff has been alerted of this request.
- 48. First Street Rapids Park: Addition of vegetation near ADA access sidewalk to First Street Rapids Park in order to prevent cutting of the switchback.
  - a. Dismissed as existing switchback cutting is minimal and no vegetation currently exists that is being damaged.
- 49. First Street Rapids Park, River Left: Permanent off-leash dog water access.
  - a. Dismissed because of fast current, healthy riparian vegetation, limited parking, proximity to residential uses, space constraints and a steep slope that would make this site more susceptible to erosion.
- 50. First Street Rapids Park, River Right: Permanent off-leash dog water access.
  - a. Dismissed because the project would conflict with adjacent uses, proximity to residential uses, fast current, limited parking, space constraints and user conflicts.
- 51. Riverview Park: Maintain access for boats.
  - a. Dismissed as access will be maintained.
- 52. Riverview Park: Consider cosmetic improvements, such as removing the chain-link fence.
  - a. Dismissed as outside of the scope of the plan.
- 53. Riverview Park: Renovate path to make more accessible
  - a. Dismissed given significant cost for a low usage park. Should be re-evaluated in partnership with the City of Bend when the Core Area Plan is implemented, which will likely increase usership of the park.
- 54. Sawyer Park: Sawyer Park: Consider addition of fencing upriver along OB Riley Road.
  - a. Dismissed as this will be considered as part of the CIP project to address parking at Sawyer Park.
- 55. Sawyer Park: Consider addition of a permanent restroom.
  - a. Dismissed because this is outside of the scope of the plan.
- 56. Sawyer Park: Evaluate the addition of parking spaces as part of the parking project to occur in 2023 given that parking is already heavily utilized in summer.
  - a. Dismissed as this will be considered as part of the CIP project to address parking at Sawyer Park.
- 57. Sawyer Park: Consider cooperative parking agreements with nearby businesses.
  - a. Dismissed as this will be considered as part of the CIP project to address parking at Sawyer Park.
- 58. Sawyer Park: BPRD in partnership with DogPAC to further evaluate possibilities for dog swimming.
  - a. Dismissed because of fast river current/proximate rapids, long walk from the parking lot, narrow river corridor, and it is a preeminent birding area.
- 59. Miller's Landing Park: Redesign the boardwalk access for safety, accessibility, and the potential for it to be the only access point at Miller's Landing Park
  - a. Dismissed as this was combined with the other project at Miller's Landing.





# **APPENDIX 7**

## **DOG OFF-LEASH RIVER ACCESS ANALYSIS**



## **Summary of Dog Off-Leash Water Access Research**

### **February 26, 2021**

#### **Background:**

In order to better understand how other jurisdictions address dog off-leash water access, Dan Miller requested feedback from his colleagues regarding examples of dog off-leash water access in the jurisdictions where they are working or have done work. This data, along with data compiled by district staff based upon research of ten jurisdictions with similarities to Bend (Missoula, Montana; Boulder, Colorado; Austin, Texas; Corvallis, Oregon; Medford, Oregon; Eugene, Oregon; Willamalane, Oregon; Tualatin Hills, Oregon; Boise, Idaho; and Portland Oregon) resulted in the development of our initial data analysis. A summary of the results of this data analysis were presented to the board during the board work session on January 19, 2021.

Subsequent to this presentation, DogPAC provided an additional 35 potential locations with off-leash dog water access to be included in the data analysis. District staff has researched each of these additional locations and determined that some were already on our list, some should be added to our list, and some should be added to our list but require additional information. The result of this analysis is a total of 44 potential exemplary off-leash dog water access locations that we can draw learnings from as we work to identify potential locations for off-leash dog water access along the Deschutes River in Bend. Of these 44 locations, we identified 19 confirmed locations with creek/river access, 12 locations that may have creek/river access where data needs to be confirmed, and 13 locations with alternative (lake, pond, slough, wading pools) off-leash dog water access.

#### **Research Goals:**

The goals of this research were to identify examples of off-leash dog water access in other jurisdictions in order to gather insights about the following things:

- The approximate size of off-leash dog water access sites;
- Adjacent uses;
- Challenges and opportunities for existing off-leash dog water access sites;
- Types of bodies of water; and
- Future contacts to reach out to for insights on site design, etc.

The research has been effective in giving us insights on the points above and most importantly providing us some examples of existing sites and contacts for future engagement as necessary.

#### **Summary of Data:**

The data in the subsequent spreadsheet is not necessarily representative of the prevalence, design, etc. of off-leash dog water access areas throughout the country. As noted in the background section, this data is a snapshot of off-leash dog water access areas throughout the country based upon feedback from National Park Service – River, Trails and Conservation Assistance Program employees, district research of jurisdictions with similarities to Bend and sites identified by DogPAC. Based upon the data we found, what follows is a high-level summary of key takeaways.



- **Size/Adjacent Uses** - We could not find the acreage for all creek/river access areas, but for those we found data on, the majority exceed five acres in size. For context, 10 of the 16 river parks along the Deschutes River are 5 acres or less. Of the smaller acreage areas, many exist in the middle of large cities (Portland, Austin, Boise, etc.) where residential areas are minimal and/or the water access is in the middle of the park or along a larger water source.
- **Water Bodies:** There are variety of water access types including lakes, ponds, rivers/creeks and wading pools. In addition, we also found some ocean river access, but that data has not been added to the spreadsheet as it was outside of our research scope.
- **Users:** The majority of sites evaluated were fenced (partially or completely) and were focused on a single user group (dogs and their owners).
- **Amenities:** The dog parks include other amenities like water fountains, trails, poop bags, trash cans, and benches. Many of the off-leash dog parks have fencing, and some that did not voiced challenges with dogs running into roads and dog/user conflicts.

Though none of the sites we found were directly comparable to off-lease dog water access on the Deschutes River at district parks, the data we found did help provide insights as we continue to collectively explore how to address the expressed community desire for off-leash dog water access.



No.	Location	Park Name	Ownership	Park Size	Type of water access/amenities	Water Body Type	Challenges/Notes	Contact	More Information
<b>Creeks and Rivers - Confirmed Off-leash Water Access</b>									
1	Bozeman, MO	Sourdough Canyon	City	N/A - no designated area found	This appears to be a trail walk with water access. It's USFS land and not specifically for dogs, but off-leash access is allowed.	Creek/River		N/A	<a href="https://www.fs.usda.gov/recarea/custer-gallatin/recarea/?recid=81165">https://www.fs.usda.gov/recarea/custer-gallatin/recarea/?recid=81165</a>
2	Colorado Springs	Bear Creek Dog Park	El Paso County PR	25 acres	The off-leash dog park is located in Bear Creek Regional Park. The dog park was established in 1997 and is open year-round to canine visitors and their people. The park is comprised of open prairie, hills, woods and a 1/3-mile-long stretch of Bear Creek. There are several walking trails running the length and circumference of the area, including the 3/4-mile primary loop, and several secondary trails. The park includes areas for dogs and people to wade and play in the <b>creek</b> , large areas through which to run and chase balls, and an Agility Training Area. A two-acre small dog/senior dog area is separated from the general dog area to provide space for those who wish to keep the dog play to a minimum.	Creek/River		El Paso County Parks Department: (719) 520-7529	<a href="https://communityservices.elpasoco.com/parks-and-recreation/bear-creek-dog-park/">https://communityservices.elpasoco.com/parks-and-recreation/bear-creek-dog-park/</a>
3	Denver, CO	Cherry Creek State Park	Colorado State Parks and Wildlife	4,000 acre park, 107 acres for OL dogs	Cherry Creek covers 4,000 acres. The designated Dog Off-Leash Area allows dogs to play and explore 107 fenced acres of that land. <b>And Cherry Creek</b> flows through for easy access to water.	Creek/River		Julie Isbill (207) 725-5028 O (207) 449-0053 M	<a href="https://www.thedenverear.com/best-denver-metro-dog-parks/">https://www.thedenverear.com/best-denver-metro-dog-parks/</a>
4	Draper, UT	Dayland Dog Park	City	Uncertain	It appears that the water comes through the park via spring water from <b>Corner Creek</b> . Large and small dog areas.	Creek/River	Giardia possible? <a href="https://www.draperutah.gov/DocumentCenter/View/6870/Dog-Park-water">https://www.draperutah.gov/DocumentCenter/View/6870/Dog-Park-water</a>	801-576-6500 info@draper.ut.us	<a href="https://www.draperutah.gov/1028/Dayland-Dog-Park">https://www.draperutah.gov/1028/Dayland-Dog-Park</a>
5	Salt Lake City, UT	Freedom Trail at Memory Grove	City of Salt Lake	Uncertain	<b>Creek</b> along trail that dogs can access off leash, but the lake is off limits. This appears to be an open area with dogs allowed all along the trail north of Memory Grove Park.	Creek/River		Lee Bollwinkel Parks Division Director lee.bollwinkel@slc.gov.com	<a href="https://www.bringfido.com/attraction/2979">https://www.bringfido.com/attraction/2979</a>
6	Salt Lake City, UT	Rotary Glen Park	City of Salt Lake	Uncertain	Emigration <b>Creek</b> runs through the park. Off leash area designated.	Creek/River	not a fenced park	Lee Bollwinkel Parks Division Director lee.bollwinkel@slc.gov.com	<a href="https://www.bringfido.com/attraction/10438">https://www.bringfido.com/attraction/10438</a>
7	Vail, ID	Stephens Park	Vail gov	Uncertain	It appears to be along Gore <b>creek</b> . Not much available on City website except: "Both Bighorn and Stephens parks are dog friendly parks and dogs may be off their leash and controlled by voice command, with the exception of the playground areas."	Creek/River	A patron noted that because it's not fenced, dogs can run into the nearby road.		<a href="https://www.bringfido.com/attraction/3554">https://www.bringfido.com/attraction/3554</a>
8	Austin, TX; Colorado River, Within city of Austin, downtown	Auditorium Shores Dog Park	Austin Parks	4.5 Acres	Off-leash area with <b>dammed river access (Colorado River)</b> . 3 Distinct water access areas, interior walking trail, drinking fountain/shower for dogs, large open green space, rain garden for water treatment. No fenced in area.	Creek/River	Not fenced and includes trails so challenges with bike/ped/dog interaction. Algal Bloom in 2019 sickened dogs.	Gibran Lule-Hurtado, gibran_lule@nps.gov, 720-591-6209	<a href="http://www.austintexas.gov/blog/leash-dog-enforcement-auditorium-vic-mathias-shores-begins-january-25-2016">http://www.austintexas.gov/blog/leash-dog-enforcement-auditorium-vic-mathias-shores-begins-january-25-2016</a>



No.	Location	Park Name	Ownership	Park Size	Type of water access/amenities	Water Body Type	Challenges/Notes	Contact	More Information
9	Casper, WY	Morad Park OLA	City of Casper	Uncertain	Dogs are welcome to join you off-leash in this beautiful unfenced public park. The park features the Platte River Trail, benches, a picnic table, a porta-john, and <b>river access</b> . Morad Park is a natural area. The park is bordered by the North Platte River on the north. The park is not fenced-in and there are no gates along the pathway or for the street entrance. Dogs must be leashed outside the park and signs along the pathway let owners know the boundaries.	Creek/River	None found	Natalie Burgos natalie_burgos@pa rtner.nps.gov, or City (307) 235- 8283	<a href="https://casperwy.gov/cms/One.aspx?portalId=83540&amp;pageId=119539">https://casperwy.gov/cms/One.aspx?portalId=83540&amp;pageId=119539</a>
10	Corvallis, OR	Willamette Park	City of Corvallis Parks and Rec	287 acres with access to river	Most of the park is designated as "off-leash" for dogs. Dogs are required to be on leash only in the picnic shelter, play ground and soccer field areas. The <b>river</b> has a current so dogs should be good swimmers	Creek/River	This is a large park with many uses including sports and frisbee. Dogs need to respond by verbal queue or should be leashed.	Administrative Office: 541-766- 6918  PRreception@corv allisoregon.gov	<a href="https://wagwalking.com/lifestyle/parks/willamette-park-off-leash-dog-area-">https://wagwalking.com/lifestyle/parks/willamette-park-off-leash-dog-area-</a>
11	Durango, CO	Durango Dog Park	City	6 square miles	This park is on the other side of the <b>river</b> from the main area of town along the river. There are no neighboring homes or a shared park area.	Creek/River			<a href="https://www.bringfido.com/attraction/275">https://www.bringfido.com/attraction/275</a>
12	Missoula, MT	Jacon's Island Bark Park	Missoula Parks and Rec	6 acres	The Jacobs Island Bark Park, 6 acres at the east end of Jacobs Island Park, has been fenced and double-gated to provide a secure place for owners and their dogs to romp, get the exercise they need and have fun off-leash. access to Clark Fork of <b>river shoreline</b>	Creek/River	The park is bordered by the Clark Fork River and the riverbank is not fenced.	Lucia Portman (206) 220-4117 lucia_portman@np s.gov , or (406) 721- 7275 or email parksrec@ci.misso ula.mt.us	<a href="https://www.bringfido.com/attraction/2726">https://www.bringfido.com/attraction/2726</a>
13	Norfolk, VA	Bea Arthur Dog Park	Run by PETA	1 acre	This 1-acre dog park features a large expanse of lawn, double-gated entrance, a water station, a toy bin, a shaded picnic area, and an easy-access ramp for dog-paddling in the Elizabeth <b>River</b> .	Creek/River		Natalie Burgos natalie_burgos@pa rtner.nps.gov, IL 60607, or 757-622- PETA (7382)	<a href="https://spotlight.peta.org/petadogpark/">https://spotlight.peta.org/petadogpark/</a>
14	Palisade, CO	Palisade Section River Bend Trail	City of Palisade	3-4 miles of trail	Harky's Launch, in Riverbend Park, provides access for rafters to the Colorado <b>River</b> . Dogs can run unleashed from this point west through the Palisade Heritage Area. Dog owners are responsible for their dogs actions, including cleaning up after them.	Creek/River		Palisade Chamber of Commerce: (970) 464-7458	<a href="https://www.gihikes.com/2010/11/palisade-section.html">https://www.gihikes.com/2010/11/palisade-section.html</a>
15	Portland, OR	Sellwood OLA	Portland P&R	1.5 acres	Sellwood <b>Riverfront</b> Park features a 1.5-acre off-leash area that is a great place for dogs to play. Bring poop bags and water for your pets, as they are not provided on site.	Creek/River	a few comments about duck poop and "watch where you walk"	503-823-4000	<a href="https://www.bringfido.com/attraction/564">https://www.bringfido.com/attraction/564</a>
16	Salt Lake City, UT	Parley's Nature Reserve	City of Salt Lake	87 acres	A river runs the entire length of the reserve and is available for dogs to get in at various locations. At the end of the dirt road, there is a large swimming hole. Dogs and kids enjoy cooling off here during the hot summer months. Dogs are allowed off-leash in designated areas only.	Creek/River		Lee Bollwinkel Parks Division Director lee.bollwinkel@slc gov.com	<a href="https://www.bringfido.com/attraction/663">https://www.bringfido.com/attraction/663</a>
17	Southbury, CT	Southbury Dog Park	Land Owned by O&G industries, managed by volunteers	14 acres	Fenced-in small-dog area, a huge open field, a beautiful and accessible <b>river</b> , two wooded trails, tables and benches, and plenty of poop bags!	Creek/River		Natalie Burgos natalie_burgos@pa rtner.nps.gov, OR (203) 262-0600 (town of Southbury)	<a href="https://southburydogpark.net">https://southburydogpark.net</a>



No.	Location	Park Name	Ownership	Park Size	Type of water access/amenities	Water Body Type	Challenges/Notes	Contact	More Information
18	Troutdale, OR	1,000 Acre Dog Park/Sandy River Delta System	US Forest Service	1,000+ acres in Sandy River Delta	The Sandy River Delta Park trail system consists of a thousand acres of off leash trails that lead to the Sandy <b>River</b> where your dog can wade or swim. Walk or hike for hours. Dogs must remain leashed on Confluence Trail.	Creek/River		Natalie Burgos natalie_burgos@pa rtner.nps.gov, or USFS (503) 695- 2372	<a href="https://www.fs.usda.gov/recarea/crgnsa/recarea/?recid=29976">https://www.fs.usda.gov/recarea/crgnsa/recarea/?recid=29976</a>
19	West Linn, OR	Mary S Young	West Linn PR	128 acres with off leash beach area	Mary S. Young Park offers a place to walk or sit by the Willamette <b>River</b> . About 128 acres, this quiet, forested park is a favorite for urban birders. Plenty of room for kids to play on the sports fields, a restroom, shelter (that can be reserved), and an area for dogs to run unleashed.	Creek/River			<a href="https://westlinnoregon.gov/parksrec/mary-s-young-park-0_">https://westlinnoregon.gov/parksrec/mary-s-young-park-0_</a> <a href="https://www.bringfido.com/attraction/2942">https://www.bringfido.com/attraction/2942</a>
<b>Creeks and Rivers - Unconfirmed Off-leash Water Access</b>									
20	Medford, OR	Bear Creek Park	Medford Parks and Rec	2 acres	It is not clear if dogs can access the <b>creek</b> safely or legally. Bear Creek does not appear to be a part of the dog park.	Creek/River		N/A	<a href="http://www.ci.medford.or.us/Page.asp?NavID=3997">http://www.ci.medford.or.us/Page.asp?NavID=3997</a>
21	Auburn, WA	Roegner Dog Park	City	Whole park is 21.25 acres	The dog park/OLA is separate from the river and there is not direct access. Large and small dog areas. Couldn't confirm if dogs can legally access the river.	Creek/River		N/A	<a href="https://www.auburnwa.gov/city_hall/parks_arts_recreation/parks_trails/roegner">https://www.auburnwa.gov/city_hall/parks_arts_recreation/parks_trails/roegner</a>
22	Billings, MT	Coulson Park	City	Uncertain	This park is noted as a natural area, undeveloped on the City website. There is no mention of a dog park. The park is located along the <b>Yellowstone River</b> . City appears to be working on a master plan which indicates improvements may include a dog park.	Creek/River		N/A	<a href="https://www.billingsparks.org/park/coulson/">https://www.billingsparks.org/park/coulson/</a>
23	Boise, ID	Manitou Park	City	Uncertain	The dog park/OLA is separate from the <b>river</b> and defined by signed boundaries. The City website says only part of the park is OL during specific hours. It does not appear to include the river, nor is water access listed as a feature on a doggie website.	Creek/River		N/A	<a href="https://www.cityofboise.org/departments/parks-and-recreation/dogs-off-leash-parks-and-areas/#rules">https://www.cityofboise.org/departments/parks-and-recreation/dogs-off-leash-parks-and-areas/#rules</a>
24	Carnation, WA	Carnation Dog Park	City	Uncertain	The dog park/OLA is separate from the <b>river</b> and there is not direct access. A picture of the dog park sign rules online states dogs should be on leash outside the fenced dog park.	Creek/River		N/A	<a href="#">Dog park signage</a>
25	Golden, ID	Tony Grampsas	City	Uncertain	The creek is not part of the dog park and appears to just run along an area of the park not part of the dog park. No mention of water amenities on website.	Creek/River		N/A	<a href="https://www.cityofgolden.net/city-services/dog-parks/">https://www.cityofgolden.net/city-services/dog-parks/</a>
26	Hood River, OR	Port Marina Park	Port of Hood River	Uncertain	This is a sandbar at the confluence of the Colombia and Hood <b>Rivers</b> . It is not managed by the parks district or City and appears to be part of the Port lands. There appear to be no current off leash regulations or laws here.	Creek/River		N/A	<a href="https://portofhoodriver.com/waterfrontrecreation/">https://portofhoodriver.com/waterfrontrecreation/</a>
27	Post Falls, ID	Corbin Park	City	Uncertain	Dogs must be on leash per ordinance	Creek/River		N/A	<a href="https://www.postfallsidaho.org/departments/parks-recreation/parks/corbin-park/">https://www.postfallsidaho.org/departments/parks-recreation/parks/corbin-park/</a>



No.	Location	Park Name	Ownership	Park Size	Type of water access/amenities	Water Body Type	Challenges/Notes	Contact	More Information
28	Renton, WA	Cedar River	City	Uncertain	The dog park/OLA is separate from the river and there is not direct access. The City website says specifically that there is not access to the river and dogs must be on leash outside the fenced OLA.	Creek/River		N/A	<a href="https://rentonwa.gov/city_hall/community_services/parks_and_trails/find_a_park_or_trail/cedar_river_dog_park/cedar_river_dog_park_rules_and_faq">https://rentonwa.gov/city_hall/community_services/parks_and_trails/find_a_park_or_trail/cedar_river_dog_park/cedar_river_dog_park_rules_and_faq</a>
29	Roseburg, OR	Happy Trails Dog Park/Templin Beach	City	Uncertain	Happy Tails Dog Park is part of Templin Beach Park and does not have direct river access from the OLA. According to the Park and Rec website, dogs are not allowed off leash in the park and only in the Happy Tails OLA.	Creek/River		N/A	<a href="https://www.cityofroseburg.org/storage/app/media/Parks/parks/Happy_Tails_Dog_Park.pdf">https://www.cityofroseburg.org/storage/app/media/Parks/parks/Happy_Tails_Dog_Park.pdf</a>
30	Roseburg, OR	Stewart Park	City	Uncertain	Dogs are not allowed off leash in any parks in Roseburg, or in water. Only off-leash area in town is Happy Tails.	Creek/River		N/A	<a href="https://www.cityofroseburg.org/storage/app/media/Parks/park-rules/City%20Parks%20Rules%20and%20Regulations%20from%20Resolution%20No.%202018-21.pdf">https://www.cityofroseburg.org/storage/app/media/Parks/park-rules/City%20Parks%20Rules%20and%20Regulations%20from%20Resolution%20No.%202018-21.pdf</a>
31	West Linn, OR	Willamette Park		Uncertain	Couldn't find info on their website about an OLA here. There is also a Willamette Park in Portland (on that we found conflicting info on. Need more data	Creek/River			
<b>Other Water Bodies - Confirmed Off-Leash Water Access</b>									
32	Casper, WY	Lake McKenzie Dog Park	City of Casper	uncertain	The fenced in dog park features a double gated entry at both parking lots, dog drinking fountains, hoses to clean mud off dogs, benches, and a special swimming area in the <b>lake</b> .	Lake	The middle of the park fills with a muddy pond in the spring.	307-235-8400	<a href="https://www.bringfido.com/attraction/12787">https://www.bringfido.com/attraction/12787</a>
33	Longmont, CO; 7 miles outside of Boulder	Coot Lake	City of Boulder Parks and Recreation	1.2 mile trail around the <b>lake</b> .	Dogs are allowed to swim on the east and south shores only. Dogs are not allowed on the west side or in any of the wetland areas. Dogs are only permitted off-leash if they are registered as participants in the Voice and Sight Tag Program (TAG).	Lake	May have algae blooms	Ericka Pilcher, ericka_pilcher@nps.gov, 720-527-3036	<a href="https://bouldercolorado.gov/parks-rec/coot-lake">https://bouldercolorado.gov/parks-rec/coot-lake</a>
34	Seattle, WA	Magnuson Park	Seattle Parks and Rec	8.6 acres on <b>Lake</b> Washington	The Magnuson off-leash area contains 8.6 acres. It is a place where city hounds can romp with buddies in Seattle's biggest fully-fenced back yard for canines. This off-leash area is the only one inside city limits with water access.	Lake	A few negative reviews regarding crime in area and poor signage/space, lack of grass and lots of gravel.	Susan Rosebrough O: 206.220.4121 M: 206.851.1657 susan_rosebrough@nps.gov	<a href="https://www.seattle.gov/parks/find/parks/magnuson-park/off-leash-area">https://www.seattle.gov/parks/find/parks/magnuson-park/off-leash-area</a>
35	Sandpoint, ID	Sandpoint Dog Beach	Public land/ROW	uncertain	Found on railroad and Idaho Transportation Department right-of-way as well as private land, this is a day-use, no-fee area. Dog Beach gets its name from the fact that this is a public <b>lake beach</b> that people can legally bring their unleashed dogs for play and a swim.	Lake			<a href="https://www.sandpointonline.com/rec/lakeguide/parks.html">https://www.sandpointonline.com/rec/lakeguide/parks.html</a>
36	Boise, ID	Ann Morrison Park	Boise Park and Rec	5.4 acre park	Together Treasure Valley Dog Island is located in the southwest corner of Ann Morrison Park and is a year-round destination for dogs and their owners. The site includes a 5.4-acre active dog area, a fenced "shy dog" area and opportunities for dogs to swim and play in the surrounding <b>pond</b> . Two picnic shelters have been installed along with nine Together Treasure Valley park benches offering ample seating throughout the park.	Pond		(208) 608-7000	<a href="https://www.cityofboise.org/departments/parks-and-recreation/parks/ann-morrison-park/">https://www.cityofboise.org/departments/parks-and-recreation/parks/ann-morrison-park/</a>



No.	Location	Park Name	Ownership	Park Size	Type of water access/amenities	Water Body Type	Challenges/Notes	Contact	More Information
37	Bozeman, MO	Bozeman Pond Park	City in partnership with Land Trust	uncertain	Bozeman Pond Park has two places for fido to play: a doggy swimming beach and the new Lewis and Bark Park dog park (both enclosed by fencing). The fenced and enclosed area, to include the actual beach itself, on the west side of the Bozeman Ponds and specifically signed for use as restraint-free dog park	Pond			<a href="https://www.bozeman.net/Home/Components/FacilityDirectory/FacilityDirectory/191/1863">https://www.bozeman.net/Home/Components/FacilityDirectory/FacilityDirectory/191/1863</a>
38	Bozeman, MO	Dog Park at Gallatin	County in partnerships with Land Trust and Non profits	13 acres	This park is 13 acres of pure off-leash play area complete with a beach and diving dock.	Pond			<a href="https://gvlt.org/featured-trails/gallatin-regional-park/">https://gvlt.org/featured-trails/gallatin-regional-park/</a>
39	Denver, CO	Chatfield State Park	Colorado State Parks and Wildlife	69 acres	Completely fenced open space for your dogs to exercise- including two <b>ponds</b> and miles of paved and unpaved walking trails	Pond		Julie Isbill (207) 725-5028 O (207) 449-0053 M	<a href="#">chatfield state park campground map</a>
40	Nampa, ID	Amity Dog Park	Nampa Parks and Rec	6 acres	Nampa's first dog park presents the perfect occasion for people and pets to interact with others. Handlers and their dogs will enjoy this fully-fenced park with its expansive grassy areas, walking trails, drinking water (for dogs and humans), shade shelters, trees, benches, a swimming <b>pond</b> for dogs, and ample parking.	Pond		Parks Maintenance: 208-468-5890	<a href="https://www.nampaparksandrecreation.org/Facilities/Facility/Details/Amity-Dog-Park-3">https://www.nampaparksandrecreation.org/Facilities/Facility/Details/Amity-Dog-Park-3</a>
41	Westminster, CO	Westminster Hills Dog Park	Westminster P&R	420 acres	This Westminster park is a favorite for Denver Metro dog owners. It offers 420 acres between Colorado Hills Open Space and Standley Lake North Open Space Park with a <b>dog drinking fountain, a dog swimming pond</b> , benches and shade. Be aware that this area is only partially fenced so make sure your dog responds well to voice commands.	Pond		303-658-2400	<a href="https://www.cityofwestminster.us/ParksRecreation/Parks.TrailsOpenSpace/WestminsterHillsOff-LeashDogPark">https://www.cityofwestminster.us/ParksRecreation/Parks.TrailsOpenSpace/WestminsterHillsOff-LeashDogPark</a>
42	King County, WA	Marymoor OL Dog Park	City of King County P&R	40 acres	"Doggy Disneyland", as it is locally dubbed, Marymoor Park is best known for its 40-acre off-leash dog area. Includes access to the <b>Sammamish Slough</b> .	Slough		Corita K. Waters o. 202.354.6908, c. 202.641.7377, Corita_Waters@nparks.gov	<a href="https://www.kingcounty.gov/services/parks-recreation/parks/parks-and-natural-lands/popular-parks/marymoor/offleash.aspx">https://www.kingcounty.gov/services/parks-recreation/parks/parks-and-natural-lands/popular-parks/marymoor/offleash.aspx</a>
43	Eugene, OR	Alton Baker Park	Eugene Park and Rec	4 acres	The park has a lot of water fountains and in the summer, local volunteers bring in <b>wading pools</b> and metal water bowls for the dogs to use	Wading pools	The river is across from the park for dogs to access but it's unclear if they can legally be off leash. Pictures show dogs in water off leash by some submitters on Google.	Ph: 541-682-4800	<a href="https://wagwalking.com/lifestyle/parks/alton-baker-dog-park">https://wagwalking.com/lifestyle/parks/alton-baker-dog-park</a>
44	Independence, OR	Independence Dog Park	Volunteers	2 acres	The dog park is next to the <b>river</b> , but there is not direct access to the river from the park. Reviewers say there are often plastic pools with water in them during the summer for play.	Wading pools			<a href="https://www.facebook.com/IndependenceCommunityDogPark/">https://www.facebook.com/IndependenceCommunityDogPark/</a>



What follows is a presentation that documents all twenty sites analyzed as potential dog off-leash river access locations. The presentation provides details on the evaluation factors, as well as the challenges with each of the identified sites.



# Off-Leash Dog Water Access Deschutes River



S I T E   E V A L U A T I O N

U P D A T E D   -   M A Y   2 0 2 1





# Process

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- Identified 20 potential off-leash dog water access sites along the Deschutes  
16 permanent locations and 4 seasonal locations
- Utilized 11 criteria to evaluate the sites
- Evaluated sites and divided into two categories  
Recommended – includes seasonal and permanent opportunities  
Not Recommended – includes seasonal and permanent opportunities
- Evaluated projects with BPRD leadership and staff; discussed with DogPAC, focus group, board and public



# Evaluation Criteria

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- **River Current and dog safety:** slow, moderate, fast and any characteristics that impact dog safety
- **Existing bank material:** soil, vegetation, riprap, seawall, etc.
- **River Width:** narrow, moderate, wide
- **Bank Slope:** gradual, moderate, steep
- **Current streamside habitat condition:** none, poor, moderate, good (consider access point and immediate surroundings)
- **ESA Critical Habitat:** yes, no
- **Parking Availability / Ease of Access:** low, medium, high
- **Potential conflict with other visitors:** distance from parking to OLA, congestion, kids, etc.
- **Existing level of dog use:** low, moderate, high
- **Proximity to neighboring properties:** describe distance from neighbors upstream, downstream, across river
- **Project Complexity:** low, moderate, high
- **Notes:** dog safety concerns, etc.



# Summary of Project Sites

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- Recommended

Riverbend Park – Upriver of Existing Dog River Access

- Not Recommended

Columbia Park

Drake Park – Existing Beach (Seasonal)

Farewell Bend Park - Canoe Access

Farewell Bend Park - Cedarwood

Farewell Bend Park – Existing Beach (Seasonal)

Farewell Bend Park - Under Bill Healy Bridge

Farewell Bend Park - Upriver of Bill Healy Bridge

First Street Rapids Park – River Left

- Not Recommended

First Street Rapids Park – River Right

Harmon Park

McKay Park River Access – Existing Beach (Seasonal)

Miller's Landing Park

Miller's Landing Park – Upriver of Park

Pacific Park

Pioneer Park

Riverbend Park – Existing Beach (Seasonal)

Riverbend Park – Near Bill Healy Bridge

River Rim Park

Sawyer Park



Recommended Project Site



# Riverbend Park – Upriver of Existing Dog River Access

## Recommended: Permanent

### PRO / CON EVALUATION

Pros	Cons
Wide river width	Requires removal of healthy habitat
Adequate parking	Critical habitat area
Easy to access	Proximity to private property
Moderate current	Costly and complicated

### PROPOSED LOCATION





Not Recommended Sites



# Columbia Park

Not Recommended: Permanent

## CHALLENGES

- Healthy vegetation
- Limited parking
- Narrow river channel
- Neighborhood park
- Space constraints
- Steep slope

## PROPOSED LOCATION





# Drake Park – Existing Beach

Not Recommended: Seasonal

## CHALLENGES

- Conflict with adjacent uses
- Create additional erosion
- Limited parking
- User conflicts

## PROPOSED LOCATION





# Farewell Bend Park - Canoe Access

Not Recommended: Permanent

## CHALLENGES

- Concerns expressed by regulatory bodies
- Critical habitat area
- Downriver private property
- Steep slope

## PROPOSED LOCATION





# Farewell Bend Park - Cedarwood

Not Recommended: Permanent

## CHALLENGES

- Adjacent residential uses
- Fast current
- Healthy riparian vegetation
- Limited parking

## PROPOSED LOCATION





# Farewell Bend Park – Existing Beach

## Recommended: Seasonal

---

### CHALLENGES

- Critical habitat area
- Downriver riparian area impacts
- Seasonal
- User conflicts

### PROPOSED LOCATION





# Farewell Bend Park – Under Bill Healy Bridge

Not Recommended: Permanent

## CHALLENGES

- Abuts critical habitat
- Not district property
- Unwelcoming environment
- Strong current
- Proximity to Riverbend South Project

## PROPOSED LOCATION





# Farewell Bend Park – Upriver of Bill Healy Bridge

Not Recommended: Permanent

## CHALLENGES

- Adjacent residential uses
- Healthy riparian vegetation
- May impact trail
- Proximity to Riverbend South Project

## PROPOSED LOCATION





# First Street Rapids Park – River Left

Not Recommended: Permanent

## CHALLENGES

- Fast current
- Healthy riparian vegetation
- Limited parking
- Space constraints
- Steep slope

## PROPOSED LOCATION





# First Street Rapids Park – River Right

Not Recommended: Permanent

## CHALLENGES

- Conflict with adjacent uses
- Fast current
- Limited parking
- Space constraints
- User conflicts

## PROPOSED LOCATION





# Harmon Park

Not Recommended: Permanent

## CHALLENGES

- Limited parking, all on-street
- User conflicts: already high use for ballfields and playground; other use from buildings, and dock
- Mudflats; would require engineering to eliminate

## PROPOSED LOCATION





# McKay Park – Existing Beach

Not Recommended: Seasonal

## CHALLENGES

- Downriver riparian area impacts
- Increased erosion
- Limited parking
- User conflicts

## PROPOSED LOCATION





# Miller's Landing Park

Not Recommended: Permanent

## CHALLENGES

- Healthy riparian vegetation
- Impacts to habitat channel
- Proximity to private property, include residential units
- User conflicts

## PROPOSED LOCATION





# Miller's Landing Park – Upriver of Park

Not Recommended: Permanent

## CHALLENGES

- Healthy riparian vegetation
- Impacts to habitat channel
- Private property
- User conflicts

## PROPOSED LOCATION





# Pacific Park

Not Recommended: Permanent

## CHALLENGES

- Adjacent residential density
- Conflict with approved project
- Moderate/fast current
- Costly and complicated
- Low level of existing dog use
- Potential for dogs to be swept under Portland Avenue bridge

## PROPOSED LOCATION





# Pioneer Park

Not Recommended: Permanent

## CHALLENGES

- Costly and complicated
- Conflict with neighboring uses and/or events
- Dam creates possible safety issue
- Impact to historical character of park
- User conflicts

## PROPOSED LOCATION





# Riverbend Park – Existing Beach

Recommended: Seasonal

## CHALLENGES

- Critical habitat
- Downriver riparian area impacts
- Seasonal
- User Conflicts

## PROPOSED LOCATION





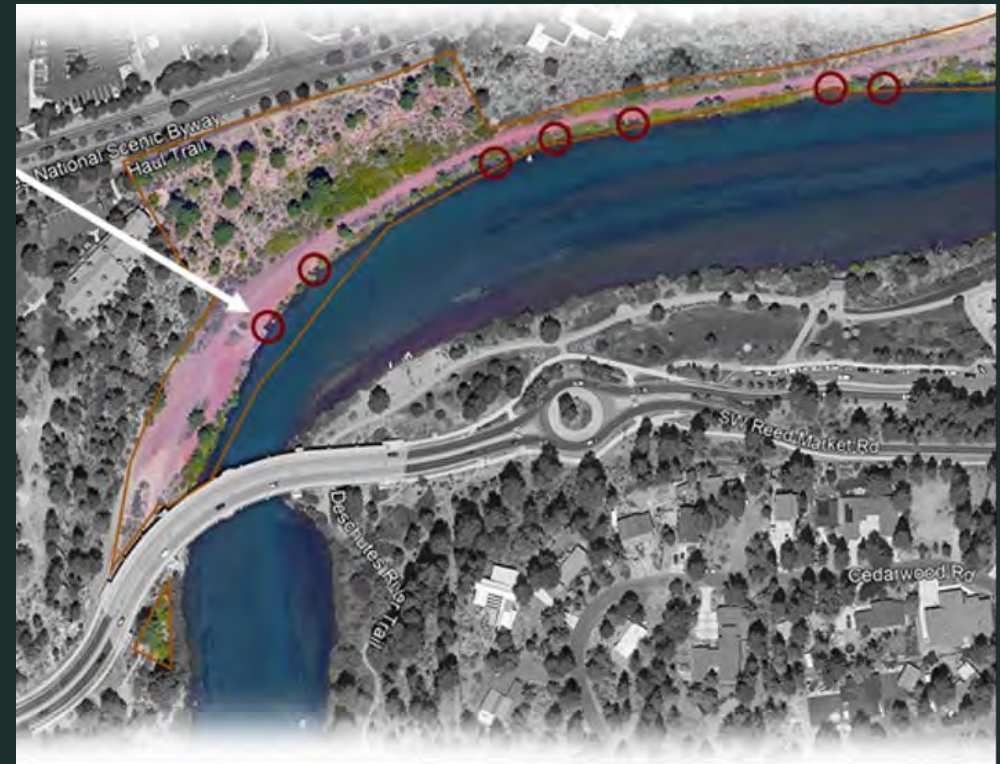
# Riverbend Park – Near Bill Healy Bridge

Not Recommended: Permanent

## CHALLENGES

- Critical habitat area
- Impact to restoration project
- Long walk from parking lot
- Strong current
- User conflicts

## PROPOSED LOCATION





# River Rim Park

Not Recommended: Permanent

## CHALLENGES

- Adjacent residential area
- Healthy riparian vegetation
- Limited parking
- Rapids
- Steep slope

## PROPOSED LOCATION





# Sawyer Park

Not Recommended: Permanent

## CHALLENGES

- Fast river current/proximate rapids
- Long walk from parking lot
- Narrow river corridor
- Preeminent birding area

## PROPOSED LOCATION







# APPENDIX 8

## PROJECT-SPECIFIC MAPS

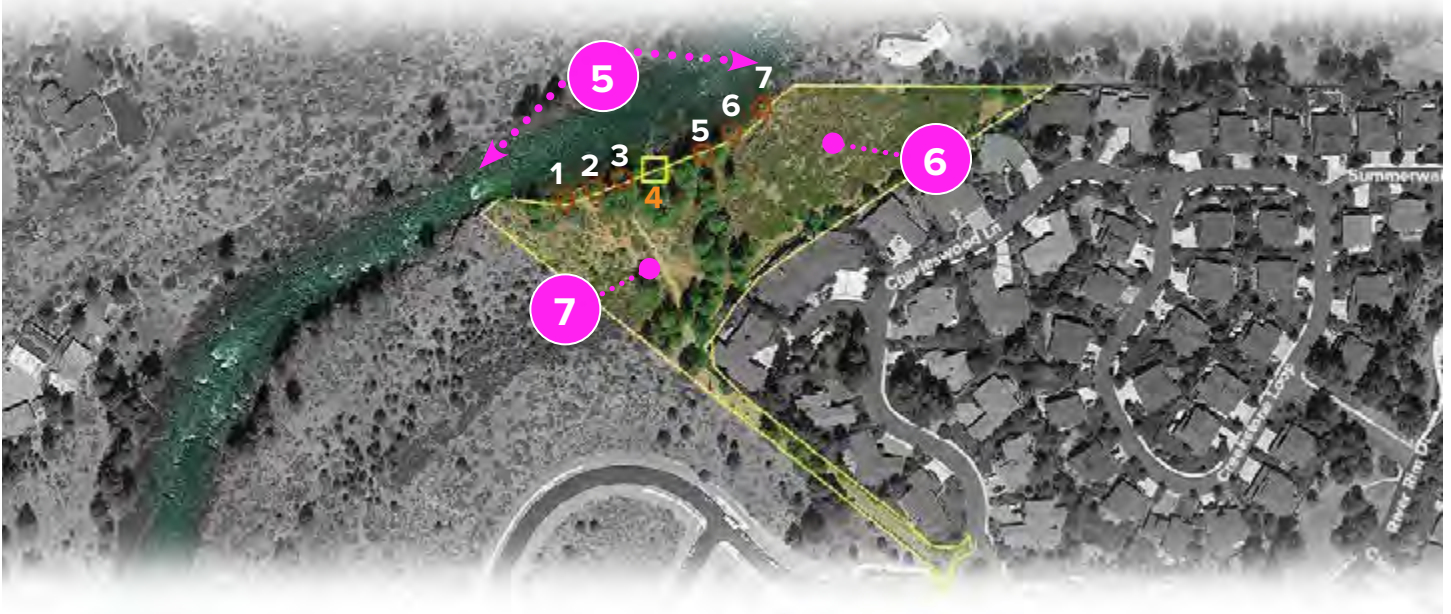


# River Rim Park

## Project #

- 5** Consolidate access/protect habitat
- 6** Enhance experience
- 7** Modify trail

-  Designated
-  User created
-  Most used point
-  Park boundary
-  Project area





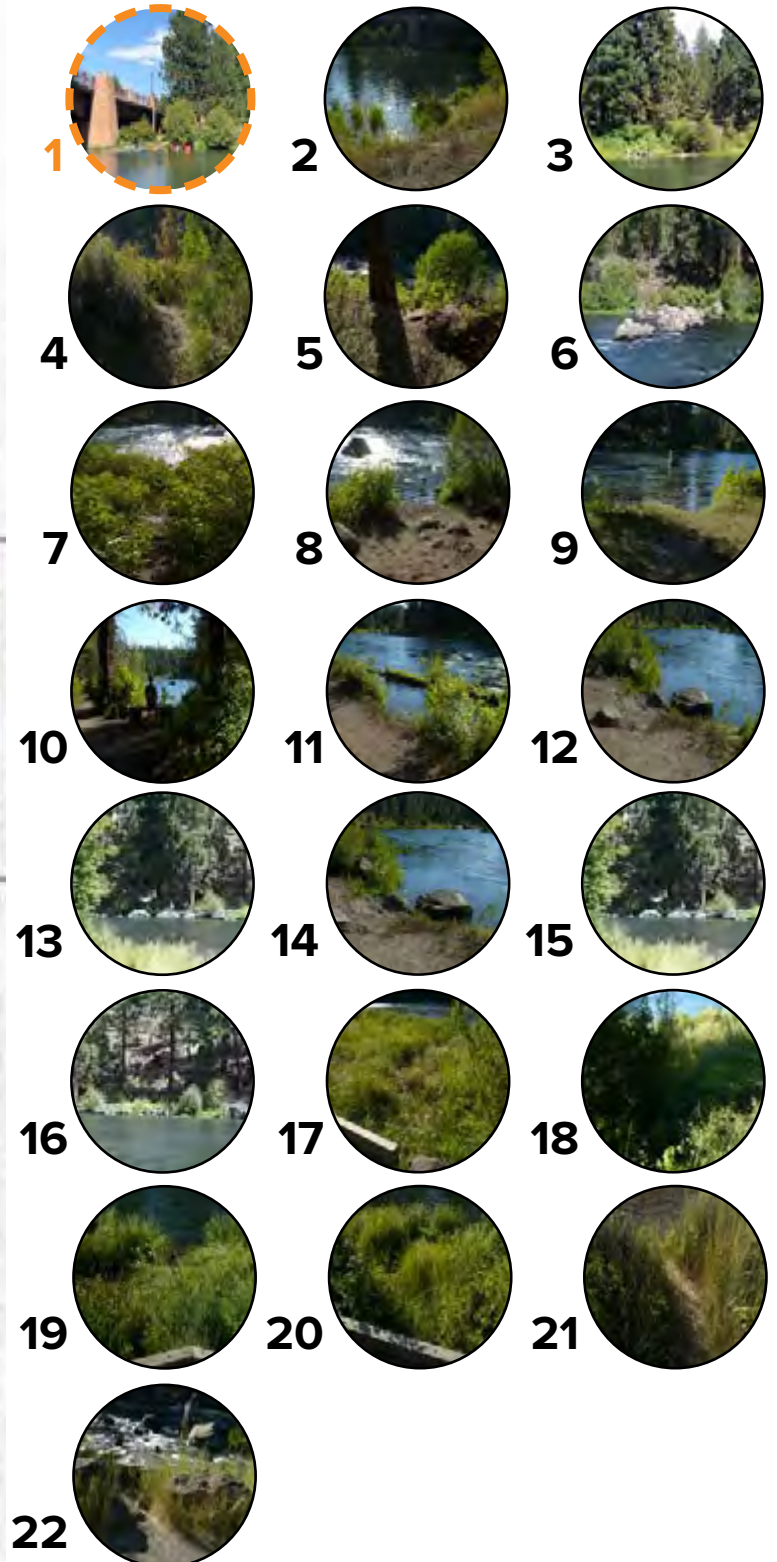
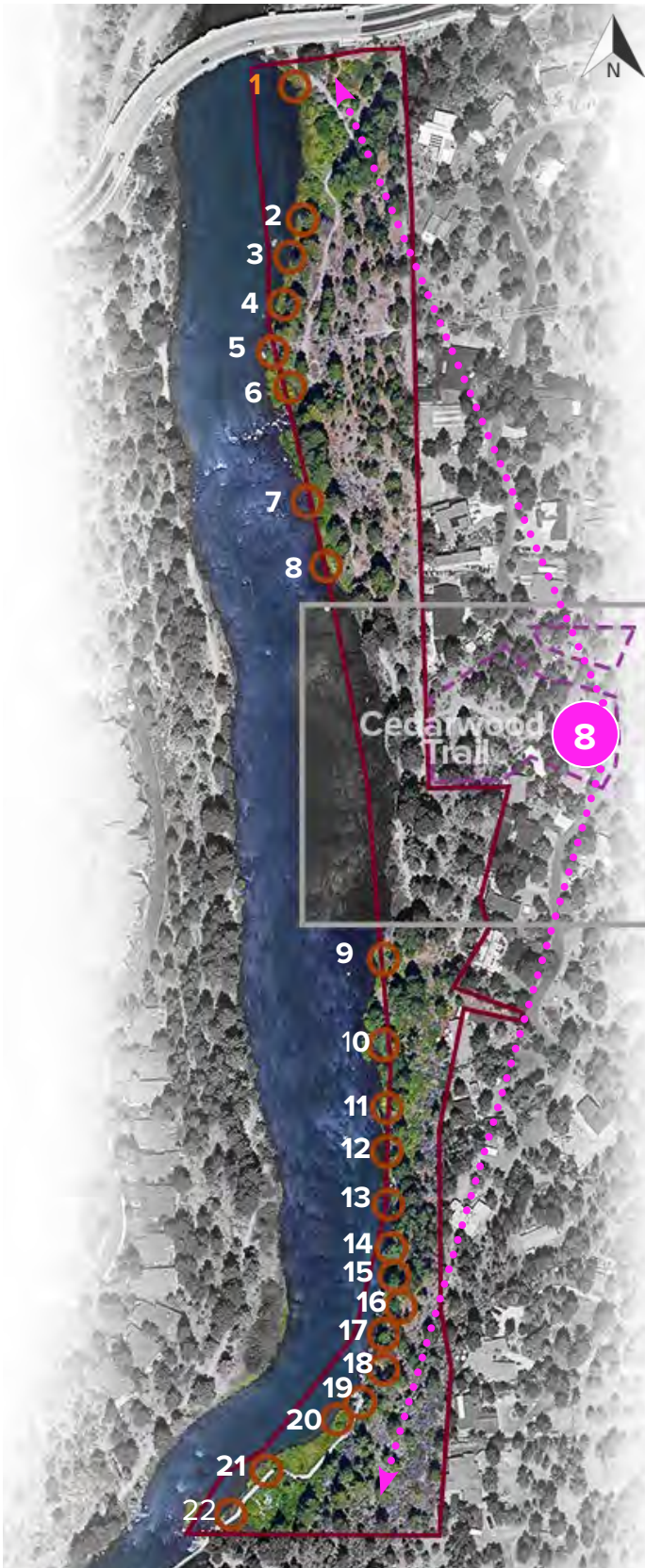
# Farewell Bend Park- South

Project #

8

Consolidate/Improve Access

- Designated
- User created
- Most used point
- Park boundary
- Project area





# Farewell Bend Park- Cedarwood Trail

Project #

10

Trail access

- Designated
- User created
- Most used point
- Park boundary
- Project area



1



2



3



4



5



6

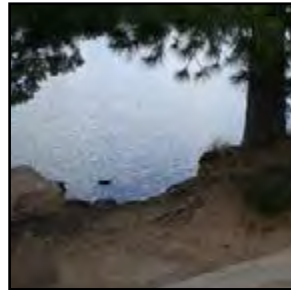


# Farewell Bend Park- North

## Project #

- 9** Trail access
- 13** Habitat restoration
- 14** Improve access
- 15** Beach enhancements
- 16** Evaluate restoration

-  Designated
-  User created
-  Most used point
-  Park boundary
-  Project area





# Riverbend Park- North

## Project #

**17** Improve beach accessibility

**18** Off-leash dog water access

- Designated
- User created
- Most used point
- Park boundary
- Project area



1



# McKay Park

**Project #**

**19**

**Plant trees**

**20**

**Improve accessible access**

- Designated
- User created
- Most used point
- Park boundary
- Project area



**1**



**2**





# Miller's Landing Park

Project #

21

Refine access

- Designated
- User created
- Most used point
- Park boundary
- Project area



1



2





# Columbia Park

Project #

22

Refine access

- Designated
- User created
- Most used point
- Park boundary
- Project area



1



2



# Harmon Park

Project #

23

Improve dock

- Designated
- User created
- Most used point
- Park boundary
- Project area





# First Street Rapids Park- River Left

Project #

24

Close access points

- Designated
- User created
- Most used point
- Park boundary
- Project area



1





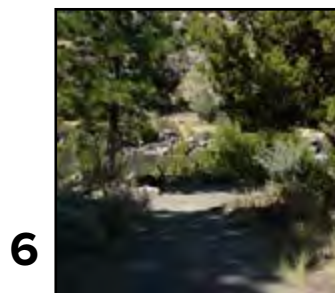
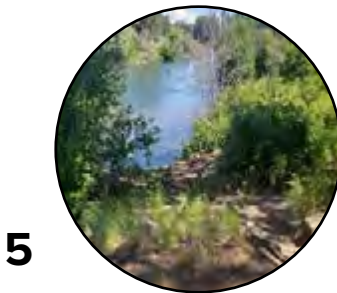
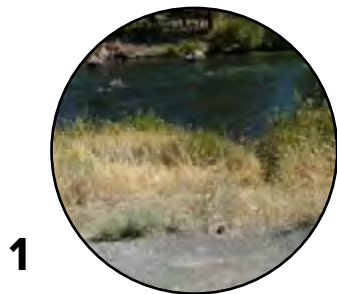
# First Street Rapids Park- River Right

Project #

25

Consolidate/Improve Access

- Designated
- User created
- Most used point
- Park boundary
- Project area





# Sawyer Park- South

Project #

26

Consolidate/Improve Access

- Designated
- User created
- Most used point
- Park boundary
- Project area





# Sawyer Park- Central

Project #

**27**

**Consolidate/Improve Access**

- Designated
- User created
- Most used point
- Park boundary
- Project area





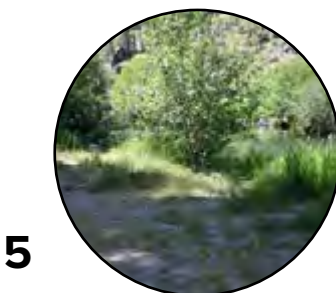
# Riley Ranch Nature Reserve

Project #

28

Create access

- Designated
- User created
- Most used point
- Park boundary
- Project area







# APPENDIX 9

## REGULATORY FRAMEWORK



## Introduction

The Deschutes River Access and Habitat Restoration Plan (plan) is a comprehensive planning level document that identifies 27 projects for implementation along the Deschutes River corridor between River Rim Park to the south and Riley Ranch Nature Preserve to the north. Given the nature of the plan, the project concepts are not highly developed, and will be further developed during the implementation phase of the plan. Based upon the highly conceptual level of details for each project available within the plan, the following regulatory framework has been developed to help guide permitting for these projects during the implementation phase.

## Regulatory Agencies with Potential Permitting Authority

What follows is a list of agencies that may have permitting requirements for projects within the plan. As noted above, given the highly conceptual nature of the projects, exact permitting requirements will be determined on a project-by-project basis. Of note, this section of the Deschutes River is outside of the State Scenic Waterway and its permitting requirements. As such, those permitting requirements are not discussed below.

- **U.S. Army Corps of Engineers (USACE)** - Administers Section 404 of the Clean Water Act, which requires approval prior to discharging dredged or fill materials into the “waters of the United States” and adjacent wetlands, and ensures compliance with section 106 of the National Historic Preservation Act.
  - **Joint Permit**– Wetlands and waterways in Oregon are regulated by the USACE and Department of State Lands. Both of these agencies require submittal of a joint permit application describing the project in detail including its purpose and need. The information submitted for the joint permit is the same for both agencies, but they have completely separate regulatory programs and issue their own permits.
  - **Section 404 permit**: Dependent upon the scope of the project, a Nationwide or Individual 404 permit will be required for projects that will require dredging or fill. The USACE manages these 404 permits in coordination with the Department of State Lands as noted in the bullet above.
  - **Compliance with Section 106 of the Historic Preservation Act (NHPA)** - if a project site may affect Native American cultural sites, the project must proceed through the consultation process with the USACE and applicable Native American Nation. If the project could have an “adverse effect” the USACE initiates consultation with the State Historic Preservation Office and the Tribes and prepares a “Memorandum of Agreement” to mitigate the adverse effects or to submit a research design to mitigate adverse effects through proper recovery.



- **Oregon Department of State Lands (DSL)** - Administers the State Removal-Fill law for work in waters of the State and ensures compliance with the State Historic Preservation Office
  - **Joint Permit** – Wetlands and waterways in Oregon are regulated by the USACE and Department of State Lands. Both of these agencies require submittal of a joint permit application describing the project in detail including its purpose and need. The information submitted for the joint permit is the same for both agencies, but they have completely separate regulatory programs and issue their own permits. For DSL, applicants proposing to move, remove or fill material in waters of the state will be required to obtain an Individual Permit or a General Authorization.
  
- **State Historic Preservation Office** – Ensures compliance with Section 106 of the Historic Preservation Act
  - **Joint Permit** - if a project site may affect Native American cultural sites, the project must proceed through the consultation process with the USACE and applicable Native American Nation. If the project could have an “adverse effect” the Corps initiates consultation with the State Historic Preservation Office (SHPO) and the Tribes and prepares a “Memorandum of Agreement” to mitigate the adverse effects or to submit a research design to mitigate adverse effects through proper recovery. In addition, if the project may affect historic structures, the project must move through the consultation process with USACE and SHPO. Specifically, local agencies have a responsibility to consult with the SHPO when project scope involves ground disturbance on non-federal public lands or the project scope involves work on non-federal publicly owned buildings or structures.
  
- **US Fish and Wildlife (USFWS)** - provides consultation for species listed under the Federal Endangered Species Act (ESA)
  - **USFWS Consultation review: Section 7 of the ESA** - given that some of the project areas are home to the Oregon Spotted Frog (a federally listed threatened species), USACE consultation with the USFWS may be required through the Joint Permit review pursuant to the requirements of Section 7 of the ESA.
  
- **Oregon Department of Environmental Quality (DEQ)** - Administers 401 Water Quality Certification (WQC) and their authority for this is delegated by the Environmental Protection Agency
  - **WQC** – ensures the project complies with relevant sections of the Clean Water Act and Oregon’s approved water quality standards, programs and policies. This review is required for projects that may result in any discharge into the waters of



the United States. The information provided to DEQ for its review is the same as for the Joint Permit, but DEQ can ask for additional information. The USACE cannot issue an Individual Permit (through the Joint Permit Process) unless the project receives WQC.

- **1200C** - construction permit that authorize discharges in Oregon (excluding trail trust and reservation lands) for projects in excess of one acre, or projects that are smaller than one acre, but that are part of a collective project that will exceed one acre.
- **Oregon Department of Fish and Wildlife (ODFW)** - provides oversight for in-water work fish passage criteria and wildlife habitat conservation. Their consultation may be required for some of the projects within the plan.
- **City of Bend** - the City of Bend will have permitting authority for the projects through the City's Municipal Code and State Building code.
  - **Water Overlay Zone (WOZ)** - The WOZ (2.7.600) ensures conservation and enhancement of natural resource values of areas along the Deschutes River. The WOZ includes the following sub-zones: Riparian Corridors, Deschutes River Corridor Design Review, River Corridor Areas of Special Interest and Flood Plains. Many parcels within the WOZ are affected by more than one sub-zone and many of the projects within the plan will be subject to WOZ permitting requirements. As such, a discretionary WOZ permit will be required for many projects within the plan. The Bend Development Code (4.1.600) includes two levels of development permitting for properties along the Deschutes River within the WOZ, and the required type of WOZ permit will be reviewed on a case-by-case basis:
    - Type II – Limited land use decision/permit, administrative review by the Development Services Director
    - Type III – Quasi-judicial, Planning Commission
  - **Building Permits** – a ministerial permit may be required for some projects, including those that have structures, pathways and other elements subject to permitting by the Uniform Building Code
  - **Right-of-Way Permit** - a ministerial right-of-way permit will be required for any work in the City of Bend right-of-way or within a public easement.
  - **Grading Permit** – a ministerial grading permit is required for clearing and grading activities related to construction, demolition and site development.
  - **Drainage Permit** – a ministerial drainage permit is required when a project may alter runoff patterns to demonstrate that the proposed project will adequately treat and dispose of stormwater.



## National Environmental Policy Act

In addition to these permitting requirements, there is the potential for some projects within the plan to trigger the need for National Environmental Policy Act (NEPA) review. NEPA is intended to disclose potential environmental impacts of projects and is required for federal projects or projects that receive federal funding. In the event that one of the projects in this plan receives federal funding, NEPA review may be required.