North Clackamas Community Park

North Side Planning Report

NORTH CLACKAMAS PARKS & RECREATION DISTRICT

alta PLANNING + DESIGN

PHS

February, 2008

ACKNOWLEDGEMENTS

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Introduction

North Clackamas Community Park is the largest community park maintained by the North Clackamas Parks and Recreation District (NCPRD). The 45-acre park provides a unique recreational experience for all visitors. Camas Creek divides the park into north and south halves. The northern half of the park is home to a new play structure, dog run area, picnic facilities and stands of large oak and ash trees. A maintenance storage area has recently been cleaned up, the former caretaker's home has been removed and an additional 1.5 acre piece of property north of Mt. Scott Creek was donated to the park. The southern half of the park includes multiple sports fields, a soon-to-be-completed equestrian facility and a 258-space parking lot. Mt. Scott Creek flows west along the northern and western boundaries of the park, forming a forested edge of Oregon Ash and Oregon White Oak. The park is bordered by residential and institutional properties.

Purposes

The park north of Camas Creek is an opportunity to create a passive recreation setting with an emphasis on environmental enhancement and education to balance the intensively active recreation facility south of Camas Creek. NCPRD desires to build consensus among all interested parties around a common vision for the north side of the park.

Project Location

The purpose of this plan is:

1) To determine the community's wishes for recreational opportunities in North Clackamas Park and design a plan that provides these activities in a manner suitable for all users of the park and reduces the environmental impact of these uses.
2) To identify environmentally significant areas and develop suitable recommendations for those areas.
3) To develop a unifying design theme for new elements and interpretive signage to be added to the park.
4) Develop a cost-effective concept plan for the future of the north side of the park that can be implemented through innovative design solutions, and is easily maintained by NCPRD and volunteers.

"... create a passive recreation setting with an emphasis on environmental enhancement and education to balance the intensively active recreation facility..."

Approach

Alta Planning + Design began the process of site inventory and analysis in May of 2007. This included:

- Meeting with NCPRD staff members to discuss the scope and budget of the project.
- Site tour with NCPRD staff members and members of the North Clackamas Park Stewardship Committee.
- Review of existing documents related to North Clackamas Park including: previous park master plans, geotechnical reports, wetland delineation reports, site

surveys, wildlife reports, and documents provided by the North Clackamas Park Stewardship Committee

- Preparation of a site inventory plan and board showing recommended materials appropriate for the project.
- Brainstorming session with community members to consider ideas for the park

Based on the initial findings, Alta Planning + Design moved to the next phase of the process which included:

- Preparation of four initial design concepts to review with NCPRD staff
- Stakeholder meetings to present more refined concepts
- Posting three initial concepts on the NCPRD website
- Two refined preliminary concept plans presented to community members
- Surveys mailed to local households and interested parties
- A draft concept plan based on the survey data, community input and feedback from NCPRD staff
- Cost estimates
- Signage recommendations
- Preparation of a draft report
- Revisions of the concept plan & report
- Completion of the North Clackamas Park North Side Planning Study

Public Involvement Process

Stakeholder groups, advisory committees, park neighbors, and park users played a major role in developing the North Side Conceptual Plan for North Clackamas Park. The North Clackamas Park Stewardship Committee served as Project Advisory Committee (PAC) and provided input during the Plan's development. PAC members included one representative each from the following groups:

- Friends of North Clackamas Park
- Milwaukie Center
- Dog Park
- Friends of Mt. Scott/Kellogg Creek
- Sports groups
- City of Milwaukie
- Institutional Neighbors
- Equestrians

Alta Staff toured the site on several occasions with stakeholders interested in sharing their knowledge of the park and expressing their desires for future park improvements. NCPRD also met with the Friends of the Milwaukie Center Community Advisory Board, the Milwaukie Park and Recreation Board and the NCPRD Advisory Board to provide project updates and solicit comments.

NCPRD organized three public meetings to obtain input and ideas for park improvements. The first meeting focused on the goals of the plan, presentation of the site analysis and allowed the public to provide feedback to the design team. The second meeting focused on presentation of the two preliminary concepts and determined the public preference for a final design. The third meeting was a presentation of the final preferred concept plan and natural resource recommendations. Following each public meeting plans were posted to an online project website. The District hosted an open house for the community to view the final plan and draft report.

Project kick-off site tour

In addition to public meetings, neighbors, park user and committee members were encouraged by Alta Staff and NCPRD to voice their comments and concerns at any point during the design process. Many comments were received via phone conversation and email and incorporated into the plan whenever possible.

Existing Conditions

Existing Facilities

North Clackamas Park is an established recreation facility enjoyed by citizens throughout the community year round. Existing facilities include:

Off-Leash Dog Area

The 1.45 acre facility is heavily used year-round. During the public process, there was definite support for maintaining a dog run for the local community. A few park neighbors have complained about the noise of barking dogs and the yelling of the owners. The District has been working with the City of Milwaukie to address these complaints. Users of the off-leash area feel the facility is in need of updates to improve safety for owners and dogs.

Off-leash dog area entry

Play Area

Play structures were added to the north side of the park approximately two years ago. A large structure serves older children and a smaller structure serves children two and younger. NCPRD would like the structures to remain in their current location. There are drainage problems in portions of the play area that need to be addressed.

Existing play structures

Picnic Shelter

A large group picnic shelter donated to the park by the local Rotary Club is located just west of the gravel parking area. The 2,400 square-foot, 200 person facility is the only shelter available for reservation in the Parks District and is occupied most weekends during warmer months for events. The existing foundation is cracking and other repairs are likely necessary in the near future. Smaller groups are unable to reserve only a portion of the shelter. Park users have requested additional smaller covered picnic areas with grills be added to the park.

Exterior of the existing picnic shelter

Interior of the existing picnic shelter

Bridges

One crossing of Mt. Scott Creek is located in the northwest corner of the park and provides access to the neighborhood north of the park. There are five existing crossings of Camas Creek. Three crossings are arched wooden bridges, two of which were recently renovated. The western-most crossing, located at the confluence of Camas and Mt. Scott Creeks, is a crushed culvert primarily used by pedestrians and maintenance vehicles. The eastern-most crossing is used by vehicles to access an unpaved parking area just east of the group picnic shelter. This culvert crossing is also crushed and in need of repair/replacement.

Mt. Scott Creek crossing (Photo courtesy of PHS)

One of three wooden bridges over Camas Creek

Parking

The only parking located north of Camas Creek is an unpaved gravel lot with space for approximately 25 cars. The gravel lot extends into the buffer of Camas Creek and does not adequately serve the need of park users. Additional parking is available in the adjacent Milwaukie Center paved lot and in lots shared with the Sara Hite Memorial Rose Gardens and the softball complex.

Existing gravel parking lot

Restrooms

Existing restrooms are located east of the off-leash dog area and north of the group picnic pavilion. These facilities are out-dated and in need of repair. Additional restrooms are located south of Camas Creek.

Caretaker

A mobile home was recently removed from the park where a permanent caretaker lived for over twenty years. A new caretaker is living in a recreational vehicle parked on park property in place of the mobile home. The Parks District is assessing the long-term need for a year-round caretaker on site.

Maintenance/ Storage

A storage facility, located near the existing restrooms, is shared by parks maintenance and the Milwaukie Center. Large equipment is stored in a fenced area east of the off-leash dog area. The Milwaukie Center also uses a storage container north of the Center near the community garden beds. Maintenance staff expressed a need for an equipment wash area adjacent to the storage building.

Environmental Conditions

Pacific Habitat Services (PHS) prepared a report titled Natural Resources Review (See Appendix E) as part of this process.

The northern portion of North Clackamas Park lies on fine-grained alluvial sediments between Mt. Scott Creek and Camas Creek. Topography within the park is relatively flat. Mt. Scott Creek flows to the west along the northern border of the study area. Camas Creek, a small tributary of Mt. Scott Creek, also flows westward, though near the southern portion of the planning area.

Plant Communities

The northern portion of the park contains mown lawn, oak and ash woodland, both creeks, riparian areas and wetlands.

Mowed Lawn

The mowed lawns are vegetated with typical lawn grasses and weeds, with scattered trees in some areas. Predominant grasses in the lawns include Kentucky Bluegrass and Annual Bluegrass. Significant amount of weedy, non-native species such as White Clover, Hairy Cats Ear, English Daisy, Common Dandelion and Creeping Buttercup also occur within the lawns.

Lawn between off-leash dog area and playground

Riparian Woodland

The riparian woodland generally occurs as a narrow band of vegetation along Camas Creek and the south side of Mt. Scott Creek, with more extensive woodland communities to the north of Mt. Scott Creek. The riparian woodland adjacent to Mt. Scott Creek is the largest contiguous woodland community within the park, and in this area, the woodland contains both

Riparian woodland north of Mt. Scott Creek

wetland and non-wetland riparian plant communities.

Riparian woodlands within the park provide important water quality and wildlife habitat functions. The riparian woodlands act as a buffer to the stream, filtering sediments and various pollutants from runoff before the water enters the stream. Trees and shrubs within these riparian woodlands also provide shade to the stream, and this shade aids in maintaining relatively low water temperatures. The buffer provided by the riparian plant communities along Mt. Scott Creek is generally wider on the north side of the stream than on the south side of the stream. The buffer provided by riparian plant communities along Camas Creek is generally very narrow, though recent plantings on the south side of Camas Creek have expanded the width of the buffer. The riparian woodlands, particularly those along Mt. Scott Creek, provide habitat for a number of wildlife species adapted to suburban woodland and edge habitats, and these woodlands are likely the most important terrestrial habitat within the park.

Narrow areas of riparian woodland occur along Mt. Scott Creek and Camas Creek. The riparian woodland along Mt. Scott Creek has canopy of mature second-growth hardwoods and conifers, with Red Alder, Big Leaf Maple, Douglas Fir, Oregon Ash, Black Cottonwood, and Western red Cedar.

Oregon Ash is the dominant tree species along Camas Creek. Trees, shrubs, and wood vines common in the under story of the riparian woodlands include Sitka Willow, Douglas Spiraea, Snowberry, Clustered Wild Rose, Indian Plum, Vine Maple, Red-Osier Dogwood, Beaked Hazelnut, Salmonberry, Himalayan Blackberry, and English Ivy.

Restoration areas on the south bank of Mt. Scott Creek downstream from its confluence with Camas Creek and on the south side of Camas Creek, between the creek and the ball fields, have planted populations of native riparian species, including Red Alder, Western Red Cedar, Sitka Willow, Douglas Spiraea, and Red-Osier Dogwood.

Oak-Ash Woodland

A small wooded area dominated by mature Oregon White Oak and Oregon Ash is present in the north-central and eastern portions of the park, between Camas Creek and Mt. Scott Creek, and provides a contiguous, wooded corridor between the riparian woodlands associated with the two streams. Under existing conditions, the Oak-Ash woodland is frequently mowed to maintain an open, park-like setting for picnic facilities and recreation. Herbaceous vegetation within the Oak-Ash woodland consists almost entirely of mown grass, and this woodland generally lacks an under story of trees and shrubs, though a few scattered Common Hawthorn, Oregon Grape, and English Holly are present. The mature oaks, open forest structure and sparse under story within this community are reminiscent of oak savanna habitat, which is becoming increasingly rare in the Willamette Valley.

Oak-ash woodland north of Milwaukee Center

Invasive Species

A number of non-native invasive plant species occur throughout North Clackamas Park. These plants are especially prevalent within the riparian woodlands bordering Mt. Scott Creek. Himalayan Blackberry and large stands of English Ivy occur in the vicinity of the small pond north of Mt. Scott Creek, in the northeastern corner of the park, and along the south bank of Mt. Scott Creek near the western park boundary. Mature Common Hawthorns are scattered throughout the Oak-Ash woodland between Mt. Scott Creek and Camas Creek, and many small Common Hawthorns are present between the existing maintenance buildings and the off-leash dog area.

Although they don't currently occur as dominant species, Multiflora Rose, Japanese Knotweed, English Holly and Common Laurel Cherry also occur along Mt. Scott

Table 1 - Plant Species Observed in North Clackamas Park

	Botanical Name	**Common Name**
Trees, Shrubs and Woody Vines	*Abies grandis*	Grand Fir
	Acer circinatum	Vine Maple
	Acer macrophyllum	Bigleaf Maple
	Alnus rubra	Red Alder
	Betula papyrifera	Paper Birch
	Cornus sericea	Red-Osier Dogwood
	Corylus cornuta	Beaked Hazelnut
	Crataegus monogyna	Common Hawthorn
	Fraxinus latifolia	Oregon Ash
	Hedera helix	English Ivy
	Ilex aquifolium	English Holly
	Mahonia aquifolium	Oregon Grape
	Oemleria cerasiformis	Indian Plum
	Pinus contorta	Shore Pine
	Pinus ponderosa	Ponderosa Pine
	Populus trichocarpa	Black Cottonwood
	Prunus avium	Sweet Cherry
	Prunus laurocerasus	Common Laurelcherry
	Pseudotsuga menziesii	Douglas Fir
	Quercus bicolor	Swamp White Oak
	Quercus garryana	Oregon White Oak
	Rosa multiflora	Multiflora Rose
	Rosa pisocarpa	Clustered Rose
	Rubus discolor	Himalayan Blackberry
	Rubus spectabilis	Salmonberry
	Rubus ursinus	California Dewberry
	Salix sitchensis	Sitka Willow
	Solanum dulcamara	Climbing Nightshade
	Spiraea douglasii	Douglas Spiraea
	Symphoricarpos albus	Snowberry

	Thuja plicata	Western Red Cedar
Herbaceous Plants	*Athyrium filix-femina*	Lady Fern
	Bellis perennis	English Daisy
	Bidens frondosa	Devil's Beggarstick
	Centaurea cyanus	Garden Cornflower
	Cirsium arvense	Canada Thistle
	Dipsacus sylvestris	Teasel
	Epilobium watsonii	Watson's Willow Herb
	Equisetum telmateia	Giant Horsetail
	Hypochaeris radicata	Hairy Cats Ear
	Impatiens noli-tangere	Western Touch-me-not
	Lapsana communis	Nipplewort
	Ludwigia palustris	Marsh Seedbox
	Lysichiton americanum	Skunk Cabbage
	Lygonum cuspidatum	Japanese Knotweed
	Polypodium glycyrrrhiza	Licorice Fern
	Polystichum munitum	Sword Fern
	Prunella vulgaris	Heal-all
	Ranunculus repens	Creeping Buttercup
	Taraxacum officinale	Common Dandelion
	Tolmiea menziesii	Piggy-back Plant
	Trifolium repens	White Clover
	Veronica americana	American Speedwell
Grasses, Sedges and Rushes	*Bromus sitchensis*	Alaska Brome
	Carex obnupta	Slough Sedge
	Dactylis glomerata	Orchard Grass
	Eleocharis acicularis	Needle Spikerush
	Eleocharis palustris	Common Spikerush
	Eleocharis ovata	Ovate Spikerush
	Festuca arundinacea	Tall Fescue
	Glyceria elata	Tall Mannagrass
	Holcus lanatus	Common Velvet Grass

Juncus effusus	Soft Rush
Phalaris arundinacea	Reed Canarygrass
Poa annua	Annual Bluegrass
Poa pratensis	Kentucky Bluegrass
Poa trivialis	Rough Bluegrass
Scirpus microcarpus	Small-fruited Bulrush

Creek. Canada Thistle occurs in un-maintained uplands in various locations, and Reed Canarygrass is common along Camas Creek. Bittersweet Nightshade occurs as a dominant species in the forested wetlands in the northwestern portion of the park.

Wetlands and Waterways

Regulatory Jurisdiction and Definitions

Information regarding regulatory jurisdictions and definitions can be found in Appendix E – Natural Resources Review.

Description of On-Site Wetlands and Waterways

Wetlands and other water resources at North Clackamas Park include Mt. Scott Creek, several palustrine forested wetlands associated with Mt. Scott Creek, Camas Creek and adjacent wetlands, and a small pond located to the north of Mt. Scott Creek.

Mt. Scott Creek and Associated Wetlands

Mt. Scott Creek, a perennial stream that flows westward along the northern boundary of North Clackamas Park, is the dominant hydrologic feature in the park. Within the park, Mt. Scott Creek is 10 to 20 feet wide. The stream banks are generally low and rise one to two feet above the stream bed. Small areas of erosion and undercutting are apparent on the banks, but the stream banks appear to be relatively stable. Within the park, Mt. Scott Creek has a relatively uniform gravel and cobble substrate.

Mt. Scott Creek

PHS identified two palustrine forested wetlands associated with Mt. Scott Creek in the northwestern portion of the park. These wetlands have a forest canopy dominated by Western Red Cedar, Oregon Ash, and Red Alder with Red-Osier Dogwood, Indian Plum, Salmonberry, Clustered Wild Rose, and Himalayan Blackberry occurring as dominant shrubs in the under story. Dominant herbaceous species in these wetlands include Slough Sedge, Skunk Cabbage, Reed Canarygrass, Lady Fern and Piggy-Back Plant.

Flows within Mt. Scott Creek vary seasonally, like most streams in the region, with significant groundwater inputs to base flow from the slope to the north. Large and steady fluxes of groundwater feed the wetland complex near the northwestern park boundary. Water discharged from these wetlands enters Mt. Scott Creek near the western park boundary.

Camas Creek

Camas Creek is a shallow seasonal tributary to Mt. Scott Creek that crosses the central portion of the park and flows into Mt. Scott Creek in the western portion of the park. Camas Creek originates in a palustrine emergent wetland in the northeastern portion of the park. Throughout its length, Camas Creek is a low-gradient,

Camas Creek

slow-flowing stream. The stream channel is approximately four to six feet. The stream banks are low and indistinct, and the stream channel is vegetated with Reed Canarygrass in some areas. The substrate of the Camas Creek stream channel is composed primarily of fine sediments.

A narrow wetland fringe borders the entire length of Camas Creek. The wetland has a tree canopy of Oregon Ash, Willows, Red Alder, Red-Osier Dogwood, and Swamp White Oak. Other dominant species within the Camas Creek wetlands include Reed Canarygrass, Spike Rushes, Slough Sedge, Lady Fern, and Marsh Seedbox. Groundwater inputs to Camas Creek occur throughout the stream length, but major inflows appear to be near the northeastern corner of the park and from the south in the vicinity of the upper end of the northwest-trending portion of the creek.

Pond

A small pond is present north of Mt. Scott Creek in the northeastern portion of the park. The pond was excavated and has relatively steep banks that rise approximately three feet above the surface of the water. The pond receives the majority of its water from groundwater inputs and runoff from the adjacent hillside to the north, as there is no apparent surface connection to Mt. Scott Creek.

Fish and Wildlife

With its mosaic of riparian woodlands, oak woodland, lawns, streams, and wetlands, North Clackamas Park provides habitat for a variety of wildlife species adapted to suburban landscapes. Additionally, the perennial waters of Mt. Scott Creek and the small pond in the northern portion of the site provide habitat for aquatic and semi-aquatic species, including various species of fish, amphibians and benthic macroinvertebrates. Although wildlife surveys have not been conducted at North Clackamas Park specifically, PHS observed a number of wildlife species while conducting site visits at the park, and a reach of Mt. Scott Creek surveyed for fish by the Oregon Department of Fish and Wildlife (ODFW) includes the portion of Mt. Scott Creek within the park boundaries.

PHS observed 29 species of birds at North Clackamas Park during two site visits – one on the afternoon of July 13, 2007 and one on the morning of December 13, 2007. The bird species observed by PHS on each date are listed in Table 2, below.

Table 2 - Birds observed at North Clackamas Park

Common Name	Scientific Name	7/13/07	12/13/07
American Crow	*Corvus brachyrhynchos*	X	X
American Goldfinch	*Carduelis tristis*	X	X
American Robin	*Turdus migratorius*	X	X
American Wigeon	*Anas americana*		X
Barn Swallow	*Hirunda rustica*	X	
Bewick's Wren	*Thryomanes bewickii*		X
Black-capped Chickadee	*Poecile atricapillus*	X	X
Black-headed Grosbeak	*Pheucticus melanocephalus*	X	
Bushtit	*Psaltriparus minimus*	X	X
Downy Woodpecker	*Picoides pubescens*	X	X
European Starling	*Sturnus vulgaris*	X	X

Golden-crowned Kinglet	*Regulus satrapa*		X
Green Heron	*Butorides virescens*	X	
House Finch	*Carpodacus mexicanus*	X	
House Sparrow	*Passer domesticus*	X	
Lazuli Bunting	*Passerina amoena*	X	
Lesser Goldfinch	*Carduelis psaltria*	X	
Mallard	*Anas platyrhynchos*	X	X
Northern Flicker	*Colaptes Auratus*	X	X
Pine Siskin	*Carduelis pinus*		X
Red-tailed Hawk	*Buteo jamaicensis*		X
Ruby-crowned Kinglet	*Regulus calendula*		X
Sharp-shinned Hawk	*Accipiter striatus*		X
Song Sparrow	*Melospiza melodia*	X	X
Spotted Towhee	*Pipilo maculates*	X	
Steller's Jay	*Cyanocitta stelleri*	X	X
Townsend's Warbler	*Dendroica townsendi*		X
Western Scrub-Jay	*Aphelocoma californica*	X	X
White-breasted Nuthatch	*Sitta carolinensis*		X

Water Quality
These observations were taken from data collected further upstream, though we believe representative of those in the park.

- Water quality is generally good (stream likely supports a population of resident cutthroat trout though water quality generally deteriorates as water moves downstream through increasingly urbanized areas).
- Water temperatures were found to follow the local climate with maximum recorded summer temperatures reaching 20°C (68°F).
- Dissolved oxygen concentrations may be an issue – they did not comply with state water quality standards (greater than 90-95% saturation), falling as low as 63% saturation.
- The pH of the water was within state standard and ranged from 6.8-7.4 standard units.
- The alkalinities of the stream are high enough (>20 mg/L) to adequately buffer pH fluctuations.
- The bacteria standard was exceeded, likely reflecting the urbanized nature of the watershed and the high fecal bacteria levels generally associated with storm water runoff from urban areas.
- Suspended sediment fluxes have not been measured, but the bed material at low flows through the portion of Mt. Scott Creek along the northern border of the park suggest that a considerable flux of silt is moving through the stream.

- Overall, the water quality of Mt. Scott Creek is typical of water quality in similar urbanized streams.

Desired Future Condition

The desired future condition (DFC) for North Clackamas Park is a neighborhood park that provides recreational opportunities as well as forested riparian wetland and non-wetland habitats that consist of native plant species and contain good structural diversity. Plant communities will consist of natural associations and will contain a diversity of native species. The overstory canopy will remain much as it exists in the wooded portions of the park. Non-native invasive species such as reed canarygrass, Himalayan blackberry, and English ivy will be removed, and native trees, shrubs, grasses and forbs will be planted to augment the existing riparian communities. The implementation of an Integrated Pest Management Program will prevent invasive species from becoming established and out-competing the native vegetation.

The riparian buffers along Mt. Scott Creek and Camas Creek will be expanded up to 70 feet on the south sides of the streams, and these buffers will be planted with native trees and shrubs to shade the water surface . Supplemental shrub plantings within the existing wooded area on south side of the east-west portion of Mt. Scott Creek downstream from Camas Creek confluence will provide additional stream shading. Reduced human impact immediately adjacent to the stream will allow a denser growth of vegetation immediately along the steam channels. The riparian buffers will be allowed to undergo natural ecological succession to develop species diversity and vegetation structure to provide shelter, food, and reproduction opportunities for native fauna. Native grasses and wildflowers in a meadow community south of Mt. Scott Creek will provide habitat for bees, butterflies, and other insects as well as birds and small mammals.

The combination of increased stream shade and stream habitat improvements will benefit salmonids and other aquatic organisms. The removal of the culvert near the mouth of Camas Creek and the restoration of the stream bed and banks will improve the connectivity of habitats between Mt. Scott Creek and the lower reaches of Camas Creek. Large woody debris in Mt. Scott Creek will diversify flows, vary sediment distribution, and provide substrate diversity, which will benefit aquatic macroinvertebrates as well as fish. Minor excavation of the outflow channel of the wetland in the northwestern portion of the park will improve the hydrologic connection between the wetland and Mt. Scott Creek and allow water to back up into the wetland during high flows, providing low-velocity refugia for fish during flood events.

Background Documents

Wetland Determination and Delineation for North Clackamas Park

PHS delineated wetlands and waterways within the southern portion of the park on June 5 and June 19, 2003, with an additional site visit on February 23, 2004 to review the jurisdictional status of wetlands and ditches on site. The results of PHS's wetland delineation were described in a wetland delineation report dated March 10, 2004. The Oregon Department of State Lands (DSL) approved the wetland delineation (DSL #2004-0153) on February 17, 2005. On October 19, 2006 PHS revisited North Clackamas Park to delineate the wetlands and waterways within the northern portion of the park. DSL approved the updated wetland delineation on April 16, 2007.

Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1

The primary source document for determining the jurisdictional extent of wetlands is the Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (Environmental Laboratory 1987), which is recognized by both the DSL and the COE. This document, also known as the "1987 Manual", defines criteria for three parameters

(i.e., hydrophytic vegetation, wetland hydrology and hydric soils) that must be met for an area to be considered a wetland. The 1987 Manual also establishes procedures for evaluating indicators to determine if the wetland criteria are met.

Geotechnical Investigation North Clackamas Park Sports Field Complex
Geotechnical & Environmental Consultants prepared a site investigation for the area south of Camas Creek in North Clackamas Park in March, 2005, prior to construction of the softball complex. They analyzed the soils and developed recommendations for site construction and soil preparation.

Storyboard Report
The Stewardship Committee for North Clackamas Park formed a subcommittee, the Storyboard Work Group, to develop recommended educational signage for North Clackamas Park. The committee reviewed several existing sign types, evaluated each type, and identified preferred sign types for the park. Metal signs with rounded edges and earth colors were preferred to wood signs, brightly colored signs, and large signs.

Distribution of Fish and Crayfish and Measurement of Available Habitat in Streams of the North Clackamas County
The Oregon Department of Fish and Wildlife conducted fish surveys along two reaches of Mt. Scott Creek between the summer of 1997 and the spring of 1998. One of the Mt. Scott Creek survey reaches, "Reach 1", extended from the mouth of Mt. Scott Creek upstream to its confluence with Phillips Creek and included the portion of Mt. Scott Creek that flows through the park. The most commonly encountered fish species within Reach 1 were Reticulate Sculpin, Redside Shiner, Western Mosquitofish and Speckled Dace. During the survey, Cutthroat Trout were encountered in Reach 3, upstream of the park, but not within the portion of Mt. Scott Stream that flows through the park.

North Clackamas Parks and Recreation Master Plan
A master plan for the entire parks and recreation district was adopted in 2004 by North Clackamas Parks and Recreation District. The plan establishes visions and goals based on the District's constituents including: quality of life, maintenance and safety, education, preservation, accessibility and environmental advocacy and stewardship, among others. Recommendations were made to the District addressing all aspects of service including, governance and financing, organizational structure, parks and recreation facilities, programs and services, partnerships and a review by the Board of County Commissioners.

north side of North Clackamas Park is bound by Mt. Scott Creek to the north and west and Camas Creek to the south. Both of these creeks are required to have a fifty foot (50') buffer from the top-of-bank. No structures may be located in the buffer without approval and appropriate mitigation and plantings must be of the appropriate species and densities. Public trails and boardwalks may be allowed within the buffer limits with approval by the City of Milwaukie.

Flooding

Picnic Area B flooded

Flooding is a concern in North Clackamas Park. Approximately 70% of the north side of North Clackamas Park is located within the 100 year floodplain. Improvements in the floodplain must meet special requirements. In addition, there are areas officially designated as out of the floodplain that are known to hold standing water during extended periods of rain. Any recommendations made for these areas must meet the requirements of the City of Milwaukie Municipal Code Chapter 18.04 – Flood Hazard Areas. Examples of some of the floodplain regulations include:

- Balanced cut and fill
- Crossing as close to perpendicular as possible
- New structures shall have the lowest floor at least one foot above base flood elevation or be flood-proofed

Existing Facilities

Many existing facilities on the north side of North Clackamas Park will remain in their current location. These include: the Milwaukie Center (including parking and all outdoor activities), the playground (including adjoining benches and sidewalks), the crossing of Mt. Scott Creek, and the two recently renovated crossings of Camas Creek.

Some existing facilities will still be located in the north side of North Clackamas Park, but new locations are to be considered. These include: the off-leash dog area, maintenance equipment storage, a caretaker area, restrooms, parking, picnic shelters, horseshoe pits, and a creek crossing near the confluence of Camas Creek and Mt. Scott Creek.

Opportunities

Property Acquisitions

Recently North Clackamas Parks and Recreation District acquired two pieces of property along the northern border of North Clackamas Park.

One and a half acres were acquired south of Mt. Scott Creek between the off-leash dog area and the existing caretaker's house. Currently, this area is used for equipment storage and a fence separates it from the rest of the park.

An additional one and a half acres was donated to the District this year north of the existing caretaker's facility and north of Mt. Scott Creek. A pond was dredged out of this area many years ago, but the property is currently inaccessible from the park or the neighborhood.

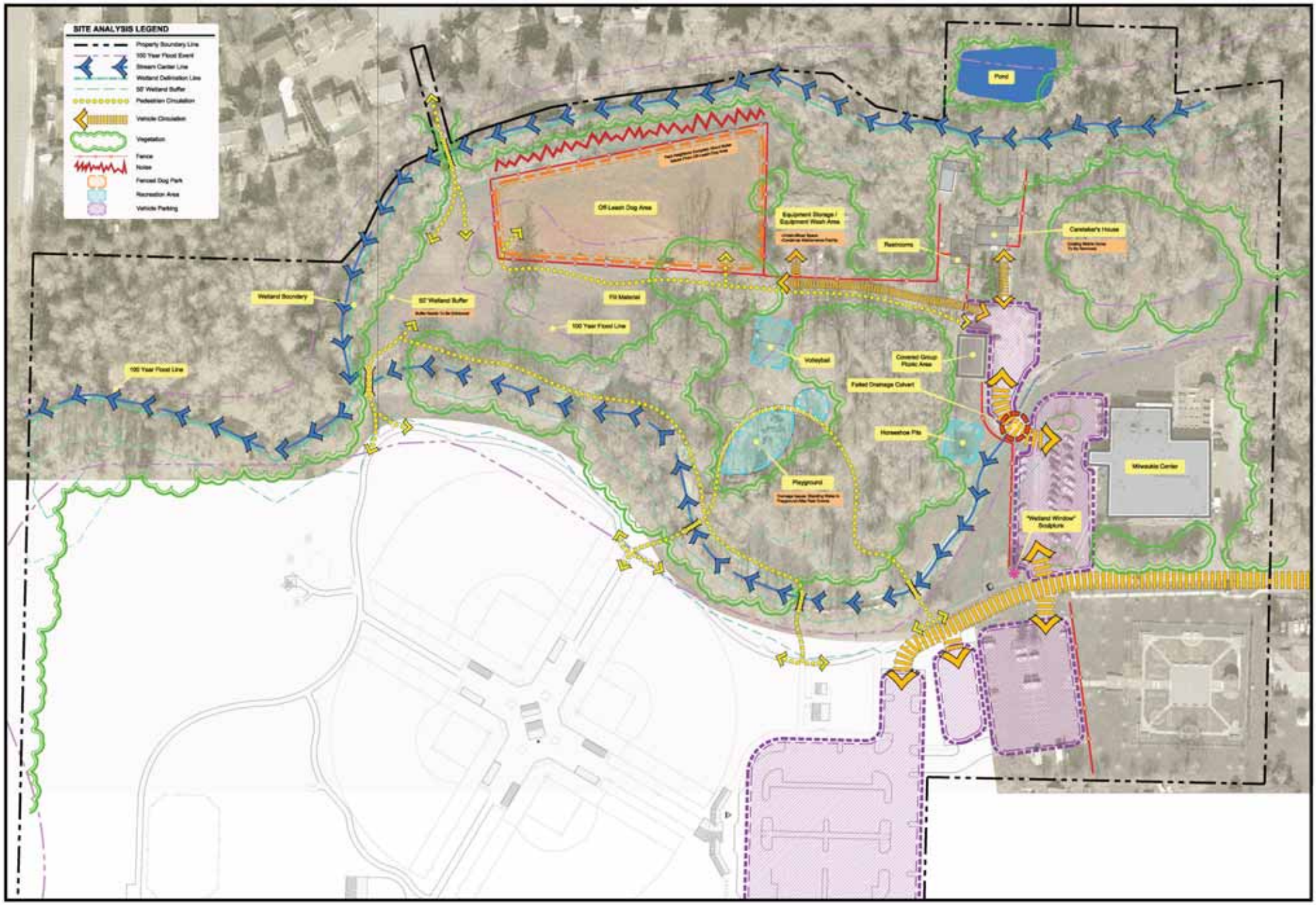
Education

Few people understand the benefits watersheds and wetlands provide and fewer still understand how their actions affect sensitive wetland environments. Opportunities to educate park users about these sensitive areas exist throughout the park.

Community Partnerships

Numerous opportunities exist to bring the park community together during the process of updating facilities in North Clackamas Park. Some opportunities to consider of include:

- Improvements to the off-leash dog area serve as an opportunity to welcome dog owners to the park. Dog owners will provide watchful eyes during times when other users do not visit the park and their presence deters undesirable activities.
- Master Gardeners have received approval to locate a greenhouse near their existing garden plots north of the Milwaukie Center. Beneficial partnerships could include: propagation of native plans for creek and wetland buffers; education partnerships with local schools and the Milwaukie Center; demonstration projects including composting and water recycling.
- The Milwaukie Center has many programs for senior citizens. One obvious partnership is the pairing of a new walking trail in the park with the existing walking program at the Milwaukie Center. Further partnership opportunities should be explored.
- Community service groups have a history of organizing volunteer projects within the park and those partnerships should continue. The Boy Scouts recently repaired two of the foot bridges that cross Camas Creek. Other groups have held park trash clean up events, monitored and counted wildlife within the park and replaced invasive plants with native plants in wetland and creek buffer areas.



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NORTH CLACKAMAS COMMUNITY PARK

SITE ANALYSIS DIAGRAM

N

0 20' 40' 80' 120' 160'

Concept Plan

The key goal of this process is to develop a plan that minimizes environmental and property impacts, provides for ease of maintenance and longevity, while providing a safe and enjoyable experience for the community. Based on field observations, site analysis, background data collection, and input from the district and public, conceptual plans were developed and refined to achieve this goal.

Conceptual Planning

Following the first public meeting Alta Staff created three concepts for a north side plan (Appendix B). The three options included: a plan that was most natural, a plan that was most developed, and a third plan that was a balance between the two. These three concepts were presented to the Stewardship Committee and posted on a website for public review and comment.

Preliminary Concept Evaluation

Two concepts (Appendix C) were prepared for a second public meeting. Following the preliminary public meeting and comment period, there was clear support for keeping the existing character of the park intact, providing additional parking, enhancing the wetland buffers, and improving the crossings of Camas Creek. Both concepts include a half mile (½) loop trail with senior exercise stations, maintenance and restroom facilities, and educational signage at overlooks of Mt. Scott Creek.

Plan A

Plan A minimizes paving north of Camas Creek and concentrates buildings in areas already disturbed by the existing parking lot and existing buildings.

Plan B

Plan B removes facilities for maintenance and storage away from park activity areas and preserves the field west of the playground.

Concept Plan

A concept plan was developed for the third public meeting based on responses North Clackamas Parks and Recreation District received from a mailing comparing the two preliminary concepts, as well as feedback from the public and stakeholder meetings. Overall, most respondents favored Plan B over Plan A.

Program Elements

Operations and Maintenance

Maintenance Building

NCPRD maintenance staff needs an area for washing and storing equipment in the park with utility connections. The Milwaukie Center needs additional storage for Meals on Wheels equipment, special event items and other program materials. The plan shows these facilities as a combined area north of the Milwaukie Center. This location was preferred by those who responded to the survey and by staff from Oregon Department of Fish and Wildlife who toured the site. An access drive is provided through the new parking lot access drive and the building is located east of the proposed off-leash dog area.

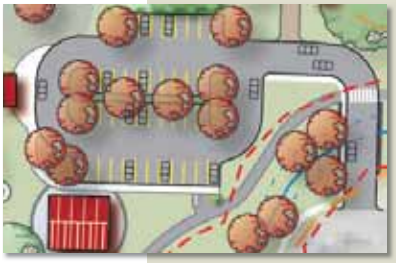
Caretaker

The plan locates a space for a park caretaker just east of the off-leash dog area. This location utilizes existing utility connections available in the area and positions the caretaker in a centralized location. The park caretaker resides in an RV parked on site, and a final decision is pending from NCPRD regarding the desired arrangements. Alta recommends evaluating the need for this position carefully and building a more permanent arrangement if NCPRD finds that a full-time caretaker is required.

Restrooms
Restrooms are located just west of the new parking lot halfway between the entrance to the off-leash dog area and the playground. This location was preferred by a majority of the survey respondents. This facility is to replace the current structure which is in need of repair.

Fencing
Split rail fencing will be located south of Mt. Scott Creek near the overlooks and crossing of Camas Creek and northeast of the walking path north of the proposed maintenance facility. The creek bank in these areas is eroded and fencing will help rejuvenate native plantings, protect wildlife in these areas, and reduce erosion. The remaining buffers are densely planted and will be signed as protected areas. Additional fencing may be added to protect plantings and sensitive areas as needed.

Split rail fence



Proposed parking lot with drop-off loop

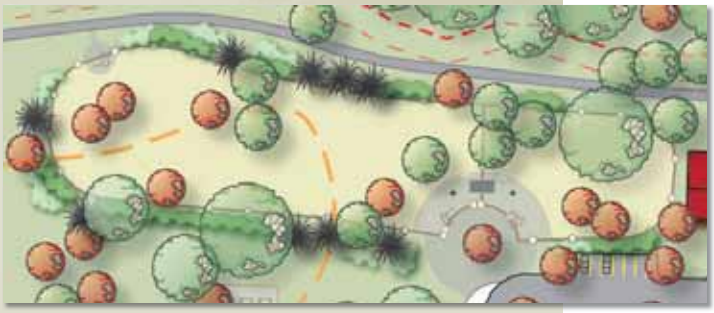
Parking
A new forty (40) vehicle parking lot and passenger drop-off is located in the approximate location of the existing gravel lot. The final design of the parking area should comply with requirements from table 19.503.9 in the City of Milwaukie Municipal Code. The existing crossing of Camas Creek is removed and a new bridge is provided. Alta recommends treating runoff from the parking lot with a series of bioswales located in the planter islands.

Parking lot run-off should be treated through a bioswale

The District received concerns regarding traffic volume increases in front of the Milwaukie Center from vehicles accessing the new parking lot. Alta Staff recommends a review of traffic calming options for this area prior to construction of the new parking lot.

Bioswales filter, slow, infiltrate and cool run-off

Off Leash Dog Area
The off-leash dog area is shifted east and is approximately the same size as the existing facility (1.45 acres). Relocating the dog park farther from homes will alleviate some of the noise impacts on park neighbors.



Re-located off-leash dog area should be divided

A new split rail fence with mesh backing delineates the off leash area and plantings provide a buffer between dogs and other park users. To improve safety, double gates with separate points of entry and exit are recommended and the space is divided between large and small dogs. Paved entry plazas with benches, kiosks, water and shade structures make the off-leash area more pleasant for visitors and their dogs. Perimeter plantings provide a visual separation between the off leash area and the other park activity areas.

Split-rail fence with mesh backing

Climbing boulders
(Photo courtesy of Rockcraft Designs)

Recreation

Playground

Drainage improvements are recommended to the existing playground. The existing sidewalk is extended to the eastern pedestrian bridge completing the loop. A new play area is added with climbing boulders.

Picnic Shelters

Two group shelters are shown. The larger shelter is south of the new parking lot and is approximately two-thirds the size of the existing shelter. A smaller shelter is located near the playground. The total size of covered, group picnic facilities is unchanged. In addition, new covered picnic shelters are added north of the existing playground.

Proposed playground addition and new picnic shelters

Educational Creek Overlooks

Two overlooks of Mt. Scott with benches and educational signage provide wildlife viewing opportunities and allow visitors to access the creek without disturbing the buffers.

Camas Creek Crossing

A new sixty foot bridge will be located seventy five feet from the confluence of Mt. Scott and Camas Creeks to connect the northern and southern halves of North Clackamas Park. This crossing will replace the existing crushed culvert crossing.

Proposed overlooks and relocated Camas Creek crossing

Wooden Overlook
(Photo courtesy of Steve Berliner)

Trails
A half-mile (½) loop trail follows the southern and eastern buffers of Mt. Scott Creek, the northern buffer of Camas Creek and the eastern boundary of the park. Public input indicated a majority of park users want the trail to be paved to meet the needs of all users. In addition, exercise stations geared toward a senior walking program are shown in groups of threes evenly spaced around the trail.

Horseshoes
The horseshoe courts were relocated north of the existing playground. The courts are oriented north-south so players are never facing the sun. A low fence could be considered around the courts if there is a safety concern.

Greenhouse
Currently Master Gardeners have raised planting beds and other gardens northeast of the Milwaukie Center. The group has requested space for a greenhouse in the park. Master Gardeners will provide funding for the greenhouse and be responsible for operating and maintaining the facility. There is public support to include the greenhouse as part of this plan. The greenhouse is shown in place of an existing portable storage container north of the Milwaukie Center which will be removed when a permanent storage building is constructed. The greenhouse will be approximately 20' wide and 50' long.

Asphalt path with 2' buffer

Senior exercise stations
(Photo courtesy of Lifetrain)

Asphalt path with grass swale

Date: 10/24/2007

Scale: AS SHOWN

North Clackamas Community Park
Conceptual Park Plan

alta PLANNING + DESIGN

1638 NE Davis
Portland, OR 97232
503.230.9862
www.altaplanning.com

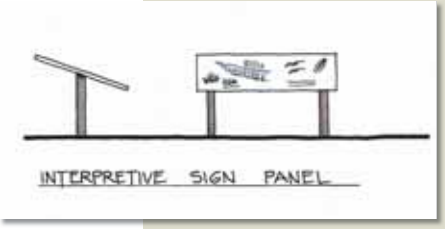
Signage

The need for appropriate signage in the park was mentioned numerous times during the public involvement process. The Conceptual Signage Plan shows four types of signs and where they should be placed in the park. The types are:

- Educational
- Informational
- Health and Fitness
- Plant Identification

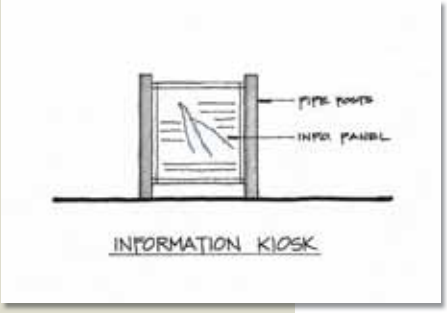
Educational Signs

Educational signs will be about 3 feet high with angled panels. Each of these panels will include information about topics that pertain to that area of the park. For example, the signs at the overlooks could include information and graphics about the Mt. Scott Creek. History of the creek, details about the larger river system, ways to protect the health of the creek are all topics that could be covered. Other panels in the park should include graphics and information about native wildlife, plants, and natural history of the region. In addition, there is desire to have an interpretive sign near the art piece at the entrance to the park. This sign should be similar to the rest of the educational signs in the park.



Informational Signs

Informational Signs will be vertical and up to 5 feet tall. These signs will include basic information about the park like hours of operation, park rules and a park map. These need to be placed at entrances to the park as shown on the sign plan. In addition, there needs to be a sign at the entrance to the off-leash dog area. This sign will include rules pertaining specifically to the use of this area.



Health and Fitness

The proposed exercise stations are vertical with three sides that can include sign panels. The manufacturer of these stations has a number of options for panels that include health and fitness information beyond just instructions for the specific exercise at that station. These include panels about preventing osteoporosis, healthy eating, and ideas for other exercise.

Sign panels on exercise stations (Photo courtesy of Lifetrail)

Plant Tags

Plant tags are an extension of the educational signs and will be no more than 1 foot high. They need to be inconspicuous from a distance, but readable when a person is standing near the plant. These tags need to identify key native species throughout the park and include the common plant name, the botanical name, and

Plant tags to identify native plants

a short description about where the native habitat, growth habit, and any other interesting facts. Each type of plant should be identified no more than one time in the park and the tags should be located along the proposed pathway when possible. The Master Gardeners are a valuable resource and have shown interest in being responsible for the content of native plant tags.

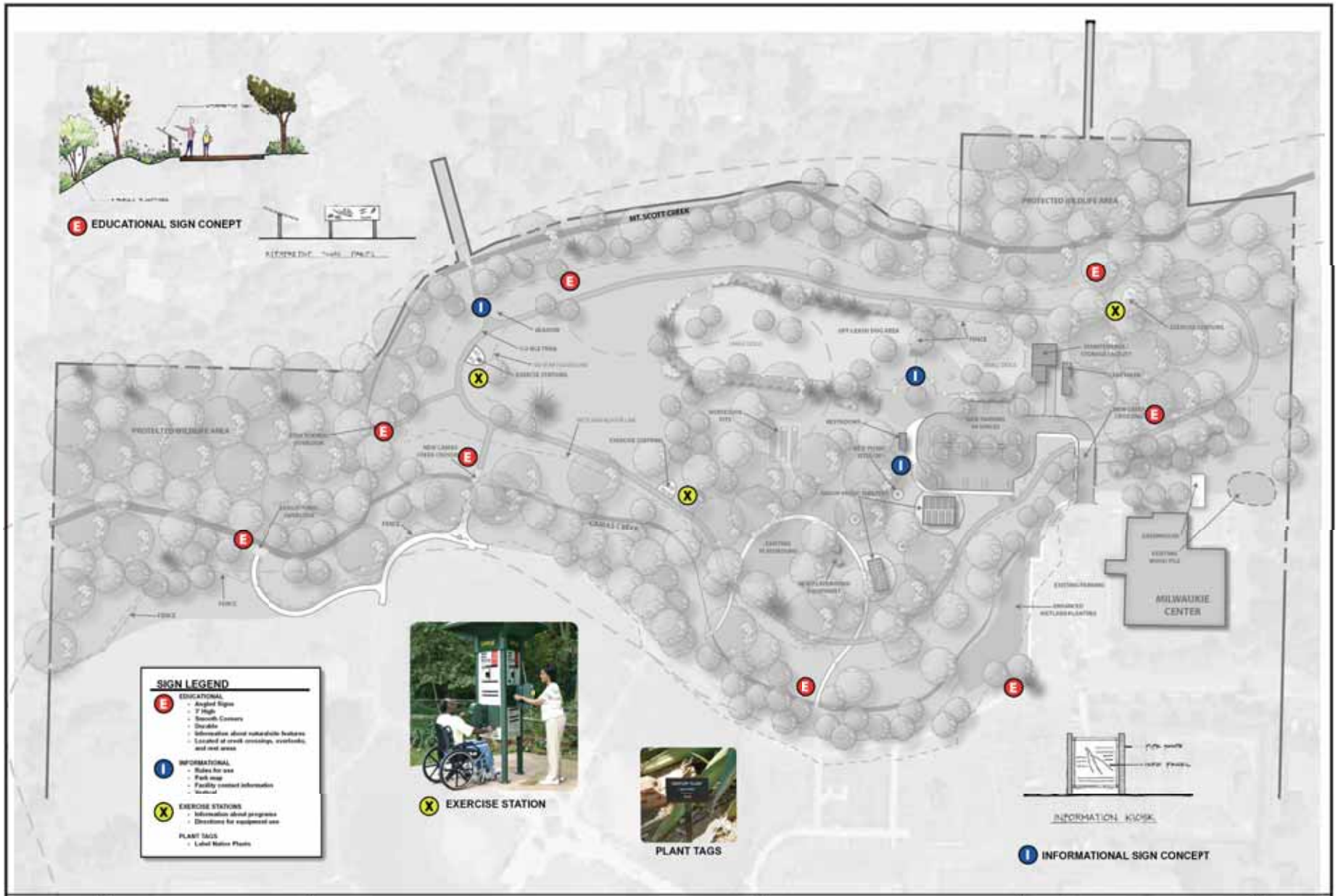
Sign Topics and Content

North Clackamas Parks and Recreation District has been working with the Stewardship Committee to determine the future of the park. This committee has done extensive research regarding signage options. Their recommendations are for durable signs made of metal with rounded corners. This committee also has generated lists of topics for consideration for the educational signs. These include:

- Watershed Map
- Native Plants and Trees
- Mammals (deer, squirrels, rabbits, etc.)
- Birds (owl, Blue Heron, hawk, etc.)
- Reptiles and Amphibians (snakes, snails, frogs, etc.)
- Insects (crickets, ladybugs, dragonflies, etc.)

Next Steps

The next step will be to hire a consultant to design the signs and the specific sign panels. This consultant will need to develop an overall look and theme for the signage in the park. Each of the four sign types need to have a common thread.



Date: 11/28/2007

Scale: AS SHOWN

North Clackamas Community Park Conceptual Signage Plan

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Restoration

This section includes the improvements that are shown on the plan, plus others that do not lend themselves to a graphic, but that could be implemented by the Parks District in the future.

Buffer Improvements

Mt. Scott Creek is not listed by DEQ as being "Water Quality Limited" for temperature. As such, it was not placed on the 303(d) list for this parameter. However, in 2006 Total Maximum Daily Loads (TMDLs) were issued by DEQ for all streams in the Willamette Sub-Basin. This means that Clackamas County needs to prepare an implementation plan describing how "system potential vegetation" (i.e. riparian vegetation that would historically have been found along the stream) will be planted along streams within their jurisdiction. DEQ has determined that planting "system potential vegetation" will adequately shade the creek and reduce water temperatures. Only a portion of riparian vegetation contributes to stream shading.

Small buffer plantings should be protected

To determine the "system potential vegetation" width, Pacific Habitat Services (PHS) applied a model that it has used in other jurisdictions to Mt. Scott Creek. The reach of Mt. Scott Creek along the northern border of the park is dominated by blackberry thickets and has very little taller vegetation providing shade to the stream surface. The stream surface will be shaded with a 70-foot wide riparian area along the south bank of the stream. The east-west portion of Mt. Scott Creek downstream from the Camas Creek confluence would also benefit from additional shading by planting tall shrubs beneath the existing trees along the south side of the stream.

The northeastern portion of Camas Creek is largely un-shaded and would greatly benefit from riparian vegetation along both sides of the stream, but especially along the entirely exposed south side. Planting was completed on the south side of Camas Creek when the new softball facilities were built. When these plants reach maturity Camas Creek will be further shaded.

Suggested native trees and shrubs to be planted along the riparian areas of Mt. Scott Creek and Camas Creek are included in the table below.

Table 3 - Suggested Native Trees and Shrubs

Scientific Name	Common Name
Acer circinatum	Vine Maple
Acer macrophyllum	Bigleaf Maple
Alnus rubra	Red Alder
Corylus cornuta	Beaked Hazelnut
Crataegus douglasii	Black Hawthorn
Fraxinus latifolia	Oregon Ash
Lonicera involucrata	Twinberry
Oemleria cerasiformis	Indian Plum

Physocarpus capitatus	Pacific Ninebark
Pseudotsuga menziesii	Douglas Fir
Quercus garryana	Oregon White Oak
Rhamnus purshiana	Cascara
Rosa nutkana	Nootka Rose
Salix lasiandra	Pacific Willow
Sambucus racemosa	Red Elderberry
Spiraea douglasii	Douglas Spiraea
Symphoricarpos albus	Snowberry
Thuja plicata	Western Red Cedar

Habitat Improvements

Culvert removal

A culvert currently exists in Camas Creek at its confluence with Mt. Scott Creek. This culvert allows maintenance vehicles and foot traffic to cross the creek. This culvert is proposed to be removed and the confluence area restored. The bed of the stream may benefit from a shallow grade control structure (e.g. check dam) to ensure the bed of Camas Creek does not down-cut and start to erode upstream. This activity will require state and federal permits. The banks should be planted with selected species from Table 3.

Woody Debris

The park portion of Mt. Scott Creek has flow regimes that do not vary greatly with channel distance. A few large woody debris placements within the channel might locally diversify flows and vary the sediment distribution. The portion of the channel between the footbridge to Casa Del Rey Drive and the confluence with Camas Creek might be best suited to such installations.

Human access

Removal of the trail along Mt. Scott Creek to the west of the Camas Creek and Mt. Scott Creek confluence is recommended. The banks in these areas have been eroded and compacted, reducing the cover of native vegetation. Access will be limited to discrete points to ensure that wildlife-human interaction is minimal and that damage to stream banks can be repaired. Continued access to the creek will degrade the stream health and reduce the effectiveness of other restoration work proposed in this plan. Viewing platforms at the edge of the stream will be an attractive and functional alternative to direct creek access. Educational groups will be allowed direct creek access with prior approval from NCPRD on a limited basis.

Wetland Preservation

Enhancements of the wetlands in the northwestern portion of the site will entail removal of invasive species: Reed Canarygrass and Himalaya Blackberry and replacement with small woody shrubs: Twinberry, Spiraea, and Red-Osier Dogwood. The discharge to Mt. Scott Creek near the west end of the park may be opened to allow high-flow refugia without fish entrapment. The present outflow from the adjacent wetlands is situated several feet above the stream thalweg and probably rarely is overtopped to allow water to flow into the adjacent wetlands. A small excavation of the present outflow channel would allow high flows of Mt. Scott Creek to enter the wetlands and provide a lower-velocity

environment for fish during flood episodes. A log structure immediately downstream from the wetland orifice would locally raise water levels at the refugia entrance during large flows and increase the likelihood of water surface elevations sufficient to allow fish passage into the wetland. The width of the channel at this point would require several anchored logs to achieve significant local elevation of storm flows.

Concrete Removal

Large pieces of concrete are currently located within the stream upstream of the confluence of Camas Creek and Mt. Scott Creek. These pieces of concrete should be removed and the large piece of wood located in this area cut in half to dissuade people from crossing the creek.

Oak-Ash Woodland

Alternate picnic areas that utilize moveable picnic tables so that only one of these sites is in use at a time. This will minimize the impact to mature trees from heavy use around the base and reduce hazards to park users caused by falling branches. Only the picnic area in use should be mowed by maintenance crews. This practice will help alleviate some of the compaction caused by heavy use and maintenance under the tree canopy.

In addition, older trees need to be replaced so this sensitive habitat does not disappear. New Oregon White Oak and Oregon Ash should be clustered with native under story shrubs such as Snowberry and Oregon Grape. Plantings should be coordinated with maintenance staff and managed so that over time the need to mow under these trees is significantly reduced or eliminated.

Native Meadow

Native forbs should be planted within areas to the south of Mt. Scott Creek. The south side of the meadow should be adjacent to the path that is proposed in this area. This will ensure that park maintenance activities do not extend into the native meadow. This native meadow will likely look unkempt compared to mowed areas of the park, but will provide more diverse habitat for insects and birds.

Management

The use of policies and measures contained in the Integrated Pest Management Program adapted by NCPRD is recommended to control undesirable species within the park. As defined in the Oregon Statutes (ORS 262.1), Chapter 943, "integrated pest management" is "…a coordinated decision-making and action process that uses the most appropriate pest control methods and strategies in an environmentally and economically sound manner to meet pest management objectives. The elements of integrated pest management include: (a) preventing pest problems; (b) monitoring for the presence of pests and pest damage; (c) establishing the density of pest population, which may be set at zero, that can be tolerated or corrected with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic or aesthetic threshold; (d) treating pest problems to reduce population below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical and pesticidal control methods and that shall consider human health, ecological impact, feasibility and cost effectiveness; and (e) evaluating the effects and efficacy of pest treatments."

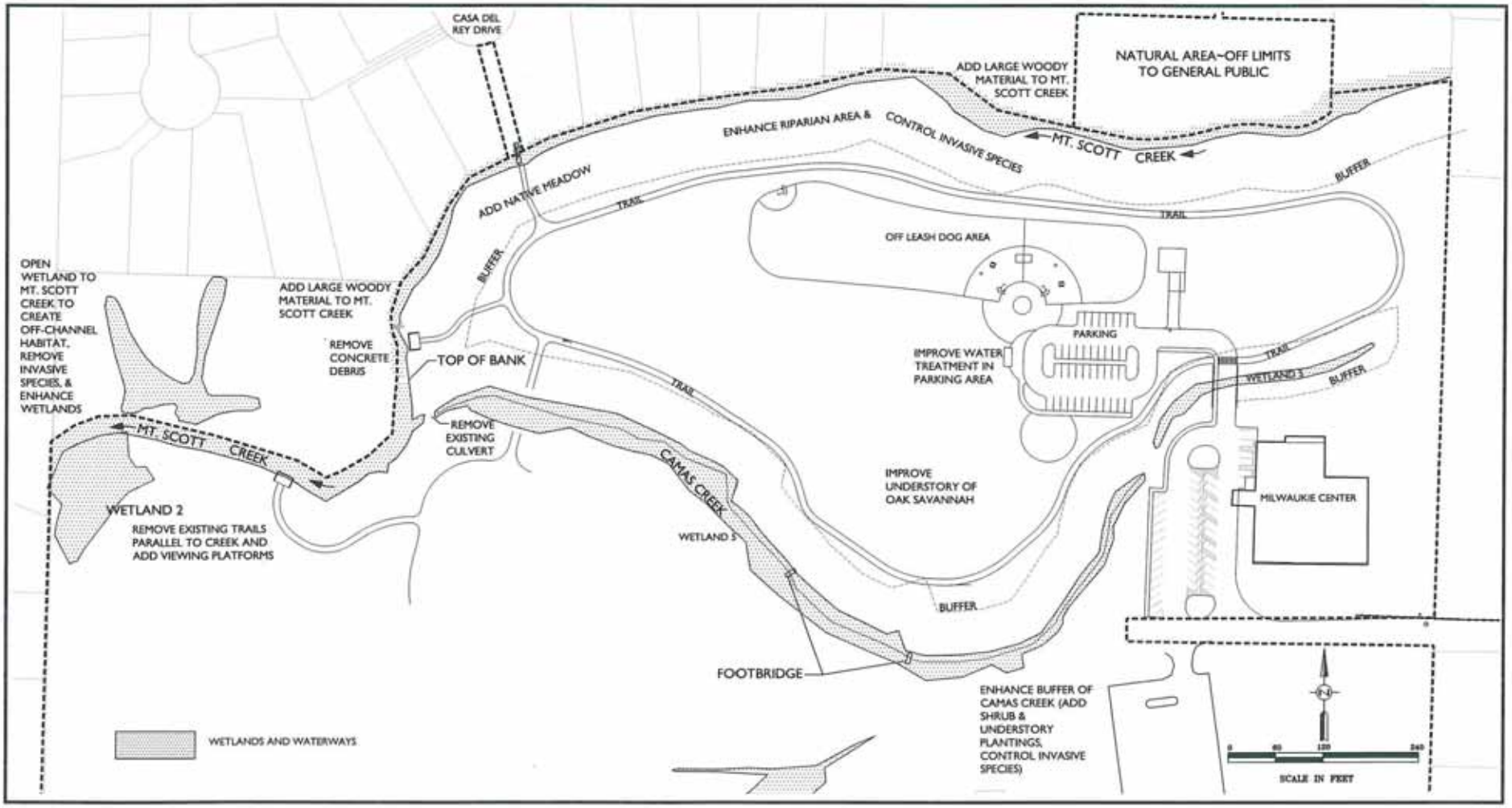
NCPRD's Integrated Pest Management Program evaluated and considered together various integrated pest management measures so that the best overall solutions are chosen and implemented. The prevention of pest problems through good policy and planning are assessed first. Cultural practices, avoidance measures, and physical means of managing pests are assessed next. Finally, mechanical practices, trapping, biological controls, and the use of natural and synthetic pesticides are assessed.

Incorporation of this integrated pest management policy into the maintenance

activities at North Clackamas Park is recommended to ensure the protection of Mt. Scott Creek and Camas Creek and to help restore populations of salmonids in Mt. Scott Creek.

Mowing

Other maintenance considerations include limiting mowing to areas outside of the riparian zones. Mowing within the Oak-Ash Woodland should be limited. The trees in the woodland may be damaged by mowing equipment allowing bacteria, fungi, viruses and insects to damage mature, valuable trees. To ensure that the trees are protected and that habitat is improved, native shrubs, such as Snowberry and Oregon Grape should be planted around the base of selected tree groups.



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Overview of the recommended natural resource improvements in the northern part of North Clackamas Park in Clackamas, Oregon. Site plan provided by Alta Planning + Design, 2007.

FIGURE 2

Pacific Habitat Services, Inc.

Next Steps

Cost Opinion

Element	Cost	Description
Demolition		
	$90,000.00	Site demolition in preparation for construction
Operations and Maintenance		
Maintenance Building	$185,000.00	Equipment wash facility and 1,500 SF. of storage
Caretaker Facility	$10,500.00	Concrete pad and utility hook up
Restrooms	$35,500.00	Includes building, foundation, and connections
Fencing	$15,000.00	Assumes 1,000 LF of three-rail split rail fencing
Parking Lot	$200,000.00	forty (40) vehicles, lighting, planters
Off Leash Dog Area		
	$102,000.00	Includes mesh fencing, gates, water, sewer, turf & concrete surfacing improvements, and planting
Recreation		
Playground	$48,500.00	Mulch surface, climbing boulders, concrete curb
Group Picnic Shelters	$136,500.00	2 shelters, 33 picnic tables
Individual Picnic Sites	$25,300.00	3 covered w/ tables on paved surface
Educational Creek Overlooks	$72,000.00	Boardwalk, rail and 2 benches each
Trails	$200,000.00	Asphalt surface, and 5 benches
Exercise Stations	$42,500.00	11 stations, concrete curb, and mulch surface
Horseshoe Courts	$5,000.00	sand pits, wood borders, metal stakes
Interpretive Signage	$20,000.00	10 sign panels
Master Gardeners' Greenhouse	-	Funding provided by Master Gardeners'
Wetland Preservation & Restoration		
Camas Creek Pedestrian Crossing	$60,000.00	Prefab pedestrian bridge
Camas Creek Vehicle Crossing	$800,000.00	Wooden vehicle crossing bridge
Buffer Enhancement - Invasives Removal	$27,000.00	Removal of invasives species; NCPRD assumes this will be done with primarily volunteer labor
Buffer Enhancement - Plants	$64,800.00	Cost of bare root plants
Buffer Enhancement - Manual Planting	$16,200.00	NCPRD assumes most of the planting will be done with volunteer labor
Wetland Enhancement - Invasives Removal	$1,000.00	Removal of invasives species; NCPRD assumes this will be done with primarily volunteer labor
Wetland Enhancement - Plants	$2,400.00	Cost of bare root plants
Wetland Enhancement - Manual Planting	$600.00	NCPRD assumes most of the planting will be done with volunteer labor
Subtotal	**$2,069,800.00**	
Design Fees 12%	$248,376.00	
Mobilization 8%	$165,584.00	
Contingency 20%	$496,752.00	
Total	**$2,980,512.00**	

Project Phasing Options

The goal of the phasing plan for park improvements is to make immediate, noticeable, improvements with available NCPRD funding. As each phase is developed, park users should be able to distinguish those improvements. Initial improvements will make it possible for NCPRD to lobby for additional funding to complete some of the more costly improvements to the park.

Phase I

The goal of the first phase is to make an initial impact with limited funds. For instance, NCPRD would like to utilize volunteer labor for many of the improvements to creek buffer and wetland areas. Phase one improvements include:

- Trail
- Master Gardeners' Greenhouse
- Camas Creek Pedestrian and Maintenance Crossing
- Creek Buffer Enhancements
- Wetland Enhancements
- Informational Signage, relevant Educational Signage and Native Plant Tags
- Fencing
- Off Leash Dog Area

Phase II

The second phase improves the facilities of the park that provide comfort to visitors including:

- Restrooms
- Group Picnic Shelters
- Maintenance and Storage Buildings
- Caretaker Site

Phase III

Phase three addresses improvements to parking and the vehicular crossing of Camas Creek including:

- Vehicle Bridge
- Parking
- Wetland Improvements east of the new bridge

Phase IV

The final phase includes improvements to natural resource areas that will enhance the experience of visitors to these areas. It also adds park elements that should not be installed prior to providing additional parking. Improvements include:

- Creek Overlooks
- Remaining Educational Signage
- New Bouldering Playground Equipment
- Individual Picnic Sites
- Exercise Stations
- Horseshoes

Appendix A – Public Input Summary

NORTH CLACKAMAS PARK

North Side Planning Ideas Received To Date

Sources:

- District Advisory Board
- North Clackamas Park Stewardship Committee
- Comment cards returned by community
- Comments from staff
- Phone calls from community
- E-mails from community
- Web site: www.clackamas.us/ncprd
- Letters from community

OPERATIONS AND MAINTENANCE

General

- Replace the fence on the east side of the park.
- Remove the spoils behind the dog park shelter and south of the dog park fence.
- Where do buses get parked? In safety
- Congestion on site, busy, intensity of use, parking
- Will need some type of areas for maintenance equipment storage (on north side), and a wash area to clean equipment-one that drains into sewer, not creek. Enough room for a few mowers and a tractor and a lockable building. Near the existing caretaker house will provide easy access to sewer.
- Park maintenance needs space for equipment washing and storage of a few mowers and a vehicle.
- Better signage in park
- Remove all concrete rubble downstream from bridge accessing neighborhood to north
- Need access across swale for maintenance
- Emergency access, need bridge
- Build a storage and bus shelter so that theft of the equipment and vandalism to the busses will stop.
- We need a different address for North Clackamas Park than for Milwaukie Center
- We need a separate water meter for North Clackamas Park north side than for Milwaukie Center – currently what water is used in the north side we pay for.

  - I'm writing to voice my opposition to the current location of the maintenance building on the east edge of the park and the paved trail running right through the only open area in the oak grove north of the Milwaukie Center as shown in the concept plan map displayed at the Oct. 24th meeting about the north side planning for NCP. According to the documents provided at the meeting, the building location experiences poor drainage and occasional surface flow from a wetland area east of the park boundary into Camas Creek. It makes more sense to me to place the building closer to the small dog run and the pad provided for the park caretaker. As the dog run is currently larger than average, a small reduction in space on the side reserved for small dogs would easily allow space for both the maintenance building and the caretaker. Putting those two facilities together would reduce the area paved (or the area under gravel) in the park. With the maintenance building not on the east edge of the park, the new trail could be re-routed so it goes to the east of the open area in the oak grove.
  - Parks Maintenance and Milwaukie Center storage facility and entrance road – C/CAB members are concerned that the entrance road to a storage facility not interfere with parking in the back of the Milwaukie Center and not displace the Emergency Firewood Program. Additionally, we want to ensure that adequate space is available for secure parking of the four busses used by the Milwaukie Center within the storage facility compound.
  - The Emergency Firewood Program is the only one in the tri-county area and an important community resource. It needs adequate space, to be secure and yet easy to access for staff, volunteers and users.

- I do not like the idea of removing the chain link fencing along the north border of the park. I want to have some division of park property from my back yard. We don't want to look out and see strangers sitting on my deck!

-

Parking

- We need this parking, however, buses take up a lot of space here (four buses on lot now)
- Maybe break up parking, put some closer to dogs
- Parking is happening right up to and almost into the wetland area, no buffer
- Negotiate with the Clackamas Christian Center Church to buy-rent-lease their property east of the Milwaukie Center to develop for needed parking! For Milwaukie Center and North Clackamas Parks use.
- Move buses to behind Milwaukie Center or find alternative parking
- Buses were vandalized when they were behind the Milwaukie Center
- I was recently made aware that the caretaker's cabin/trailer has been removed and that a storage container has been placed near the community garden on the northeast side of the Milwaukie Center. I know of past vandalism problems with the Center's buses as well. I suggest that the area where the caretaker's building used to sit be considered for secure bus parking (either a fenced/gated lot or a bus barn). If a building is built for the buses, either as part of it or adjacent to it should be a storage building for the Milwaukie Center. Currently there are Center items stored on the Stringfield property and the nutrition program also needs on-site storage. The emergency wood program could also be relocated near the new storage/bus parking area and that would free up some space for a small expansion to the parking lot behind the Center.
- I just wanted to throw bus parking into the mix with the park remodel. Right now we park our buses in the gravel by the A-frame.
- Please, we need more parking spaces. The ball games and such use up a lot of spaces.
- Please add more parking to the Senior Center.
- We need more parking spaces for the Sr. Center. Thank you for doing this for us.
- There's no parking for seniors because of the baseball games taking our spots. We have a lot of handicap people that need their space back.
- We need more parking, especially for the Senior Center. Have to walk too far with walkers.
- We need more parking for bingo.
- There is not enough parking at the Milwaukie Center!! Seniors <u>cannot</u> walk too far to get into the facility. It is a disservice not to have adequate parking for our participants.
- I teach evening classes at the Center, and I'm curious as to where my people are supposed to park (after they've paid for classes) in the <u>full</u> parking lot?
- All the activities at the Center need more parking. With the sports events, the spaces get taken up. So don't forget the Center for parking.

- Make more parking spaces designated for the Senior Center parking only. Some of the seniors can't walk all the way from the ball fields!
- We need more parking spaces for the Senior Center.
- We would love to have more parking spaces for the Senior Center.
- We do need more parking spaces, especially handicapped.
- There is much focus on parking, I'd like there to be a push to get Trimet to increase service to the Milwaukie Center in addition to adding parking.
- We'd really like to see the parking issue addressed at the Milwaukie Center Park and park area!
- We need additional parking spots at the Milwaukie Senior Center.
- Please, we need more parking.
- We need more parking for events. It's really hard for the elderly to walk far.

  - New Parking entrance configuration – There is significant concern from our board about the current configuration of the entrance to the new parking lot north of the Milwaukie Center's current parking lot. The recommended entrance is a "straight shot" going right in front of the Milwaukie Center's front door. It can easily become a raceway. Older adults and people with disabilities who park in the Milwaukie Center parking lot and walk across it to access the front entry will be charged with dodging many more cars and potentially faster moving cars. This is a substantial safety concern. We urge you to reconsider the entrance to construct it more like the current entrance to the gravel area in front of the A-frame which would then require people to drive slowly around the Milwaukie Center parking lot curve and then turn again into the new parking area.

Restrooms

- Existing restrooms are unattractive-remove or enhance
- Can we get restrooms to be open year-round?
- Maybe leave one restroom open in winter, and more during summer
- Restrooms on west and east sides-better located
- Sewer connections may limit restroom locations
- I would like to see something in the area of 1000 to 1500 sq ft of shop space with overhead garage doors and maybe 400 to 500 sq ft of separate lockable storage space. Electricity at a minimum and a wash out sink would be nice. Also we were looking for an equipment wash area which would meet the City of Milwaukie's requirements. Maybe we could incorporate the whole structure with a public restroom facility somehow on the other side??
- New restrooms are needed

DOGS

General

- Remove the off leash dog area and permit dogs in the Park only on leash.
- Consider off leash hours in the whole park
- Remove off leash area, there was no process when it was put in. Management strategies to control noise and other problems have not worked.
- Keep dogs away from playground and picnics
- If the off leash dog exercise area is to remain, look into moving it to Picnic Area B or move it east to the west side of the rest room and maintenance area.
- Provide a 100 foot buffer between the off leash exercise area and Mt. Scott Creek.
- Do not expand dog run at NCP
- Strongly oppose any increase in size to the dog run, recommend putting it at another location.
- Put dog run in the area below the Aquatic Park.
- Please save space at North Clackamas Park for the furry members of our families to play.
- More dog parks in District to relieve pressure on NCP
- Enlarge the current dog run area – overcrowding is becoming an issue.
- I love dogs but have been advised not to take them to off leash areas because of bacteria and viruses.
- Dog run is noisy – have to listen to barking, growling fighting and owners yelling at dogs constantly.
- I work at home and have to deal with excessive barking from the dog run. Often times this starts early (7am).
- Move the west boundary of the off leash dog exercise area east (255') to provide approximately the same area (1.4 acres) as it now contains.
- Section off a portion of the dog run for small dogs. It wouldn't have to be a large area – maybe a quarter of what is there. The small dogs get overrun and picked on by the large dogs.
- I often see as many off leash dogs running throughout the park as I see in the actual "off leash area". With small children playing in the same vicinity it becomes a real safety issue, especially since we lost the other side of the park to baseball fields. The area for play and leisure has shrunk so kids are having to really watch where and how they run so as not to invite unwanted attention from loose dogs. Dog owners tell me, "don't worry he/she loves children". Unfortunately, my children do not love aggressive dogs.
- There should be no off-leash dogs in any unfenced sections of the park. My wife has been charged and barked at by several unleashed dogs and is afraid to return to the park for her daily walks.
- The present dog park, although not perfect, is a very fine asset in the North Clackamas Park system and benefits many people as well as their dogs. We hope that any future plans for the park will preserve this fine dog park.
- Keep dog park in NCP (in its current location) until an acceptable alternative is found.
- Look at the area next to the church (Clackamas Christian) for a dog run.
- Short term use of "bone yard" (existing maintenance area next to the dog run) area to test separate dog runs

Dog Run

- Priority 1 improvements for dog run:
    - Double gate
    - 5 ft. fence
    - level- no holes, but nice terrain
    - Room
    - Plumbed water (close)
    - Tables
    - Shade
    - Restrooms (in vicinity)
    - Shelter
    - Parking
    - Safe Environment, feel secure
    - Trash service
    - Set of Rules
- Priority 2 improvements for dog run:
    - Structures for dogs to play
    - Lighting
    - Wash area
    - Small dog area
    - Training Area
    - Water feature
    - Timeout area for dogs
- Fence is deteriorating, needs to be fixed
- Wet area around watering hole, should be renovated, have a nicer surface
- Whole dog park should be nicer, no holes/mud puddles, more varied landscape with hills, etc
- A covered area for people when it's raining, and more seating in general; more access points to the park
- Area not big enough to get larger dogs moving, separate areas would be good to keep barking down and to provide different things for the needs of large and small dogs, some dogs need lots of exercise
- A permanent watering area with cement surface to keep mud down
- A clean water feature/pool for dogs where they could play but not get so muddy, something that could be drained for cleaning
- Wash off station for dogs
- Add some trees in the off-leash area
- This weekend has been non-stop barking. Can someone let me know what you are doing about it? When we ask people to quiet the dogs it does no good.

    - My husband and I live in Milwaukie, and do lots of walking with our small dog. We are so happy to live close to NCP. The many improvements have been wonderful. This summer the park has been busy with many people enjoying the nice ball fields and walking paths. Also

the nice bathrooms and drinking fountains have been great additions. We have talked to people with small dogs that are afraid to put their little ones in the off leash dog area with larger dogs. I'm sure most of the dogs are friendly, but the larger dogs could possibly hurt the smaller ones in play. There are two dog parks on the west side that have divided the area with a simple wire fence. The pet play area at NCP is large enough to have even a small portion of the area for smaller dogs. Our little dog loves to play with dogs her own size and it would be a nice addition. The cost should be fairly low, as there already are two different entrances into the play area.

- This is exciting to know that the off leash area may be divided, and happen. I would prefer and area for just small dogs and one for large dogs. Even a large passive dog could play too hard for a small dog. Also, I would hope any aggressive dogs wouldn't be in the area at all!
- Move tables away from entrance to reduce dog gathering by the gates. Space the tables around the area and maybe set them on small concrete pads. Make sure tables are very durable.
- Can we add small shelters over these tables? They should be open on all sides for visibility. This lets different groups set apart and again keeps dogs from grouping too closely.
- The ground needs to be improved (leveled so that there are not stagnant pools, and have concrete and other items removed for safety). That being said, it would be nice to see a small hill or other structure developed that would allow the dogs to play on and around.
- We need a bulletin board at the edge of the parking lot on the way to the dog park area to keep all park users up to date.
- Can we add a dog rinsing station? The dogs get so muddy.

NATURAL RESOURCES

General

- Want to keep the north side in as natural a condition as possible so the environment & wildlife can be appreciated and enjoyed.
- Would like to see the north side stay as a conservation area so the creek, wildlife, vegetation, etc can be preserved and not demolished.
- Try to keep the north side in as natural a state as possible. Thank you.
- We hope for as little impact on the north side as possible. It's nice to be able to take a walk in the park & enjoy the greenery, birds, creek, etc. (when ball games are not going on)
- Create a water fall and pond with different types of plants and trees.
- Provide environmental Interpretation
- Keep the north side as natural as possible without adding additional noisy activities. We have already increased the noise with the ball park and upset the residents that live in the area; I think that we should keep added activities to quiet activities. Including a walking trail is a high priority for me with seating along the way and ample trash cans.

- Milwaukie Center is known for its spectacular "ancient" trees – the beauty of the landscape. Please, please, please do not disgrace us by "building" more ball fields! Walking amongst those trees is a sport too! There are enough ball fields here!
- There is more to recreation than baseball and soccer. You have already defiled the natural beauty of this park in the name of sports. How about leaving what's left alone for the enjoyment of those who still want a "little" bit of nature? Why must we destroy what's left?
- Please no more ballparks. Please leave the remaining trees and park area as is. It is used by many.

Culverts/Bridges

- Remove culverts, make natural, no bridge within 50 feet of Mt. Scott Creek, make inlet/refuge area for fish
- Put in walking bridge a little further east to continue the walking trail all around the park
- Walking trail should connect to boardwalk through wetlands, but keep a natural area for critters to live; where people can get to creek, put interpretive signs, but keep banks from eroding, silt kills baby fish
- Replace the culvert under the parking access road to the picnic shelter to provide continued flow from the east end of the Camas Creek.
- Remove the two culverts and road across Camas Creek at its confluence with Mt. Scott Creek and do not replace this crossing. Let the three foot bridges across the Camas Creek further east provide north/south circulation.
- The middle bridge should be the main connection between the north and the south.
- The easternmost bridge may be unnecessary, does not really connect to anything

Creek/Streams/Wetlands

- Remove all paving within the Camas Creek buffers and provide crossings on raised boardwalks.
- Remove non native species from Camas Creek buffer areas and replace with native plants.
- Provide controlled access points to Creek for appreciation
- Provide barriers, such as a split rail fence or posts and chain (as in front of the Rose Garden) to define buffer areas on both the north and south sides of the Park.
- Restore the bank of Mt. Scott Creek next to the original restoration area and remove the bench on the bank (it is within the 50' buffer anyway).
- Leave the NW corner of the Park as a wild area, but look into providing fish resting lagoons in a portion of that area.
- Incorporate the new property on the north side of Mt. Scott Creek into the Park
- Protect northwest corner of park. Possibly have boardwalk to access for interpretive education (e.g. Wildwood Recreation Area on the way to Mt. Hood)
- On the east side of the Picnic Shelter parking lot just north of the driveway there is standing water, with wetland rushes and even ducks swimming in it. Cars are parking right next to this wetland, and are even parking in it. There should be NO PARKING between where the busses park and the driveway.

- About the perimeter fence-Oregon Dept. of Fish and Wildlife and we stewards always advocate wildlife passages. Assuming the front entry gate would not stop a person anyway, please leave several "man-door" un-gated passages in any new fence sections. The less accessible to humans the better – still available to critters.
- Fence all wetlands at the protective buffer using split rail fencing [or alternatives].
- Creek needs to become an enhanced area
- Maybe put up aesthetically pleasing fence/barrier of some kind around wetlands and streams
- Enhance wetland area north of center
- There is a deep pool on the other side of the creek that was a swimming hole. Might be well suited for fish habitat.
- The spring is at the east end of Camas Creek.
- Board structure (for archery?) –no one knows what it is, remove it
- Keep 50 ft buffer on both sides of creek
- Please keep the north end of the park as green as possible. No more development! Restore Kellogg Creek and the watershed for the salmon!
- My phone has been ringing off the hook about Saturday's photo shoot along the banks of Mt. Scott Creek in the west end of North Clackamas Park. The picture below demonstrates the need to fence the buffers in order to prevent vehicle access.

- I took the below photo of a stream-viewing platform last weekend at Metolius Preserve, a gorgeous native landscape receiving lots of TLC and enhancement in the Metolius Watershed on a Forest Service Rd. off Santiam Pass Hwy, about eight miles west of Sisters, OR. The non-profit org guiding it has put three such platforms up against the small stream running through the active site. When you stand all the way to the back by the stream, there is only maybe 8' of bank remaining, and it's sloped down to the Creek, so it's like you're right on top of it, because of course you stand even higher than the top of the bank. The hewn log design might be on the rustic side for NC Park, but many materials can be considered. This feature really adds interest to a trail system that stays out of the buffer, by giving you several places to get up close and personal with the stream.

- I have had an opportunity to study the three Preliminary Concepts prepared by the consultant Alta Planning + Design. I am disappointed in the lack of environmental sensitivity and responsibilities the district has to plan for salmon recovery in the Kellogg Watershed—at least do its part.

  As you know Kellogg-Mt. Scott Creek and its watershed is listed in the 4[d] Rule, Endangered Species Act (ESA) for salmon recovery. To that extent it is incumbent that the district not only meets the basic expectation of the federal government in the use of public funds in environmentally sensitive areas of the community, but to also set an example as to what "environmental planning" really means.

  I see no evidence that the district's planning to date took into consideration the following:

  --The ESA 4[d] Rule pertaining to Salmon Recovery and taking issues
  --The Clean Water Act and Oregon Department of Environmental Quality (DEQ) TMDL compliance strategies
  --FEMA policy and USCorps Engineer/DSL/ODFW/USF&W policy concerning 404 permitting
  --The Clackamas County Comprehensive Plan and City of Milwaukie Comprehensive Plan
  --Metro's "Nature in Neighborhood" program

  At the very least, there should be evidence that the planning efforts entailed a detailed environmental assessment of the open space corridor and possible affects each concept alternative might have on the environmental factors. Further such studies would normally take into consideration the existing land use of the ENTIRE PARK, along with surrounding uses. It is difficult to consider any plan out of context and without regard of consultation with permitting and consulting agencies. It is my belief that by this time in the planning process, the district would have shared the consultant work, along with the land survey and wetland survey, with key environmental agencies and solicited recommendations in use and design, especially fisheries and habitat disciplines. After all, we are trying to sort out the non-starters that would be typically rejected in view of science-based biological opinion.

  Some of the science-based studies that have caught my attention during my research of fish issues for our urban areas have been:

  --the 1999 Metro Salmon Recovery Study which recommended a MINIMUM 200 foot setback from all proposed development and that this setback be established as habitat to benefit fisheries and wildlife. A closer scrutiny of the study actually suggested setbacks be observed based upon the

typical mature height of the tallest native trees that would likely be located along the stream corridor. We know that many native old growth Douglas Firs exceed this height.
--The 2004 Willamette Subbasin Plan adopted by the Northwest Power and Conservation Council (BPA) as part of the mitigation of impacts from BPA operations on the Columbia River. This plan includes the Kellogg Watershed. According to BPA, the subbasin plan will give context to where mitigation projects should occur and also provide assurance that the most beneficial projects are being undertaken in the right places at the right time to improve conditions for fish and wildlife.
--The Oregon Plan. This plan is presently under court scrutiny, but does provide general guides to CPR fish in the Portland Metro region. The state is relying heavily on Metro policy.
--Oregon DEQ TDML (Total Daily Maximum Load—water quality standards) Studies. The most recent study for our urban streams was done for Johnson Creek and Tyron Creek, September 29, 2006. The DEQ has stated that recommendations in this study will apply to all affected urban streams affected by the department's TMDL standards, which includes Kellogg-Mt. Scott watershed waters. Chapter 5: Lower Willamette Subbasin affects the Kellogg watershed. The study includes methodology and basic results and recommendations for Riparian Vegetation "Potential Condition" to be applied to all streams. This study also goes into various topic areas such as water temperature, loading capacity (of pollutants, toxics, etc.) to be applied in general to other Portland area urban streams as part of the 303 (d) parameters.
--FEMA maps and city/county policies concerning development within the floodplain.
--Development of Title 3 and "Nature in Neighborhood" programs under METRO's guidance and acknowledged by state LCDC.

Certainly, these policies are some of the basic policies, but in no way provide the detailed parameters we should consider for use of this park. Those should be established in consultation with the experts within our state and federal agencies. We should try to set an example of how we think the salmon can be successfully CPR'd (Conserve, Protect, Rehabilitate) through park improvements. Certainly, many can agree that there are existing areas within the park that should be *conserved/preserved* and human/domestic animal impacts (trespass, especially) prevented where possible. There are areas of the park and activities within the park today that need to be altered to *protect salmon*. For example, dogs and children cannot be permitted to play in the stream during spawning and rearing periods of the year with salmon present and they should not be permitted to alter the needed natural condition of the corridor which has yet to be determined. And finally, we need to recognize those areas along the fish/wildlife corridor that *need rehabilitation*, including a reexamination and evaluation of recent recreational improvements including the ballfields and perceived "warm up areas", mowed open space between the fields and the creek, the park maintenance area (south end of park) and children's play area, to name a few.

On any given day when ball tournaments are being held, humans and their pets can be seen by the creek or in it. On non-ball days humans and their pets can be observed along the fish and wildlife corridor up to and in the creek and some cases, humans crossing the creek to recreate on the other side of the creek.

Invasive, non-native species are invading the property, especially along the fish and wildlife corridor.

Without examining the neighborhood character of the area, completing a detailed analysis of the existing and projected conditions along the corridor (inside the park and outside park boundaries on adjoining lands—private and public), we are planning in a vacuum. As of yet there is no written analysis, accompanied by mapping and tests (or references to recognized testing by other agencies).

There has been no analysis of the drainage dynamic—existing and what we want to see in the future. For example, should this area take on more water as has other public areas along the creek have?

Should we be developing side channels to protect fish during flood events? Should we create more wetland or hydric habitat? Generally speaking, local agencies have looked to publicly held properties to help mitigate past projects and urban impacts, or help create better habitat that might be not be possible or too expensive on other lands (such as acquiring more lands). This sort of planning could be referred to as promoting environmental stewardship. For years this county, our local communities and Metro have discussed strategies to create open space corridors from the Willamette River to Happy Valley, not only for fish and wildlife, but also humans. Who better than the park district (whose geographic jurisdiction entails almost 100% of the Kellogg Watershed) would be in a position to plan this strategy? How would this property fit into the larger scheme of planning? Has this planning been incorporated into the NCPRD Master Plan and capital improvement planning?

PLANNING RECOMMENDATIONS FOR THE ENTIRE PARK:
None of the three concepts presented to the public to date represent a viable long term use commitment of the entire park acreage. The NCPRD should reexamine ALL USES in the park, including Senior Center activities (including the parking and bus program), the ball use, group gatherings, dog park use, etc. Absent of a detailed analysis, here's what I recommend:

1. Return all land within the 100 year floodplain back to nature.

[The watershed and Kellogg-Mt. Scott creek corridors are seriously degraded (especially Kellogg Creek above Rusk Road). As much riparian area as possible needs to be provided for fish habitat. And it needs to be located in various areas of the corridor. Although the rehab work in the 3 Creek Nature Area has been exceptional, it is not nearly enough to start replacing the habitat lost to development.]

Except for a small portion of the north area of the park, near the horseshoes, nearly the entire area north and west of the existing paved parking lot on the west side of the senior center is subject to flooding. If you look carefully at the native trees in the area, the ash and oak tree clusters represent the dominate species for the soil and hydric conditions associated with the historic drainage of the area and bottomland character. These 100 year flood habitats need under story plantings and ground cover returned to a native condition. This means that most all site improvements and associated activities should be removed or significantly curtailed:

--the gravel parking area and any proposal parking and or vehicle storage west and north of the existing paved parking for the Senior Center;
--the new tot lot and concrete forming, benches and tables;
--the mowed open areas;
--the dog park;
--the group picnic shelter;
--the old restrooms;
--the maintenance storage area (catchall of tables, equipment, etc.);
--the old highway-animal fencing;
--the caretaker residence and appurtenances;
--all paved trails (existing or planned) and maintenance corridors;
--BBQ pits;
--proposed exercise stations;
--proposed "educational overlooks";
--remove crossings of and culverts in Camas Creek except the recently constructed pedestrian bridges.

[The pedestrian bridges will service any needed emergency maintenance vehicle use (note: the maintenance crossing of Camas Creek immediately adjacent to the Mt. Scott Creek needs to be

removed because the Camas Creek creates an estuary of sorts as it enters Mt. Scott Creek and would provide protection to small fish during high water)].

In short a general "no touch" designation should be put on all areas NORTH of the Camas Creek and west of the Senior Center paved parking lot.

2. Enhance ALL areas within at least 200 feet of the creek on the remainder of the park to the desired riparian habitat condition (this includes the maintained area, overlooks/tot lots and mowed fields between the ball fields and Mt. Scott Creek—convert the mowed open space to meadow and additional forested buffer). Remove all paved walks between the ball fields and the creek. Install barriers to prevent humans or discourage humans from entering this 200 foot area.

3. Provide a habitat improvement and long range (10 year phasing) planting plan for the areas north of Camas Creek. Some areas currently containing extensive invasive blackberry vines would remain until plantings mature to take on more of the barrier functions the blackberry vines currently serves. Other invasive grass species would be removed/controlled as soon as possible. Provide a grading and in-stream plan where water areas need improvement to enhance fish and wildlife habitat.Provide a minimum 50 foot buffer setback for ALL areas on the south side of the Camas Creek all the way to the rear of the senior center building and woodpile gazebo.

4. Provide a caretaker residence as a second story addition to the senior center to provide an enhanced view of all areas of the park at a glance.

5. Provide a scheme for casual walking in habitat areas (unpaved with some seating at various locations and possible discreet table locations for picnicking, but no BBQs).

6. For group picnicking needs and shelter, the area north of the senior center might be considered between the Camas Creek wetlands and the building. This would allow more joint use and expanded functions for both indoor and out. Perhaps the building could be modified to provide more direct access from the community room to outdoor gathering spaces. Access could be provided to additional new restrooms within or next to the building. The ballpark restrooms also provide a reasonable facility to serve the park, even during group functions, combined with ball tournaments. There may also be a strong demand for group picnicking/gathering as part of the ball tournament complex.

7. Dog park activities and tot lots/structured play areas are inappropriate within the identified floodplain, areas north of Camas Creek and west of the ball fields (within 200 feet of the creek). In view of this constraint, the remaining locations in the park available for such use would be east of the ballpark, such as where the rose garden is. Also the structured play area would be ideal near the ball fields (between the fields and parking). The rose garden roses could be relocated to the yards around the senior center building.

   [Another option for the dog park would be to acquire or temporarily lease (10 year increments) lands to the east of the park (the church property along Rusk Road). There are lands currently held in a rough field condition with some hydric conditions between the church, its parking lot and the park. This area would allow significant open space for roaming (within a fenced area) and maintenance of weeds. It is clear from observation of the existing dog park that it is too small for the number of users—bare ground and soil erosion is developing. It looks as though the Concept Plans A and C are proposing expanded off leash roaming. Concept B appears to approximate the present size of the run located northwest of the group picnic shelter. Dogs will have adverse impacts on wildlife, including the significant and important bird population in the park. Therefore its removal from the park proper may be the best solution. One note: if the dog park is moved to the adjacent church property, the Oak savannah area immediately east of the Senior Center needs to be preserved in its historic condition. It

is believed that this treed setting has never been altered from its original native condition, other than being invaded by non-native plant species, such as blackberry vines.]

Again, I encourage administration to initiate a more aggressive consulting effort with wildlife and fisheries experts before proceeding. It would be helpful to provide more public access to the site survey and habitat analysis. Copies of this information should be more available to the public.

- Thank you for acknowledging my letter (text above). I'd feel a little better if I knew that NCPRD administration was ACTIVELY consulting and soliciting input right now from DSL, ODFW, DEQ, USF&W, etc.--the fish experts. From what I've heard so far, there hasn't been any. If you have any correspondence on file or have had working sessions with one or more of these agencies, it would be nice to know and also that it be made available to groups and individuals like myself who might like access to it, via the internet.

  Permitting from these agencies at a later date doesn't provide a good framework for planning right now. Futher, user groups might act differently if they knew there were certain environmental constraints that might be imposed upon the property.

  Also, I still feel that the ENTIRE park site needs a thorough review, now that the ballfields have been in partial operation for one season. I am hearing many environmental concerns being expressed, including impacts on the wetlands and creeks; I am not hearing whether the administration is responding to those concerns. I am becoming very concerned what county and city views are toward use of the 100 floodplain (which in the case of the park covers virtually everything north of Camas Creek and west of the Senior Center). That policy should be reviewed by the BCC and City of Milwaukie City Council as it pertains to salmon CPR federal mandates.

  I think with the Metro Bond Proceeds, the NCPRD website could be more substantially upgraded to provide access to the NCPRD "library of material", associated with the properties involved in the bond proceeds. The site survey and wetlands survey should be on the web, as an example. Also, the results of the workshop held in June. Public input should also be on the web.

  I personally feel that the NCPRD is understaffed, and perhaps lacks adequate resource training on environmental issues, to seriously address many of the technical environmental issues. A good example of that was the recent excavation activity of the r/r concerns along waterways associated with Mt. Scott Creek and the "3 Creeks Nature Area", which is of interest to the NCPRD as part of that land was purchased by park bonds. I do not believe that NCPRD staff participated in the discussions between the Tsunami group/R/R and county administrators. And, yes, I am aware that part of the bond sale back then was predicated upon the possible construction of playfields north of r/r (roughly north of the K-Mart/Lowes/McFarlands area). Certainly, I think that many realize that the area is probably too environmentally sensitive to accommodate an activity as intense as the ballfields at No. Clack. Park, considering the wildlife and fish needs.

  I know you understand that fish can only tolerate so much impact and that other user groups with strong political connections may not always understand or view their activities as an impact on fish. However, fish are certainly a litmus test, demonstrating "man's" impact on its environment here in Clackamas County and more specifically here in the Kellogg Watershed. How the NCPRD manages its holdings and complies with federal policy (concerning SALMON CPR) is certainly an area of conjecture and politics.

  I say this with the utmost respect for the employee talent we have today in the NCPRD and am not trying to attack any one individual. However, the NCPRD has been focused primarily on Parks and Rec and not on CPR'ing of natural areas to the benefit of 4(d)-listed fish in the Kellogg Watershed. There will have to be a "watershed" change in the district's focus, values and priorities to realize any

significant inroads to the fish's problem today. This criticism is not focused only on NCPRD, but the county as a whole. The Kellogg basin is "sick" today and needs a lot of attention. I'd like to see NCPRD play a lead role, or responsible agency role, for example, in ridding the watershed of the dam at the creek's mouth at the Willamette River. So far, the NCPRD has not acknowledged any role in this "fish need (to remove the dam) in its planning and CIP plan over the next 5 years. I hope this changes because without the dam removal, all our "Nature in Neighborhood" bond spending and planning will not get us very far in getting fish into the upper watershed.

This fish plight didn't happen overnight and neglect among property owners and public agencies played a big role. NCPRD is one of the important partners and stakeholders. I aim to make sure they play a lead role involving their holdings.

Thank you for listening. Should administration choose more environmentally friendly alternatives in its planning over the next few months, you can count on me to participate.

Vegetation

- All future planting on the north side should be native, such as snowberries, etc ; Maybe occasionally we could use something pretty that's non-native
- This is a perfect area for nature-scaping, with the educational component, to demonstrate how native plant landscaping can be beautiful
- Plants could be labeled for educational purposes
- Use all native plantings
- Plant natives and maintain a sufficient buffer
- Plant low-growing stuff and volunteer maintenance would be used to keep invasives out
- What do we do with large non-natives such as a 50-ft tree?
- Create an arboretum with labeled plants

RECREATION

General

- Keep north side for passive recreation
- This past weekend I attended softball games at this complex and was very much impressed. Most people attending were commenting on what a wonderful setup it was. They do, however, need to invest in the netting that goes over the backstop/batters box area, as foul balls were quite a problem. I believe they already know about this. Also, if it doesn't take place at this complex, it would be nice to see the parks bureau invest in BASEBALL fields that are the size for Babe Ruth players. The few fields left in the area are in desperate need of repairs that the average person cannot afford to keep up. People are just too busy these days to take the time to work together on these projects. They would rather pay someone else (even through their taxes) to do the job.

- Noise should be the primary consideration in all north side plans/proposals. Support any increases in trees/trails/vegetation and passive recreation. Strongly oppose ideas like basketball courts, skate parks, etc. Character of park has already changed dramatically (negatively) for north side neighbors.
- My absolute preference is to have very little development on the north side of the park. However, I would like to see open space improved… remove the holes in the grass, move the A-frame to a less obtrusive area, remove "boneyard."
- Need to listen to sound problems from people around park. Shut off the soda machines at night to save energy and money.
- I would like the park treated as a nature preserve. I want no pavement and minimal disruption, such as bark chip nature trails. No lights. No sound. No electric outlets or cook areas. Please respect this special place and community.
- Please consider leaving much of the green space...it is such a beautiful area. Storage area needs to be included in any plan along with the wood pile that is shared with those in need.

* Please increase the north side buffers in line with the comments from John Van Staveren, PHS. I agree with him
* Could you turn the direction of the horse shoe throwing from north/south to east/west? That way, the horseshoes wouldn't be intimidating to folks going into and out of the dog park. May not be an issue, couldn't tell how far they were.
* We went Sunday to the Happy Valley Park. Wow! What a great park. Made me sad to see how their ball fields are inserted so seamlessly into that park, leaving such a nice open feel. My heart is still so bruised by such a brutal installation in our park. It still looks like a prison to me, not to mention the intense noise.
* They have several places where people and dogs can actually get down to the creek, even with the boardwalk and such. It's a very focused, funneled system, and seems to be working well. One is where the duck pond is located, on the south side. I'd still like to see such and entry point for us in Mt. Scott Creek. If we don't do this, folks will find a way and it may not be where we want them to go.
* Overall, the plan for the north side of the park looks good. Great graphics! My only concern is the number of wetland/stream crossings (and whether or not all of them can be justified) and the proximity of the parking lot to the resource area. Do you know yet what the plan is for managing storm water runoff from the new parking lot? Also, unless there is a need to have the path inside the resource buffer, it would be better to keep it outside the buffer. The orange dashed line is the 100-year flood line and the bold red dashed line is the resource buffer. The only map symbol I couldn't identify is the light red dashed line and the area between that and the bold red dashed line that's been called out in orange.
* I support the consultant's recommendation for a 75-foot buffer along Mt. Scott Creek. Since his scientific evidence indicates the need for this amount of buffer to return Mt. Scott Creek to health I support establishing the recommended amount of buffer even if it means relocating other features in the park.
* I think you need to minimize. The park is already overdone. Open space is what a "park" is about. Milwaukie already has enough ball fields and playgrounds. Natural space to enjoy and relax in. That is what we need to preserve.

Trails

- Provide a wood chip or other permeable surface walking trail around the north half of the park. The trail could be located in the 100' buffer between the off leash dog exercise area and Mt. Scott Creek, but not within the 50' buffer.
- Provide a paved walk way (sidewalk) along the west side of the parking lot in front of the Milwaukie Center between the sidewalk going into the Baseball area and the large picnic shelter.
- Would prefer wood chips or crushed gravel, not hard trails
- Would like to extend walking trail
- Sawdust walking path with exercise stations along the way. The path should be about 1 mile in length
- Develop/extend the walking path. Use a softer material such as the wood chips. Have a permanent marker along the path indicating distances. Intersperse a few benches along extended trail to rest the weary. Keep it natural and simple.
- I have recently overtaxed my knee when walking on an extended walk on pavement. Dr. advised me to find an unpaved trail. Could a perimeter walking trail be included in the plans, with chips, bark dust, etc so that some of us seniors can continues our walking regimen?
- Don't extend trail to rose garden
- Trail going along north side of Camas Creek, then along Mt. Scott Creek in buffer and behind dog run
- Liked the Wildwood natural boardwalk area
- A boardwalk would be nice through the wet area
- Educational/interpretive signage all along the boardwalk trail
- More trails
- Loop trail to continue around each half of the park; connect in the middle, for a figure 8 shaped trail
- Flower garden with walking trail with different types of flowers and bushes.
- Plant more trees different types with walking trail.
- Provide seating along trail
- Add exercise stations along trail
- Mile markers
- No wood boardwalks, use material (e.g. recycled decking) that is easily maintained for wet areas
- Make sure that the trails are handicap accessible
- A harder trail would be nice for wheelchair accessibility

Caretaker

- Thinking about putting in one RV pad for the park host/caretaker to replace permanent structure
- Will the Caretakers House eventually be removed?
- Remove caretaker house?
- Removing the caretaker's house opens up more area for park use

Picnicking

- Provide at least two small (12' x 12') covered picnic shelters in Picnic area A.
- Keep all public motor vehicles out of the picnic areas and restrict them to paved or graveled surface areas only.
- Leave the west end of the North side of the Park an open grassy area.
- Group picnic areas with shelters, electricity, and water.
- Would be nice to relocate picnic shelter away from parking
- Nice to be able to unload stuff for picnics/events; Maybe we could have a drive-in drop-off area next to picnic shelter without having it next to parking
- Landscaping around picnic shelter would be nice Maybe put shelter back toward creek where caretaker shelter is currently
- The concrete pad under the picnic shelter is cracking. The structure will need to be renovated in the future.
- Picnic structure/areas-signs say areas are reserved, but areas look open for use
- Would like a sanded volleyball area If horseshoe area was rehabilitated I think they'd get used
- We see more volleyball, badminton sand-based type sports, want an area for this
- Eliminate A-frame and replace with smaller shelters that aren't rented out
- Flex space for picnic areas with kiosk for info
- Milwaukie Rotary erected the A-frame and is interested in its future
- The lack of picnic tables near BBQ stations was brought up at public meetings about north side planning. However, I don't recall comments about the handling of coals from BBQ stations. Evidence that coals are dumped at the base of trees can be found throughout the north side of the park. I'm wondering if a small metal container could be attached to the BBQ stations for the purpose of holding coals when cleaning out the stations.
- New, updated picnic structures would be nice.

Playground

- I recently did a presentation on the Parks District to child care providers. They were looking for parks that are enclosed or have a wall around a play structure so that toddlers and young ones can't run away. There would be one entrance and one exit. There could probably be more with an optional gate that can be closed. I think that parents and child care providers would be able to keep an eye on their children a little better. I have visited a park that has a fence. It's a beautiful park in Chico, Calif. called Caper Acres. I was hoping that we could build something like this around the playground at North Clackamas Park. It would be a good safety feature so that kids can be protected from running into the creek and from the numerous dogs that roam the park without a leash. Ardenwald Park has a wall that prevents kids from running into the street. It's our only park that has fences on 3 sides, but the play structure is very small.
- I would like to see barriers surrounding the play equipment to keep dogs out and little ones in. When a parent has 2 or 3 kids to watch it's nice to know one can't wander off to the creek.

- More play equipment for children
- Climbing rock/play equipment for kids
- Correct playground drainage. The outfall currently flows into the walkway to the bridge and drains slowly.
- Drainage in play equipment area not working. The outflow appears to be blocked or crushed.
- Would love to see water fountains near the play structure.
- Adding a wall around the play structure seems like a good safety measure.

Other Recreational Amenities

- Small amphitheater for classes
- Storage area added to new restroom
- Bocce ball area
- A labyrinth – There are examples at the Franciscan Spiritual Center (Hwy 224 and Webster) and also one at the Episcopal Cathedral located at 18th & Everett.
- Tai Chi area
- Amphitheater
- Croquet area
- Disc golf course
- Put up interpretive sign about the sculpture
- Consider skateboard area
- Horseshoe pits-redo and move closer to picnic area
- Rebuild and improve the horse shoe pits and bench.
- BBQ areas with water station and electric
- Additional public art
- Basketball court
- Sr. citizen exercise stations-extend walking trail from south side to go all around park
- Sr. citizen fitness plan through the Milwaukie Center to use exercise stations along walking trail
- Small greenhouse for Master Gardeners near the Milwaukie Center
- Reclaim area next to dog run for park use
- Last but not least, my highest concern is that we are able to keep the fire wood shelter and the community garden with the gazebo. Enhancing these with a greenhouse and a covered area to be able to cut wood in inclement weather would be an added bonus.
- A compost demonstration area would be a wonderful teaching tool for the community & schools. Maintained by the master gardeners, we could present 4-5 different ways of composting (including worms) using plant material generated by the gardens at Springfield Neighborhood Park!

CONCEPT PLANS

- Just reviewed the three concepts and my wife and I are very much in favor of concept B. That looks like a very environmentally friendly park.
- Personally, if I had a vote, it would be for Concept “C”. More play area in a “park” just seems to be most natural.
- Thank you for the opportunity to review these. Everything that's shown in the three concepts appears to be doable. At this conceptual stage, however, that doesn't mean very much since a lot will depend upon the details. With that said, we offer the following comments for NCPRD consideration.
    - Parks are not listed on our Zoning Code's parking table. Consequently, the addition or removal of parking spaces will need to be supported by traffic/parking analysis similar to what was done for the south side of the park.
    - Delineation of the wetland area around Camas Creek may require modifications to the extent/location of the proposed new parking lot and dog park area in Concept B.
    - New creek crossings (and even some of the existing ones) will be carefully scrutinized and may require Army Corps approval.
- I was interested to see what the consultants came up with, and I think they have some good ideas. The following are some of my thoughts.
    - Of course, I would prefer to see the off leash dog area eliminated, but since that won't happen until another place is found, I prefer the idea "B" where the area is moved to the NE corner of the park. If the NE corner doesn't work, then having the dog area moved to the east up against the maintenance yard area with the west fence moved to the east a corresponding distance. This would put the dog area closer to parking and restrooms.
    - We don't like to see more parking area added, but expanding the lot in front of the Milwaukie Center would probably be preferable than crossing Camas Creek and taking out the large group picnic shelter.
    - Could some of the Handicapped parking spaces be designated so they could be used for non-handicapped parking when the Milwaukie Center is closed?
    - Be sure to get signage up for excess parking at the church.
    - If the exercise stations are to be part of the plan, we would like to see three or four grouped together at several spots on the loop trail.
    - We like the idea of a climbing structure placed in the vicinity of the playground. The pyramid shaped cable structure in front of the Waldorf School in Milwaukie seems to get a lot of use.
    - Keep the picnic areas under the trees to the east and leave the west area for open space. I like the idea of a wild flower or grass meadow.

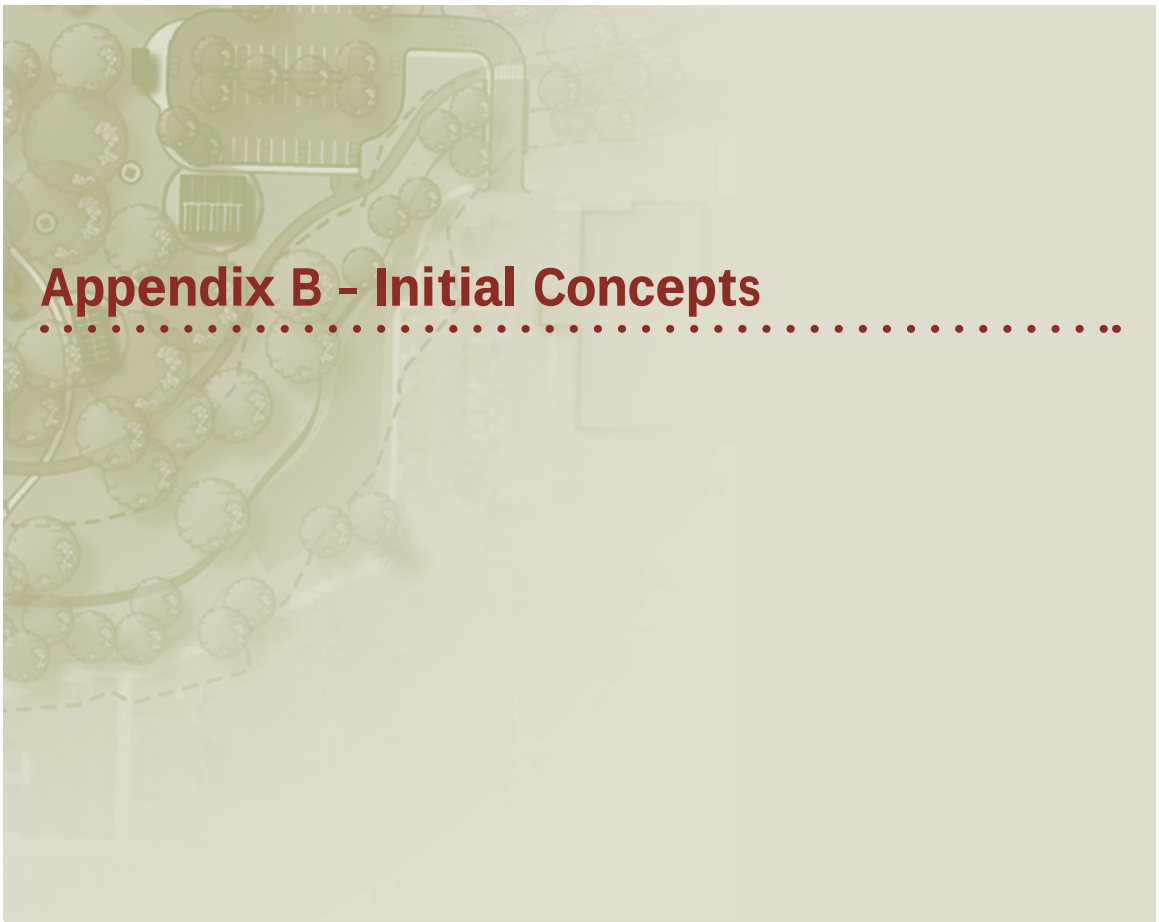
- The consultants need to provide more information about the type of meadows that could be installed and give us an idea on how they are maintained. This should bring good wildlife habitat to the park for insects, butterflies, small mammals and birds.
- I like the concept of restoring the wetland area behind the "Wetland Window" sculpture. That area is cut off from the rest of the Park and that would be a good use for it. Be sure the walkway on the West side of the parking at the center gets into the plan.
- Could the firewood space be moved over to the area where the maintenance facility will be and the area it now occupies behind the Milwaukie Center be used for secure bus parking or additional community garden space?
- Were the consultants going to provide some suggestions on wetland education sign content and placement?
- On another subject, signs have now been posted on the access road south of the ball diamonds to the affect that there is no entry except for authorized vehicles only. A similar sign should be posted at the chain between the picnic shelter and the rest rooms.

- I like concept B because it keeps the dogs separate from the kids and picnic areas.
- Concept B is great because of the additional parking it provides.
- I like having the picnic areas by the playground, like concept B shows.
- I don't like the amount of fencing all over the park. It will require lots of maintenance, and I would rather see native vegetation used to discourage people from entering the buffer zone.
- I like the creek crossing to the northeast corner of the park and the enhancement behind the Milwaukie Center shown in concept B.
- I like having the dog park behind the Milwaukie Center because it is farther away from neighbors and has more trees to buffer sound (concept B). It also opens up the west side of the park.
- Do the exercise stations actually get used?
- The Milwaukie Center's walking program, which has been very successful, could add the exercise stations to their program.
- I like concept B.
- I like moving the dog run to a separate area near parking. This minimizes having dogs run through the other areas of the park off-leash on their way to the dog run.
- I like having more parking.
- I like the ideas of having wildflowers and a meadow on the west end of the park.
- Concept A is great.
- I don't like the exercise stations – they don't get used.
- Get rid of one of the three bridges. I like the maintenance bridge shown, as well as the bridge connecting to the playground area. That is enough bridges.
- Would like to see even more of the small covered picnic areas included.
- I like the safer parking area on concept B.
- I like concept B, but I don't like the placement of the dog run.

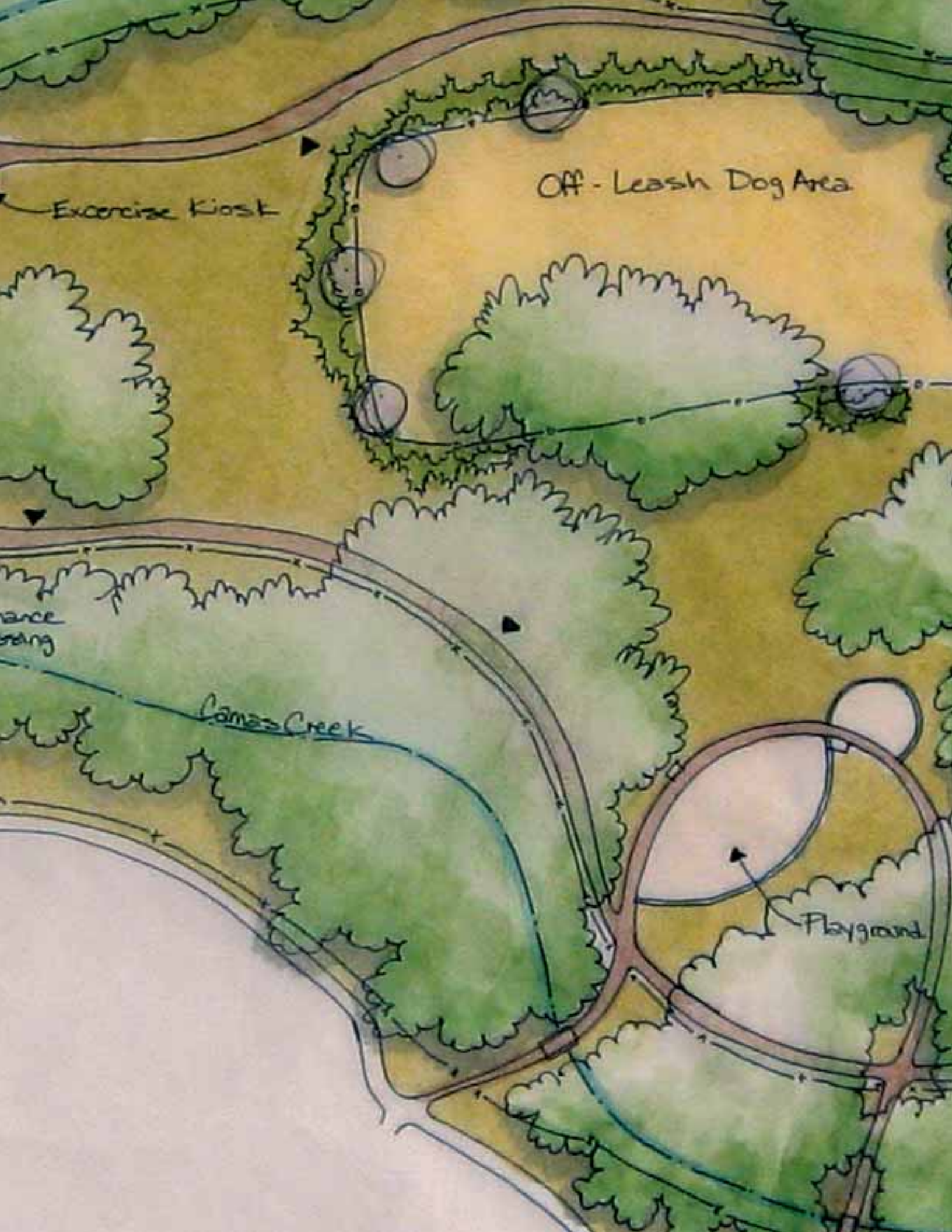
- The dog run in concept B cuts trail length (need off-pavement running area). It cuts trail length by 20%. Spread out exercise trails. Option A cuts parking – a mistake.
- I like having the dog run behind the Center.
- Keep the parking in concept B.
- Need another Camas Creek crossing – 2 small and one large, running from Milwaukie Center parking lot.
- Looks like parking on concepts is straight. We need to keep angled parking as it's easier for the senior drivers that visit the center.
- I like plan B, but with exercise stations distributed like in plan A.
- Having the dog run close to the parking lot is great, and it keeps dogs in one area instead of having them run across the people's recreation area to get to the dog run.
- I like the enhancement of the area between the Milwaukie Center and Camas Creek.
- Keep trail loop large by looping around the area north of the center.
- I like concept B, but with the off-leash area in concept A. The off-leash area in B can be replaced with the picnic shelter and horseshoe pits.
- Remove bridge crossing just north of the Milwaukie Center.
- I like concept B, but there should be even more parking, and smaller picnic shelters.
- Only B has enough additional parking. If you improve the park, more people will come. Needs 1 larges and at least 2 small group picnic shelters for renting, as well as parking for buses at the Milwaukie Center. I also prefer the dog run where it is on concept C, and the exercise stations more spread out.
- Pathway from Milwaukie Center to north side of park should be eliminated.
- I like both A and C concept plans.
- I prefer concept B, and particularly like the location of the off-leash dog area in this concept.
- I like concept B the best because of the added parking. I would also like to see a water feature for kids and maybe easier access to picnic areas from the parking area.
- I prefer concept B because it makes the most sense. There is allowance for additional parking. Would also like more faucets for picnic or other uses.
- Here are my thoughts:
    - I am excited about a walking path around the north side of the park with exercise stations. I think the idea of 3 exercise stations (a kiosk) per "stop" (where there is a bench also?) would be more beneficial than a solo exercise station or than a large group of exercise stations.
    - I don't like part of the path configuration in Concept B because it walks between a dog run and a parking lot (ugh).
    - Delete the path crossing the swale immediately to the north of Milwaukie Center.
    - The path on the West side needs to be shown to connect with the South side path – it currently doesn't in any of the concepts, and is widely used.
    - Immediately outside the Camas and Dogwood Rooms, north of Milwaukie Center, there is a small open area that is basically weeds which are mowed by Parks maintenance. There

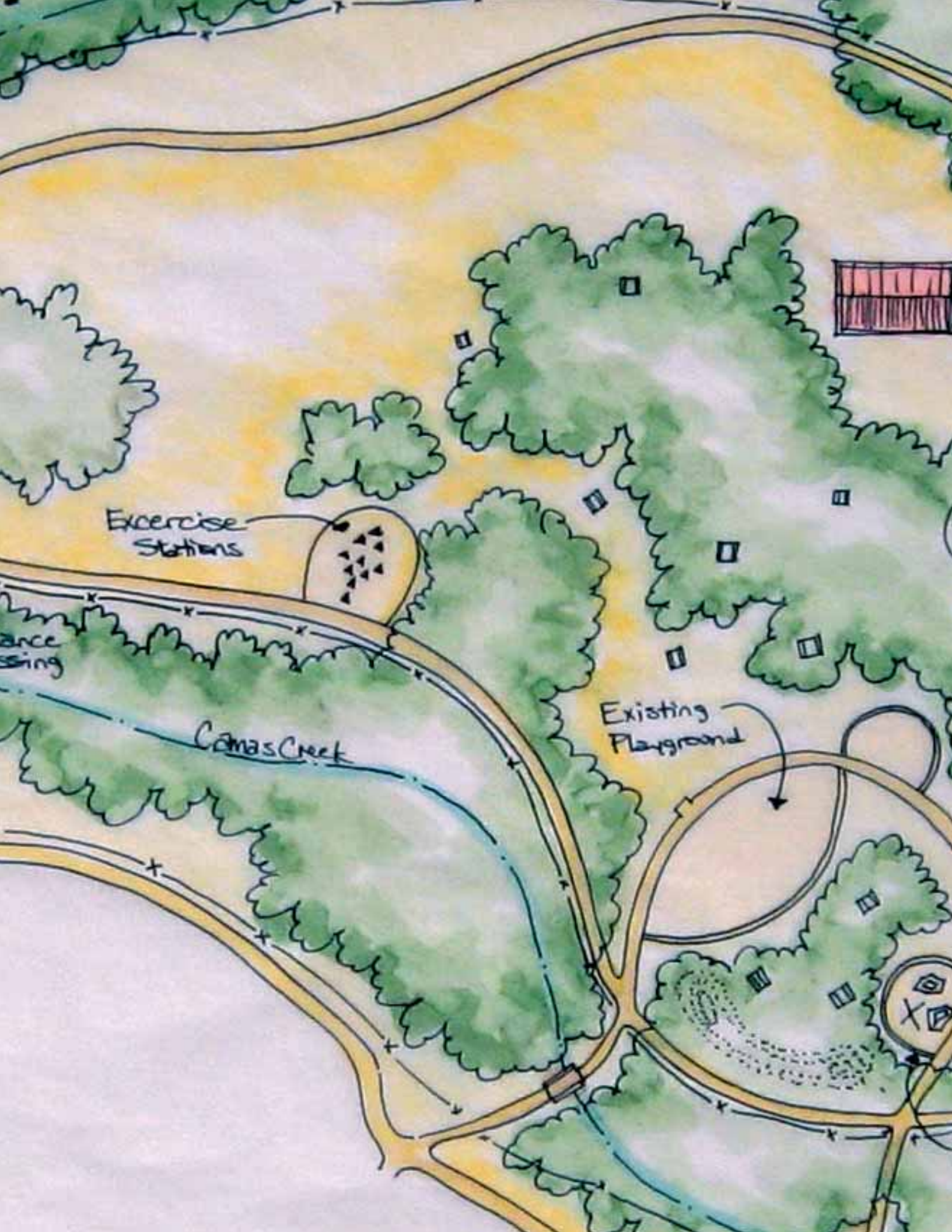
is no irrigation or other amenities. It would be nice if the north side planning included improvements to that area which move into wetland swale plantings of “Camas Creek”.

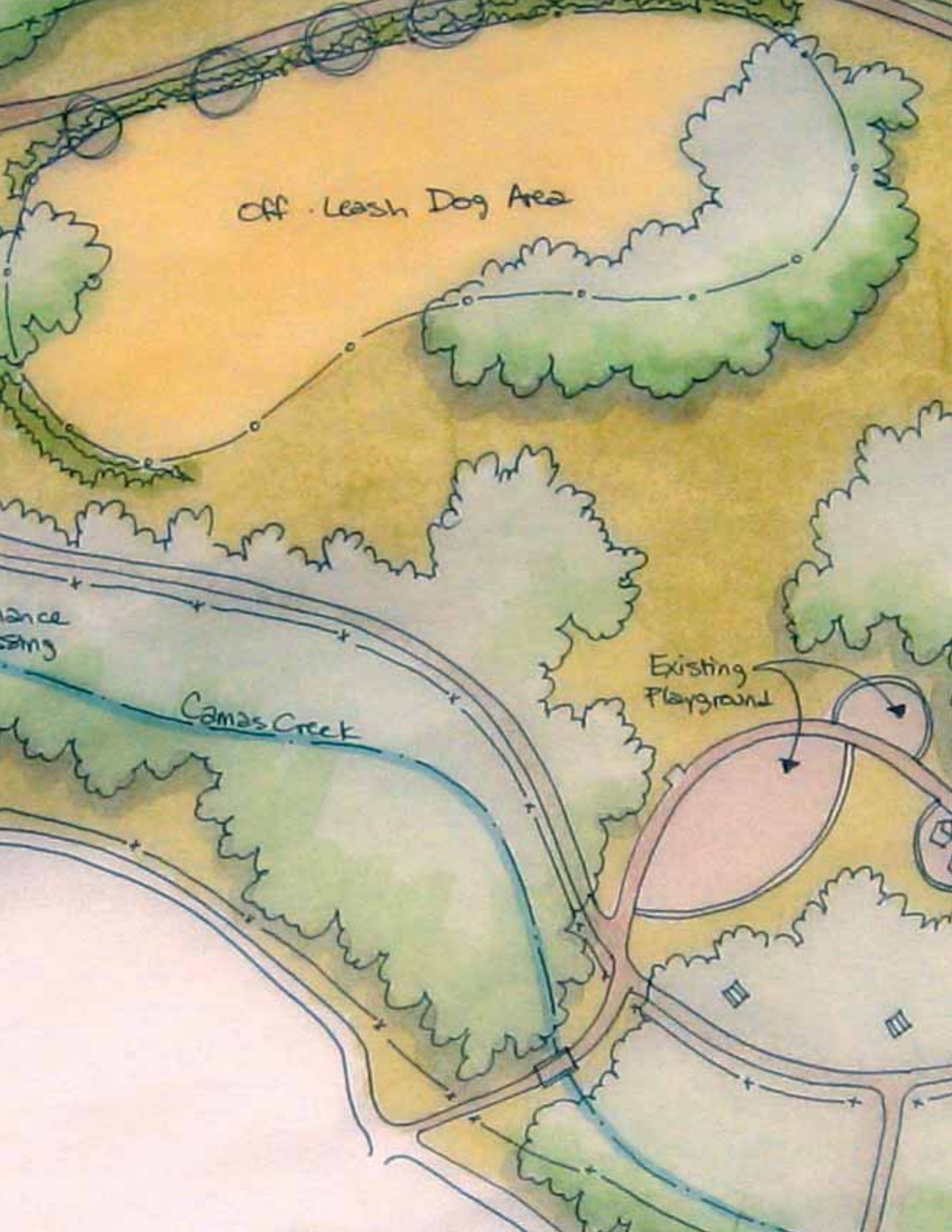
- I really like the idea of the dog run moved a little to the east of where it is now as in Concept but not immediately due north of Milwaukie Center. That is problematic for folks choosing to park in the staff and MOW parking lot to let their dogs out to get to the off-leash area. Also that shortens the walking path so much and makes it less aesthetically pleasing.
- Picnickers like having a sand volleyball court here – is that going to be placed somewhere?
- I really like the parking improvements in concept B and hope the new parking area will be designated one-way with angled-in parking.
- Master Gardeners would like to have a green house near to the Milwaukie Center and I support that concept however I do not want it to take over any of the existing community garden or the open “grass” area outside the Camas and Dogwood Rooms. That open area is used for receptions when the Camas and Dogwood Rooms are rented. Perhaps a greenhouse can go where “big green” storage container is now but where would storage go then?
- Please keep the Emergency Firewood service where it is.
- Group picnic areas – perhaps retain the large A Frame as the one big one and erect two or three smaller ones for 20-30 people picnics. I like the idea of having e closer to the kids play area.
- YES! Add natural climbing “rocks” to the play area!!!!
- Bus parking that is “secure”? (four busses)



Appendix B – Initial Concepts


Off - Leash Dog Area
Excercise Kiosk
Camas Creek
Playground


Excercise Stations
Existing Playground
Camas Creek


Off · Leash Dog Area
Camas Creek
Existing
Playground

Appendix C - Preliminary Concept Designs

LEGEND

- A PARKING
- B OFF-LEASH DOG AREA
- C GROUP PICNIC SHELTER
- D NEW PLAYGROUND NODE
- E RESTROOM
- F MAINTENANCE / STORAGE
- G CARETAKER
- H CAMAS CREEK CROSSING
- I EDUCATIONAL OVERLOOK
- J EXERCISE STATIONS
- K HORSESHOE PITS

Date: 08/22/07

Scale: AS SHOWN

North Clackamas Community Park
Concept A

alta PLANNING + DESIGN
1638 NE Davis
Portland, OR 972
503.230.9862
www.altaplanning.com

Concept A Summary

Parking (A)

The Milwaukie Center parking lot is reconfigured to accommodate sixty-three (63) spaces and a new paved parking lot accommodates thirty (30) spaces north of Camas Creek for a total of ninety-three (93) new spaces. New paving is limited to 11,290 square feet and paving in the existing Milwaukie Center parking lot that currently is within the 50 buffer of Camas Creek is removed. A new bridge crosses Camas Creek north-south east of the existing culvert.

Off-Leash Dog Area (B)

The proposed off-leash dog area is the same approximate size and in the same approximate location as the existing location. The off-leash area is divided to allow a separation between small and large dogs. A paved entry plaza provides room for picnic tables, water fountains, waste bag station, and signage. The shape of the dog park matches the existing layout of the playground.

Picnic Shelter (C)

Space for a new picnic shelter (or re-use of the existing shelter) is shown in the same location as the existing shelter.

Playground (D)

An additional area is provided north of the existing playground for climbing boulders.

Restrooms/Maintenance/Caretaker (E, F, G)

A new restroom is north of the parking along with a storage and maintenance facility. Space for a seasonal caretaker is located northwest of the parking.

Camas Creek Crossings (H)

The existing crossing in the southwest corner of the park is removed and restored to a natural condition. A new bridge suitable for maintenance vehicles is proposed about one hundred (100) feet east of the former crossing. The easternmost pedestrian bridge is removed and the two middle crossings remain.

Creek Restoration & Wildlife

A seventy foot (70') buffer is provided to the south of Mt. Scott Creek to add shade trees and maintain ideal water temperature for fish. Within the buffer, invasive species would be removed and native riparian plants would be added.

One educational overlook (I) of Mt. Scott Creek is proposed. Areas north of Mt. Scott Creek will be dedicated to wildlife.

Walking Path

Eleven (11) exercise stations (J)are spaced at equal intervals around a half-mile unpaved walking path.

Horseshoes (K)

Upgraded horseshoe pits are located in the northeast part of the park.

Fencing

Fencing the buffer areas is limited to only areas where the bank is most degraded from users entering the creek. Remaining buffers will be enhanced and signage will encourage park users to respect the buffers.

LEGEND

A PARKING
B OFF-LEASH DOG AREA
C GROUP PICNIC SHELTER
D NEW PLAYGROUND NODE
E RESTROOM
F MAINTENANCE / STORAGE
G CARETAKER
H CAMAS CREEK CROSSING
I EDUCATIONAL OVERLOOK
J EXERCISE STATIONS
K HORSESHOE PITS

Date: 08/22/07

Scale: AS SHOWN

North Clackamas Community Park
Concept B

alta PLANNING + DESIGN
1638 NE Davis
Portland, OR 972
503.230.9862
www.altaplanning.com

Concept B Summary

Parking (A)

The Milwaukie Center parking lot remains as is, accommodating 42 vehicles. A new 19,690 square foot parking lot accommodates forty (40) vehicles north of Camas Creek. A new bridge replaces the existing crushed culvert over Camas Creek.

Off Leash Dog Area (B)

The proposed off-leash dog area is about the same size as the existing area but located east. The concept shows the area divided between large and small dogs. Paved entry areas are located on the southeast and west sides with picnic table, water for dogs and their owners, and a waste bag station with signage indicating rules of use. This area will be fenced with chain link or split rail fence with an infill mesh. The perimeter will include low vegetation to visually divide the facility from the rest of the park.

Picnic Shelters (C)

One new picnic shelter, two-thirds (2/3) the size of the existing shelter, is shown east of the new parking lot. An additional shelter, one-third (1/3) the size of the existing shelter, is near the existing playground.

Playground (D)

An additional area is provided east of the existing playground for climbing boulders and the sidewalk is extended to intersect the walking trail.

Restrooms/Maintenance/Caretaker (E, F, G)

A new restroom is west of the parking lot. Space for a caretaker is located just east of the off-leash dog area. Storage and Maintenance facilities are located on the far eastern end of the park and are accessed from the parking lot east of the Milwaukie Center.

Camas Creek Crossings (H)

The existing crossing in the southwest corner of the park is removed and restored to a natural condition. A new bridge suitable for maintenance vehicles is proposed about one hundred (100) feet east of the former crossing. The easternmost pedestrian bridge is removed and the two middle crossings remain.

Creek Restoration & Wildlife

A seventy foot (70') buffer is provided to the south of Mt. Scott Creek to add shade trees and maintain ideal water temperature for fish. Within the buffer, invasive species would be removed and native riparian plants would be added.

Two educational overlooks (I) of Mt. Scott Creek is proposed. Areas north of Mt. Scott Creek will be dedicated to wildlife.

Walking Path

Eleven (11) exercise stations (J) are grouped in threes and spaced equally around the trail.

Horseshoes (K)

Upgraded horseshoe pits are centrally located just west of the new parking lot.

Fencing

The entire buffer is fenced to prevent access and to prevent further degradation of the buffer.

Appendix D – Preliminary Concept Survey

CLACKAMAS PARK
Planning Concepts Survey

CE

used to buffer between park space and creeks)

ed parking)

n)

RECREATION

10. Playground

Concept A (Add a new section with climbing rock
Concept B (Finish the loop; add climbing equipme
Don't change the playground

11. Group Picnic Shelters

Concept A (1 facility; square footage and general l
ity)
Concept B (2 facilities; smaller facility near the pla
Center)

12. Educational Creek Overlooks

Concept A (1 overlook)
Concept B (2 overlooks)
Don't add creek overlooks

13. Exercise Stations

Concept A (Individual stations spaced evenly arou
Concept B (Stations in groups of threes around th
Don't add any exercise stations to the north side

14. Horseshoes

Concept A (Located in the picnic area north of th
Concept B (Centrally located)

15. Walking Path

Paved Surface (asphalt)
Soft Surface (wood chips, crushed gravel)

16. Master Gardeners Greenhouse

Yes, I'd like to see this included in the plan
No, I don't think this should be part of the plan

NORTH CLACKAMAS PARKS & RECREATION DISTRICT

In partnershi
City of Mi

TE YOUR INPUT!

place
stamp
here

ARKS AND RECREATION DISTRICT

BLVD

Greetings!

As you know, the North Clackamas Parks and Recr
planning some improvements for the north side of Nc
We would like to get your input on the draft concept pl
Please look over the enclosed concept plans, fill out th
it to us by **October 1, 2007**.

Completed surveys may be returned to the Milwau
Aquatic Park, Sunnybrook Service Center or any oth
facility. You may also return your survey to us by mail
by folding it up so that our address is to the outside
taping it closed. Don't forget to use a postage stamp!

Concept plans are also available for viewing on the Web
www.altaplanning.com/ncp.

THANK YOU!

North Clackamas Parks and Recreation District

Printed on recycle

Appendix E - Natural Resources Review

Natural Resources Review
North Clackamas Park
North Side Planning Process

(Township 2 South, Range 2 East, Section 6, TL 100)

Prepared for

Alta Planning + Design, Inc.
Portland, Oregon

Prepared by

Pacific Habitat Services, Inc.
Wilsonville, Oregon
(503) 570-0800

December 19, 2007

Natural Resources Review
North Clackamas Park
North Side Planning Process

(Township 2 South, Range 2 East, Section 6, TL 100)

Prepared for

Mike Rose
Alta Planning + Design
1638 NE Davis
Portland, Oregon 97232

Prepared by

John van Staveren
Dale Groff
Craig Tumer
Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, Oregon 97070
(503) 570-0800
(503) 570-0855 FAX
PHS Project Number: 4000

December 19, 2007

1.0 INTRODUCTION

The North Clackamas Parks and Recreation District hired Alta Planning + Design, Inc. (Alta) to manage the North Side Planning Process for North Clackamas Park (Park) in Milwaukie, Oregon. The park is located on Kellogg Creek Drive (Township 2 South, Range 2 East, Section 6, Tax Lot 100; Latitude 45º 25’ 33”, Longitude 122º 36’ 33” W). The general location of the park is illustrated on Figure 1. All figures are in Appendix A.

The goal of the planning process is to prepare a Master Plan for the northern half of the park. Planning for the southern half of the park, which is dominated by more active uses such as baseball diamonds, is essentially complete. Pacific Habitat Services, Inc. (PHS) was hired to address natural resource issues associated with the North Side Planning Process. Although the northern half of the park contains some active uses, such as play equipment, a dog park, and a picnic shelter, it is also contains Mt. Scott Creek, Camas Creek, their riparian areas and an oak/ash woodland. As such, this portion of the park lends itself to more passive, natural resource-focused uses.

As part of the planning process, several meetings were held to understand the issues that were most important to the public. One theme commonly expressed was the desire to improve the quality of habitat within the northern portion of the park. This report describes the existing conditions within the park and reviews the natural resource issues associated with the proposed improvements.

2.0 EXISTING CONDITIONS

The northern portion of North Clackamas Park lies on fine-grained alluvial sediments between Mt. Scott Creek and Camas Creek. Topography within the park is relatively flat. Mt. Scott Creek flows to the west along the northern border of the study area. Camas Creek, a small tributary of Mt. Scott Creek, also flows westward, though near the southern portion of the planning area.

The northern portion of the park contains mown lawn, oak woodland, the creeks and their riparian areas, the Milwaukie Center, a dog park, and buildings. The following sections describe natural resources (including plant communities, wetlands, waterways, and fish and wildlife resources) within the northern portion of the park.

2.1 Plant Communities

Plant communities within North Clackamas Park include riparian woodland, oak woodland, and mowed lawns. Brief descriptions of each of the park’s plant communities are provided below. A discussion of the prevalence of non-native, invasive species within the park is also provided below. Table 1, at the end of this section, is a list of plant species (native and non-native) observed within the park. This list is not intended to provide a complete inventory of plant species that occur within the park; however, it does serve to characterize the dominant species within the park’s plant communities.

Mowed Lawn

Vegetation within the area north of Camas Creek consists of intensively mown lawn. The mown lawns include an off-leash dog park, picnic areas, and other areas used for general recreational activities. The lawns are vegetated with typical lawn grasses and weeds, with scattered trees in some areas. Predominant grasses in the lawns include Kentucky bluegrass (*Poa pratensis*) and annual bluegrass (*Poa annua*). Significant amount of weedy, non-native species such as white clover (*Trifolium repens*), hairy cats-ear (*Hypochaeris radicata*), English daisy (*Bellis perennis*), common dandelion (*Taraxacum officinale*), and creeping buttercup (*Ranunculus repens*) also occur within the lawns.

Riparian Woodland

Narrow areas of riparian woodland occur along Mt. Scott Creek and Camas Creek. The riparian woodland along Mt. Scott Creek has canopy of mature second-growth hardwoods and conifers, with red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), Douglas fir (*Pseudotsuga menziesii*), Oregon ash (*Fraxinus latifolia*), black cottonwood (*Populus trichocarpa*), and western red cedar (*Thuja plicata*). Oregon ash is the dominant tree species along Camas Creek. Trees, shrubs, and wood vines common in the understory of the riparian woodlands include Sitka willow (*Salix sitchensis*), Douglas spiraea (*Spiraea douglasii*), snowberry (*Symphoricarpos albus*), clustered wild rose (*Rosa pisocarpa*), Indian plum (*Oemleria cerasiformis*), vine maple (*Acer circinatum*), red-osier dogwood (*Cornus sericea*), beaked hazelnut (*Corylus cornutus*), salmonberry (*Rubus spectabilis*), Himalayan blackberry (*Rubus discolor*), and English ivy (*Hedera helix*). Restoration areas on the south bank of Mt. Scott Creek downstream from its confluence with Camas Creek and on the south side of Camas Creek, between the creek and the ball fields, have planted populations of native riparian species, including red alder, western red cedar, Sitka willow, Douglas spiraea, and red-osier dogwood.

The riparian woodland generally occurs as a narrow band of vegetation along Camas Creek and the south side of Mt. Scott Creek, with more extensive woodland communities to the north of Mt. Scott Creek. The riparian woodland adjacent to Mt. Scott Creek is the largest contiguous woodland community within the park, and in this area, the woodland contains both wetland and non-wetland riparian plant communities. Wetlands within North Clackamas Park are discussed further in Section 2.2 of this report.

Riparian woodlands within the park provide important water quality and wildlife habitat functions. The riparian woodlands act as a buffer to the stream, filtering sediments and various pollutants from runoff before the water enters the stream. Trees and shrubs within these riparian woodlands also provide shade to the stream, and this shade aids in maintaining relatively low water temperatures. The buffer provided by the riparian plant communities along Mt. Scott Creek is generally wider on the north side of the stream than on the south side of the stream. The buffer provided by riparian plant communities along Camas Creek is generally very narrow, though relatively recent plantings on the south side of Camas Creek have expanded the width of the buffer. The riparian woodlands, particularly those along Mt.

Scott Creek, provide habitat for a number of wildlife species adapted to suburban woodland and edge habitats, and these woodlands are likely the most important terrestrial habitat within the park. Fish and wildlife resources within the park are discussed in more detail in Section 2.3, below.

Oak – Ash Woodland

A small wooded area dominated by mature Oregon white oak (*Quercus garryana*) and Oregon ash is present in the north-central and eastern portions of the park, between Camas Creek and Mt. Scott Creek, and provides a contiguous, wooded corridor between the riparian woodlands associated with the two streams. Under existing conditions, the oak-ash woodland is frequently mowed to maintain an open, park-like setting for picnic facilities and playground equipment. Because of the frequent mowing, herbaceous vegetation within the oak-ash woodland consists almost entirely of mown grass, and this woodland generally lacks an understory of trees and shrubs, though a few scattered common hawthorn (*Crataegus monogyna*), Oregon grape (*Mahonia aquifolium*), and English holly (*Ilex aquifolium*) are present. The mature oaks, open forest structure and sparse understory within this community are reminiscent of oak savanna habitat, which is becoming increasingly rare in the Willamette Valley. Wildlife usage within this oak – ash woodland is described in Section 2.3, below.

Invasive Species

A number of non-native invasive plant species occur throughout North Clackamas Park. These plants are especially prevalent within the riparian woodlands bordering Mt. Scott Creek. Himalayan blackberry is prevalent throughout the riparian woodland bordering Mt. Scott Creek, and large stands of English ivy occur in the vicinity of the small pond north of Mt. Scott Creek, in the northeastern corner of the park, and along the south bank of Mt. Scott Creek near the western park boundary. Mature common hawthorns are scattered throughout the oak-ash woodland between Mt. Scott Creek and Camas Creek, and many small common hawthorns are present between the existing maintenance buildings and the off-leash dog area. Although they don't currently occur as dominant species, multiflora rose (*Rosa multiflora*), Japanese knotweed (*Polygonum cuspidatum*), English holly (*Ilex aquifolium*), and common laurelcherry (*Prunus laurocerasus*) also occur along Mt. Scott Creek. Canada thistle (*Cirsium arvense*) occurs in unmaintained uplands in various locations, and reed canarygrass (*Phalaris arundinacea*) is common along Camas Creek. Bittersweet nightshade (*Solanum dulcamara*), a non-native, invasive woody vine, occurs as a dominant species in the forested wetlands in the northwestern portion of the park.

Table 1 Plant Species Observed in North Clackamas Park

	BOTANICAL NAME	COMMON NAME
TREES, SHRUBS AND WOODY VINES	*Abies grandis*	grand fir
	Acer circinatum	vine maple
	Acer macrophyllum	bigleaf maple
	Alnus rubra	red alder

	BOTANICAL NAME	COMMON NAME
	Betula papyrifera	paper birch
	Cornus sericea	red-osier dogwood
	Corylus cornuta	beaked hazelnut
	Crataegus monogyna	common hawthorn
	Fraxinus latifolia	Oregon ash
	Hedera helix	English ivy
	Ilex aquifolium	English holly
	Mahonia aquifolium	Oregon grape
	Oemleria cerasiformis	Indian-plum
	Pinus contorta	shore pine
	Pinus ponderosa	ponderosa pine
	Populus trichocarpa	black cottonwood
	Prunus avium	sweet cherry
	Prunus laurocerasus	common laurelcherry
	Pseudotsuga menziesii	Douglas fir
	Quercus bicolor	swamp white oak
	Quercus garryana	Oregon white oak
	Rosa multiflora	multiflora rose
	Rosa pisocarpa	clustered rose
	Rubus discolor	Himalayan blackberry
	Rubus spectabilis	salmonberry
	Rubus ursinus	California dewberry
	Salix sitchensis	Sitka willow
	Solanum dulcamara	climbing nightshade
	Spiraea douglasii	Douglas spiraea
	Symphoricarpos albus	snowberry
	Thuja plicata	Western red cedar
FORBS	*Athyrium filix-femina*	lady fern
	Bellis perennis	English daisy
	Bidens frondosa	devil's beggarstick
	Centaurea cyanus	garden cornflower
	Cirsium arvense	Canada thistle
	Dipsacus sylvestris	teasel
	Epilobium watsonii	Watson's willow-herb
	Equisetum telmateia	giant horsetail
	Hypochaeris radicata	hairy cats-ear
	Impatiens noli-tangere	western touch-me-not
	Lapsana communis	nipplewort
	Ludwigia palustris	marsh seedbox

	BOTANICAL NAME	COMMON NAME
	Lysichiton americanum	skunk cabbage
	Lygonum cuspidatum	Japanese knotweed
	Polypodium glycyrrrhiza	Licorice fern
	Polystichum munitum	sword fern
	Prunella vulgaris	heal-all
	Ranunculus repens	creeping buttercup
	Taraxacum officinale	common dandelion
	Tolmiea menziesii	piggy-back plant
	Trifolium repens	white clover
	Veronica americana	American speedwell
GRAMINOIDS	*Bromus sitchensis*	Alaska brome
	Carex obnupta	slough sedge
	Dactylis glomerata	orchard grass
	Eleocharis acicularis	needle spikerush
	Eleocharis palustris	common spikerush
	Eleocharis ovata	ovate spikerush
	Festuca arundinacea	tall fescue
	Glyceria elata	tall mannagrass
	Holcus lanatus	common velvet grass
	Juncus effusus	soft rush
	Phalaris arundinacea	reed canarygrass
	Poa annua	annual bluegrass
	Poa pratensis	Kentucky bluegrass
	Poa trivialis	rough bluegrass
	Scirpus microcarpus	small-fruited bulrush

2.2 Wetlands and Waterways

Regulatory Jurisdiction and Definitions

The Oregon Department of State Lands (DSL) regulates waters of the state under the Removal-Fill Law (ORS 196.800-196.990). Similarly, the US Army Corps of Engineers (COE) regulates waters of the U.S. through Section 404 of the Clean Water Act.

"Waters of the state" is defined as "natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and nonnavigable...". "Natural waterways" is further defined as waterways created naturally by geological and hydrological processes, waterways that would be natural but for human-caused disturbances (e.g. channelized or culverted streams, impounded waters, partially drained wetlands or ponds created in wetlands)..."(DSL, 1995). "Waters of the U.S." is defined at 33 CFR 328.3(a) to include the following:

- waters used in interstate and foreign commerce;
- tidal waters;
- all interstate waters and wetlands;
- all other waters (including intrastate lakes, rivers, streams, wetlands, natural ponds, etc.), the use, degradation or destruction of which could affect interstate or foreign commerce;
- impoundments of waters; tributaries of waters;
- the territorial seas; and
- wetlands adjacent to waters (other than waters that are themselves wetlands).

Wetlands are defined by both the Oregon Removal-Fill Law (ORS 196.800(17)) and Federal (33 CFR 328.3(b)) regulations as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions".

The primary source document for determining the jurisdictional extent of wetlands is the *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1* (Environmental Laboratory 1987), which is recognized by both the DSL and the COE. This document, also known as the "1987 Manual", defines criteria for three parameters (i.e., hydrophytic vegetation, wetland hydrology and hydric soils) that must be met for an area to be considered a wetland. The 1987 Manual also establishes procedures for evaluating indicators to determine if the wetland criteria are met.

Description of On-Site Wetlands and Waterways

PHS delineated wetlands and waterways within the southern portion of the park on June 5 and June 19, 2003, with an additional site visit on February 23, 2004 to review the jurisdictional status of wetlands and ditches on site. The results of PHS's wetland delineation were described in a wetland delineation report dated March 10, 2004. The Oregon Department of State Lands (DSL) approved the wetland delineation (DSL #2004-0153) on February 17, 2005. On October 19, 2006 PHS revisited North Clackamas Park to delineate the wetlands and waterways within the northern portion of the park. DSL approved the updated wetland delineation on April 16, 2007.

Wetlands and other water resources at North Clackamas Park include Mt. Scott Creek, several palustrine forested wetlands associated with Mt. Scott Creek, Camas Creek and adjacent wetlands, and a small pond located to the north of Mt. Scott Creek. Brief descriptions of the on-site wetlands and other waters are provided below.

Mt. Scott Creek and Associated Wetlands

Mt. Scott Creek, a perennial stream that flows generally westward along the northern boundary of North Clackamas Park, is the dominant hydrologic feature in the park. Within the park, Mt. Scott Creek is generally 10 to 20 feet wide. The stream banks are generally low and rise one to two feet above the stream bed. Small areas of erosion and undercutting are

apparent on the banks, but the stream banks appear to be relatively stable. Within the vicinity of the park, Mt. Scott Creek has a relatively uniform gravel and cobble substrate.

Within the park boundaries, much of Mt. Scott Creek is bordered by non-wetland riparian woodland communities, as described above. However, PHS identified two palustrine forested wetlands associated with Mt. Scott Creek in the northwestern portion of the park. These wetlands have a forest canopy dominated by western red cedar, Oregon ash, and red alder with red-osier dogwood, Indian plum, salmonberry, clustered wild rose, and Himalayan blackberry occurring as dominant shrubs in the understory. Dominant herbaceous species in these wetlands include slough sedge (*Carex obnupta*), skunk cabbage (*Lysichiton americanum*), reed canarygrass, lady fern (*Athyrium filix-femina*), and piggy-back plant (*Tolmiea menziesii*).

Flows within Mt. Scott Creek vary seasonally, like most streams in the region, with significant groundwater inputs to base flow from the slope to the north. Apparently large and steady fluxes of groundwater feed the wetland complex near the northwestern park boundary. Water discharged from these wetlands enters Mt. Scott Creek near the western park boundary.

Camas Creek

Camas Creek is a shallow seasonal tributary to Mt. Scott Creek that crosses the central portion of the park and flows into Mt. Scott Creek in the western portion of the park. Camas Creek originates in a palustrine emergent wetland in the northeastern portion of the park. Throughout its length, Camas Creek is a low-gradient, slow-flowing stream. The stream channel is approximately four to six feet. The stream banks are generally low and indistinct, and the stream channel is vegetated with reed canarygrass in some areas. The substrate of the Camas Creek stream channel is composed primarily of fine sediments.

A narrow wetland fringe borders the entire length of Camas Creek. The wetland has a tree canopy of Oregon ash, and willows (*Salix* sp.), red alder, red-osier dogwood, and swamp white oak (*Quercus biclor*) has been recently planted within the wetland. Other dominant species within the Camas Creek wetlands include reed canarygrass, spikerushes (*Eleocharis acicularis* and *E. ovata*), slough sedge, lady fern, and marsh seedbox (*Ludwigia palustris*). Groundwater inputs to Camas Creek occur throughout the stream length, but major inflows appear to be near the northeastern corner of the park and from the south in the vicinity of the upper end of the northwest-trending portion of the creek.

Pond

A small pond is present north of Mt. Scott Creek in the northeastern portion of the park. The pond appears to have been excavated and has relatively steep banks that rise approximately three feet above the surface of the water. The pond appears to receive the majority of its water from groundwater inputs and runoff from the adjacent hillside to the north, as there is no apparent surface connection to Mt. Scott Creek.

2.3 Fish and Wildlife

With its mosaic of riparian woodlands, oak woodland, lawns, streams, and wetlands, North Clackamas Park provides habitat for a variety of wildlife species adapted to suburban landscapes. Additionally, the perennial waters of Mt. Scott Creek and the small pond in the northern portion of the site provide habitat for aquatic and semi-aquatic species, including various species of fish, amphibians and benthic macroinvertebrates. Although wildlife surveys have not been conducted at North Clackamas Park specifically, PHS has observed a number of wildlife species while conducting site visits at the park, and a reach of Mt. Scott Creek surveyed for fish by the Oregon Department of Fish and Wildlife (ODFW) includes the portion of Mt. Scott Creek within the park boundaries. The following paragraphs describe observed and expected wildlife usage at North Clackamas Park.

PHS observed 29 species of birds at North Clackamas Park during two site visits – one on the afternoon of July 13, 2007 and one on the morning of December 13, 2007. The bird species observed by PHS on each date are listed in Table 2, below.

Table 2 Birds observed at North Clackamas Park on July 13 and December 13, 2007

COMMON NAME	SCIENTIFIC NAME	DATE	
		7/13/07	12/13/07
American crow	*Corvus brachyrhynchos*	X	X
American goldfinch	*Carduelis tristis*	X	X
American robin	*Turdus migratorius*	X	X
American wigeon	*Anas americana*		X
Barn Swallow	*Hirunda rustica*	X	
Bewick's Wren	*Thryomanes bewickii*		X
Black-capped Chickadee	*Poecile atricapillus*	X	X
Black-headed grosbeak	*Pheucticus melanocephalus*	X	
Bushtit	*Psaltriparus minimus*	X	X
Downy woodpecker	*Picoides pubescens*	X	X
European starling	*Sturnus vulgaris*	X	X
Golden-crowned kinglet	*Regulus satrapa*		X
Green heron	*Butorides virescens*	X	
House finch	*Carpodacus mexicanus*	X	
House sparrow	*Passer domesticus*	X	
Lazuli bunting	*Passerina amoena*	X	
Lesser goldfinch	*Carduelis psaltria*	X	
Mallard	*Anas platyrhynchos*	X	X
Northern flicker	*Colaptes Auratus*	X	X
Pine siskin	*Carduelis pinus*		X

COMMON NAME	SCIENTIFIC NAME	DATE	
		7/13/07	12/13/07
Red-tailed hawk	*Buteo jamaicensis*		X
Ruby-crowned kinglet	*Regulus calendula*		X
Sharp-shinned hawk	*Accipiter striatus*		X
Song sparrow	*Melospiza melodia*	X	X
Spotted towhee	*Pipilo maculates*	X	
Steller's Jay	*Cyanocitta stelleri*	X	X
Townsend's warbler	*Dendroica townsendi*		X
Western Scrub-Jay	*Aphelocoma californica*	X	X
White-breasted nuthatch	*Sitta carolinensis*		X

The majority of birds observed by PHS were encountered in the riparian woodlands bordering Mt. Scott Creek. Green herons (*Butorides virescens*) were observed foraging in the stream and likely nest in the stream-side trees. Some species, such as back-capped chickadee (*Poecile atricapillus*), bushtiti (*Psaltriparus minimus*), downy woodpecker (*Picoides pubescens*), song sparrow (*Melospiza melodia*), spotted towhee (*Pipilo maculatus*), and Steller's jay (*Cyanocitta stelleri*), likely nest in the riparian woodlands and remain to overwinter in the park. These permanent residents are joined in winter by species such as golden-crowned kinglet (*Regulus satrapa*), ruby-crowned kinglet (*Regulus calendula*), Townsend's warbler (*Dendroica townsendi*), which travel together in small foraging flocks. Other species such as black-headed grosbeak (*Pheucticus melanocephalus*) occur in the riparian woodlands during the breeding season, but spend the winter south of Oregon.

On December 13, 2007, PHS observed a male/female pair of white-breasted nuthatches (*Sitta carolinensis*) foraging with a foraging flock of small insectivorous birds in the oak-ash woodland in the northeastern portion of the park. The subspecies of white-breasted nuthatch found west of the Cascades, *S. c. aculeata* (sometimes referred to as "slender-billed nuthatch"), is strongly associated with oak savanna habitats with widely spaced, large-diameter oaks and little understory, a habitat mimicked by the oak-ash woodland at North Clackamas Park. Breeding Bird Survey data indicate substantial declines in white-breasted nuthatch abundance in the Willamette Valley, and these declines have been attributed to habitat loss, both through the direct cutting of mature oaks and the suppression of fires, which prevent shade-tolerant species from invading oak savannas and eliminating the open understory favored by the nuthatches. Although it is not listed as threatened or endangered at the state or federal level, the Oregon Natural Heritage Information Center considers the white-breasted nuthatch population west of the Cascades to be of conservation concern. Although PHS did not observe white-breasted nuthatches at the park during the July 13, 2007 site visit, it is likely that this species occurs at the park year-round and that the oak-ash woodlands provide nesting habitat for this declining species.

In general, the bird species observed by PHS at North Clackamas Park are species that are typical of bird species expected to occur in suburban settings in the Portland metropolitan area. Species not observed by PHS, but which may be expected to occur at the park include

mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), rufous hummingbird (*Selasphorus rufus*), Vaux's swift (*Chaetura vauxi*), violet-green swallow (*Tachycineta thalassina*), varied thrush (*Ixoreus naevis*), yellow-rumped warbler (*Dendroica coronata*), fox sparrow (*Passerella iliaca*), golden-crowned sparrow (*Zonotrichia atricapilla*), and dark-eyed junco (*Junco hyemalis*). Many of these species are seasonal and would be expected to occur at North Clackamas Park during certain times of the year. Additionally, numerous other species may be encountered in the park during spring and fall migration when they stop to rest and feed during their journeys between breeding and wintering areas.

Although few mammals were observed during PHS's ste visits, several mammal species adapted to small woodlands and edge habitats in suburban landscapes would be expected to occur within the park. Raccoons (*Procyon lotor*) and black-tailed deer (*Odocoileus hemionus columbianus*) likely occur in the riparian woodlands. Eastern fox squirrels (*Sciurius niger*) were observed by PHS in the riparian and oak-ash woodlands. Adaptable predators, such as coyote (*Canus latrans*), may occasionally be seen hunting squirrels, deer mice (*Peromyscus maniculatus*), and other small rodents within the park. Because North Clackamas Park is a popular place for local residents to walk and exercise their dogs, most mammals are likely to occur between dusk and dawn when few people are present.

No amphibians or reptiles were observed during PHS's site visits; however, certain species are likely to occur within the park. Amphibians such as Pacific chorus frog (*Pseudacris regilla*), red-legged frog (*Rana aurora*), and roughskin newt (*Taricha grandulosa*) may occur in the riparian woodlands and breed in the small pond north in the northern portion of the park. Garter snakes (*Thamnophis* sp.), the most commonly encountered snakes in western Oregon, are likely to occur in the riparian habitats.

The Oregon Department of Fish and Wildlife conducted surveys conducted fish surveys along two reaches of Mt. Scott Creek between the summer of 1997 and the spring of 1998. The results of this survey effort are summarized in Table 3, below. One of the Mt. Scott Creek survey reaches, "Reach 1", extended from the mouth of Mt. Scott Creek upstream to its confluence with Phillips Creek and included the portion of Mt. Scott Creek that flows through the park. The most commonly encountered fish species within Reach 1 were reticulate sculpin (*Cottus perplexus*), redside shiner (*Richardsonius balteatus*), western mosquitofish (*Gambusia affinis*), and speckled dace (*Rhinichthys osculus*). During the survey, cutthroat trout (*Oncorhynchos clarki*) were encountered in Reach 3, upstream of the park, but not within the portion of Mt. Scott Stream that flows through the park. The StreamNet database (www.streamnet.org) maps the lower portion of Mt. Scott Creek (including the portion of the stream that flows through the park) as coho salmon (*Oncorhynchos kisutch*) and steelhead (*Oncorhynchos mykiss*) spawning and rearing habitat; however, neither of these species were recorded during ODFW's 1997-1998 survey effort on Mt. Scott Creek.

Table 3 Result of Fish Surveys Conducted in Mt. Scott Creek by the Oregon Department of Fish and Wildlife, summer 1997 – spring 1998

Species		Number Observed by Survey Date and Reach[1]							
		Summer 1997		Autumn 1997		Winter 1997		Spring 1998	
Common Name	**Scientific Name**	**Reach 1**	**Reach 3**	**Reach 1**	**Reach 3**	**Reach 1**	**Reach 3**	**Reach 1**	**Reach 3**
Pacific lamprey	*Lampetra tridentata*	0	0	0	0	0	1	0	0
Speckled dace	*Rhinichthys osculus*	22	0	5	0	5	0	0	0
Redside shiner	*Richardsonius balteatus*	45	0	17	0	13	0	3	0
Largescale sucker	*Catostomus macrocheilus*	0	0	0	0	1	0	0	0
Cutthroat trout	*Oncorhynchos clarki*	0	6	0	0	0	1	0	0
Western mosquitofish	*Gambusia affinis*	29	0	18	0	0	0	0	0
Prickley sculpin	*Cottus asper*	1	0	1	0	0	0	0	0
Reticulate sculpin	*Cottus perplexus*	249	76	299	21	239	15	120	30

1. Reach 1 - Mouth to Phillips Creek confluence; Reach 3 - Dean Creek confluence to small tributary 200m downstream of Sunnyside Road; Reach 2 of Mt. Scott Creek was not surveyed by ODFW because of the short length (Friesen and Zimmerman 1999)

Certain freshwater invertebrates are more tolerant of or sensitive to poor water quality conditions than others; therefore, the composition and relative abundance of a stream's benthic macroinvertebrate community can be an important indicator of the stream's health. PHS is not aware of any organized benthic macroinvertebrate sampling efforts in Mt. Scott Creek in the vicinity of North Clackamas Park; however, during a July 2007 site visit, PHS environmental scientists casually searched for benthic macroinvertebrates by examining the stream's substrate. During this casual survey effort, PHS noted the presence of many common netspinner caddisflies (Family Hydropsychidae), prong-gilled mayflies (Family Leptophlebiidae), flat-headed mayflies (Family Heptageniidae), several blackflies (Family Simuliidae) numerous aquatic snails and dragonfly and damselfly larvae.

Common netspinner caddisflies are facultative water quality indicators, being found in both good-quality and degraded streams. Benthic macroinvertebrate communities dominated by them may indicate some level of nutrient enrichment, and the large number of common netspinner caddisflies and snails (relative to the other taxa) observed by PHS suggest there may be some nutrient enrichment in Mt. Scott Creek. Most of the prong-gilled and flat-headed mayflies are somewhat sensitive species (though some are very sensitive and some facultative), and their presence in Mt. Scott Creek suggests the water quality is relatively good. However, without on-going sampling using a standardized protocol, definitive conclusions about the stream's water quality should not be drawn.

2.4 Water quality

These observations were taken from data collected further upstream, though we believe representative of those in the park.

- Water quality is generally good (stream likely supports a population of resident cutthroat trout though water quality generally deteriorates as water moves downstream through increasingly urbanized areas).
- Water temperatures were found to follow the local climate with maximum recorded summer temperatures reaching 20°C (68°F).
- Dissolved oxygen concentrations may be an issue – they did not comply with state water quality standards (greater than 90-95% saturation), falling as low as 63% saturation.
- The pH of the water was within state standard and ranged from 6.8-7.4 standard units.
- The alkalinities of the stream are high enough (>20 mg/L) to adequately buffer pH fluctuations.
- The bacteria standard was exceeded, likely reflecting the urbanized nature of the watershed and the high fecal bacteria levels generally associated with storm water runoff from urban areas.
- Suspended sediment fluxes have not been measured, but the bed material at low flows through the portion of Mt. Scott Creek along the northern border of the park suggest that a considerable flux of silt is moving through the stream.
- Overall, the water quality of Mt. Scott Creek is typical of water quality in similar urbanized streams.

2.5 Desired Future Condition

The desired future condition (DFC) for North Clackamas Park is a neighborhood park that provides recreational opportunities as well as forested riparian wetland and non-wetland habitats that consist of native plant species and contain good structural diversity. Plant communities will consist of natural associations and will contain a diversity of native species. The overstory canopy will remain much as it exists in the wooded portions of the park. Non-native invasive species such as reed canarygrass, Himalayan blackberry, and English ivy will be removed, and native trees, shrubs, grasses and forbs will be planted to augment the existing riparian communities. The implementation of an Integrated Pest Management Program will prevent invasive species from becoming established and out-competing the native vegetation.

The riparian buffers along Mt. Scott Creek and Camas Creek will be expanded up to 70 feet on the south sides of the streams, and these buffers will be planted with native trees and shrubs to shade the water surface . Supplemental shrub plantings within the existing wooded area on south side of the east-west portion of Mt. Scott Creek downstream from Camas Creek confluence will provide additional stream shading. Reduced human impact immediately adjacent to the stream will allow a denser growth of vegetation immediately along the steam channels. The riparian buffers will be allowed to undergo natural ecological succession to develop species diversity and vegetation structure to provide shelter, food, and reproduction

opportunities for native fauna. Native grasses and wildflowers in a meadow community south of Mt. Scott Creek will provide habitat for bees, butterflies, and other insects as well as birds and small mammals.

The combination of increased stream shade and stream habitat improvements will benefit salmonids and other aquatic organisms. The removal of the culvert near the mouth of Camas Creek and the restoration of the stream bed and banks will improve the connectivity of habitats between Mt. Scott Creek and the lower reaches of Camas Creek. Large woody debris in Mt. Scott Creek will diversify flows, vary sediment distribution, and provide substrate diversity, which will benefit aquatic macroinvertebrates as well as fish. Minor excavation of the outflow channel of the wetland in the northwestern portion of the park will improve the hydrologic connection between the wetland and Mt. Scott Creek and allow water to back up into the wetland during high flows, providing low-velocity refugia for fish during flood events.

3.0 KNOWN ISSUES AND PROPOSED IMPROVEMENTS

The conceptual park plan prepared by Alta includes a number of improvements that will improve natural resources within the park. This section includes the improvements that are shown on the plan, plus others that do not lend themselves to a graphic, but that will nevertheless be implemented by the Parks District in the future.

Water Temperatures and Shading: Mt. Scott Creek is not listed by DEQ as being "Water Quality Limited" for temperature. As such, it was not placed on the 303(d) list for this parameter. However, in 2006 Total Maximum Daily Loads (TMDLs) were issued by DEQ for all streams in the Willamette Sub-Basin. This means that Clackamas County needs to prepare an implementation plan describing how “system potential vegetation” (i.e. riparian vegetation that would historically have been found along the stream) will be planted along streams within their jurisdiction. DEQ has determined that planting “system potential vegetation” will adequately shade the creek and reduce water temperatures. However, only a certain width of riparian vegetation contributes to stream shading.

To determine this functional width, PHS applied a model that it has used in other jurisdictions to Mt. Scott Creek. The reach of Mt. Scott Creek along the northern border of the park is dominated by blackberry thickets and has very little taller vegetation providing shade to the stream surface. Because the direction of the stream through this reach is approximately 77º east of north and the south bank angle is approximately 7º, the stream surface could be effectively shaded (less than 1% increase in effective shade for a 5-foot increase in riparian width) at 62% with a 70-foot wide riparian area along the south bank of the stream. The east-west portion of Mt. Scott Creek downstream from the Camas Creek confluence would also benefit from additional shading by planting tall shrubs beneath the existing trees along the south side of the stream.

The northeastern portion of Camas Creek is largely unshaded and would greatly benefit from riparian vegetation along both sides of the stream, but especially along the entirely exposed

south side. Additional riparian width along the south side of Camas Creek would further shade the stream without greatly affecting land use on the north side of the stream.

Suggested native trees and shrubs to be planted along the riparian areas of Mt. Scott Creek and Camas Creek are included in the table below.

Table 4 Suggested Native Trees and Shrubs

Scientific Name	**Common Name**
Trees and Shrubs	
Acer circinatum	vine maple
Acer macrophyllum	bigleaf maple
Alnus rubra	red alder
Corylus cornuta	Beaked hazelnut
Crataegus douglasii	Black hawthorn
Fraxinus latifolia	Oregon ash
Lonicera involucrata	twinberry
Oemleria cerasiformis	Indian plum
Physocarpus capitatus	Pacific ninebark
Pinus ponderosa	Ponderosa pine
Pseudotsuga menziesii	Douglas fir
Quercus garryana	Oregon white oak
Rhamnus purshiana	cascara
Rosa nutkana	Nootka rose
Salix lasiandra	Pacific willow
Sambucus racemosa	Red elderberry
Spiraea douglasii	Douglas spiraea
Symphoricarpos albus	snowberry
Thuja plicata	Western red cedar

Habitat and stream improvements

Culvert removal: A culvert currently exists in Camas Creek at its confluence with Mt. Scott Creek. This culvert allows maintenance vehicles and foot traffic to cross the creek. This culvert is proposed to be removed and the confluence area restored. This activity may require state and federal permits; however, as the project is beneficial this should not be a problem. The banks should be planted with selected species from Table 4.

The bed of the stream may benefit from a shallow grade control structure (e.g. check dam) to ensure the bed of Camas Creek does not downcut and start to erode upstream.

Large wood: The park portion of Mt Scott Creek has flow regimes that do not vary greatly with channel distance. A few large woody debris placements within the channel might locally diversify flows and vary the sediment distribution. The portion of the channel between the footbridge to Casa Del Rey Drive and the confluence with Camas Creek might be best suited to such installations.

Human access: Removal of the trail along creek to the west of the Camas Creek and Mt. Scott Creek confluence should occur. The banks in these areas have been eroded and compacted, reducing the cover of native vegetation. Access will be limited to discrete points to ensure that wildlife-human interaction is minimal and that damage to stream banks can be repaired. Viewing platforms at the edge of the stream will be an attractive and functional alternative to the current condition.

Off-channel habitat in northwest corner of park: Enhancements of the wetlands in the northwestern portion of the site would entail removal of invasive species: reed canarygrass (*Phalaris arundinacea*) and brambles (*Rubus discolor*) and replacement with small woody shrubs: twinberry (*Lonicera involucrata*), spiraea (Spiraea douglasii), and red-osier dogwood (Cornus sericea). The discharge to Mt. Scott Creek near the west end of the park may be opened to allow high-flow refugia without fish entrapment. The present outflow from the adjacent wetlands is situated several feet above the stream thalweg and probably rarely is overtopped to allow water to flow into the adjacent wetlands. A small excavation of the present outflow channel would allow high flows of Mt. Scott Creek to enter the wetlands and provide a lower-velocity environment for fish during flood episodes. A log structure immediately downstream from the wetland orifice would locally raise water levels at the refugia entrance during large flows and increase the likelihood of water surface elevations sufficient to allow fish passage into the wetland. The width of the channel at this point would require several anchored logs to achieve significant local elevation of storm flows.

Removal of concrete: Large pieces of concrete are currently located within the stream upstream of the confluence of Camas Creek and Mt. Scott Creek. These pieces of concrete should be removed and the large piece of wood located in this area cut in half to dissuade people from accessing the other side of the creek.

Planting of native meadow: Native forbs should be planted within areas to the south of Mt. Scott Creek. The south side of the meadow should be adjacent to the path that is proposed in this area. This will ensure that park maintenance activities do not extend into the native meadow. This native meadow will likely look unkempt compared to mowed areas of the park, but will provide more diverse habitat for insects and birds.

Control of Invasive Species through Integrated Pest Management: The use of policies and measures contained in the Integrated Pest Management Program developed by Portland Parks and Recreation (PP&R) is recommended to control invasive species within the park. As defined in the Oregon Statutes (ORS 262.1), Chapter 943, "integrated pest management" is "…a coordinated decision-making and action process that uses the most appropriate pest control methods and strategies in an environmentally and economically sound manner to meet pest management objectives. The elements of integrated pest management include: (a) preventing pest problems; (b) monitoring for the presence of pests and pest damage; (c) establishing the density of pest population, which may be set at zero, that can be tolerated or corrected with a damage level sufficient to warrant treatment of the problem based on health, public safety, economic or aesthetic threshold; (d) treating pest problems to reduce population below those levels established by damage thresholds using strategies that may include biological, cultural, mechanical and pesticidal control methods and that shall consider human

health, ecological impact, feasibility and cost effectiveness; and (e) evaluating the effects and efficacy of pest treatments."

As prescribed in the Integrated Pest Management Methodology contained in PP&R's Integrated Pest Management Program, various integrated pest management measures are evaluated and considered together so that the best overall solutions are chosen and implemented. The prevention of pest problems through good policy and planning are assessed first. Cultural practices, avoidance measures, and physical means of managing pests are assessed next. Finally, mechanical practices, trapping, biological controls, and the use of natural and synthetic pesticides are assessed.

Incorporation of this integrated pest management policy into the maintenance activities at North Clackamas Park is recommended to ensure the protection of Mt. Scott Creek and Camas Creek and to help restore populations of salmonids in Mt. Scott Creek.

Other maintenance considerations include limiting mowing to areas outside of the riparian zones and within the oak woodland to the north of Camas Creek. The trees in the woodland may be damaged by mowing equipment. To ensure that the base of the trees are protected and that habitat is improved, shrubs, such as snowberry and Oregon grape (*Mahonia nervosa*) should be planted around the base of each tree.

5.0 CONCLUSIONS

North Clackamas Park is a valuable community resource and serves many functions. The south side of the park is dominated by more active uses. The north side of the park, with the presence of the two creeks and the woodland, lends itself to more passive uses. As such, improving wildlife habitat and increasing the diversity of native vegetation has been a priority for many of the citizens who have voiced their concerns over the future of the park. The measures briefly described above will ensure that the north side of North Clackamas Park will be focused on improving the natural environment. As funding becomes available, each of the proposals will have more detail. However, many are lower cost solutions and it is hoped that improvements to the habitat within the park can be achieved relatively quickly.