

# Neely Bridge Natural Area Site Management Guidelines

*September 2004*

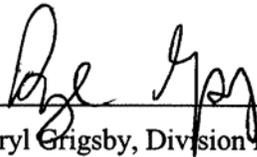


**King County**

Department of Natural Resources and Parks  
**Water and Land Resources Division**

# Neely Bridge Natural Area Site Management Guidelines

*September 2004*



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Daryl Grigsby, Division Director

King County Water and Land Resources Division



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Department of Natural Resources and Parks  
Water and Land Resources Division

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Neely Bridge NA SMG\_Final\_September 2004.doc



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Suggested citation for this report:

King County. 2004. Neely Bridge Natural Area Site Management Guidelines. King County Department of Natural Resources and Parks, Water and Land Resources Division. Seattle, Washington.

[Available: King County Department of Natural Resources and Parks]

# Executive Summary

The King County Department of Natural Resources and Parks (DNRP) acquired Neely Bridge Natural Area in fee from the Washington Parks Foundation for \$10,500 in general county funds. In December 1977, Val Bain donated the property to the Washington Parks Foundation with a stipulation that the land be used as a public recreation area.

The 25-acre Neely Bridge Natural Area is located in south King County, east of Auburn. The site is located on the right bank of the Green River at River Mile 35, upstream of the Highway 18 intersection with the Green River. The surrounding properties include farms, residences, King County's Porter Levee Natural Area and property managed by the King County Property Services Division. Part of the site is within the Upper Green River Agricultural Production District.

The site is comprised of steep portions of valley wall, including active landslide areas, and a lowland floodplain area traversed by a small sections of two streams.

The site is comprised largely of a steep bank. It includes a small section of an unclassified stream. Vegetation includes Himalayan blackberry, sword fern, salmonberry, willow, cottonwood, alder, bigleaf maple, Western redcedar, and Douglas fir.

The Middle Green River supports populations of coho, chinook, and chum salmon, steelhead, rainbow, and resident and sea-run cutthroat trout. Bull trout have also been found. Chinook and bull trout are listed as threatened under the Endangered Species Act. The lower reaches of the wall-based streams in this area are utilized for spawning by coho and chum, and rearing for chinook, coho, chum and winter steelhead. Cutthroat trout have also been reported. The Wildlife Habitat Network runs through the Green River Corridor at the Neely Bridge Natural Area.

Although the site is available for passive recreation activities such as walking, fishing or hiking, the site is not visited often due to a lack of physical or legal access. There have been no reports of inappropriate use at the site. There are no obvious revenue generating opportunities at the site at this time.

King County Department of Natural Resource and Parks goals for all ecological lands are to conserve and enhance the site's ecological value and support appropriate public use that does not harm ecological resources. The following recommendations have been made for the site.

- compete a biological assessment to improve understanding of the site's ecological characteristics
- fund a restoration study/plan for the Middle Green River Reach to identify preferred habitat enhancement alternatives in this reach based on ecological and landscape principles
- resolve boundary questions
- negotiate an access agreement
- allow the current level of passive recreation opportunities.
- monitor and control visitor impacts on the ecological values of the site
- monitor the site for encroachment, dumping, and other trash and respond as necessary

# Neely Bridge Natural Area Site Management Guidelines

## Introduction

Neely Bridge Natural Area is a King County Department of Natural Resources and Parks (DNRP) Ecological Land. Ecological Lands are a category of Water and Land Resource Division (WLRD) properties managed for the protection of their ecological value. Public access and interpretive opportunities are accommodated where they do not harm the ecological value of these sites.

This document provides general property information, a description of existing site conditions, a chronology of land management actions, and a list of management objectives and recommendations for the Neely Bridge Natural Area. Site management guidelines are developed using guidance established in the *King County Water and Land Resources Division Ecological Lands Handbook* (King County 2003).

## Part 1. General Property Information

The Neely Bridge Natural Area is located on the right bank of the Green River at approximately River Mile (RM) 35 in south King County, upstream of the Highway 18 intersection with the Green River, and east of Auburn, WA. (Refer to figure 1 for a general vicinity map; Refer to figure 2 for an aerial photo of the site.) Northwest and north of the natural area are undeveloped King County properties managed by the Property Services Division (Parcel numbers 2121059065 and 3298610320) and residential property. To the west is unimproved riverfront property, the Green River, and privately owned land enrolled in the King County Farmland Preservation Program (FPP) used for pasture and row crops. North of this farmland is King County's Porter Levee Natural Area. To the east of Neely Bridge Natural Area is agricultural property, and to the south is the Neely Bridge that crosses the Green River and additional farmland.

**Table 1. Neely Bridge Natural Area general information.**

<b>Best Available Address</b>	No address
<b>Thomas Guide Map</b>	Page 746 and 776
<b>Legal Description</b>	Section 22, Township 21 N, Range 5E, W.M.;
<b>Acreage</b>	24.88
<b>Drainage Basin</b>	Middle Green River
<b>WRIA</b>	9
<b>Council District</b>	9
<b>King County Sensitive Areas</b>	100-year floodplain, erosion, landslide, and seismic hazards, severe and moderate channel migration zones.

**Table 2. Neely Bridge Natural Area parcel information.**

<b>Parcel Number</b>	<b>Acres*</b>	<b>Purchase Date</b>	<b>Ownership type/price</b>	<b>Other Names</b>	<b>Zoning</b>	<b>Funding Source</b>
2221059010	6.56	11/1/1978	Owned in Fee \$10,500	Neely Bridge Park; Val Bain property; Washington Parks Foundation Property	A-10 APD	general County funds-converted emergency contingency funds
2221059056	9.18	11/1/1978			RA-10-SO	
2221059007	9.14	11/1/1978				

\*acreage taken from the King County Assessor parcel records

## Part 2. Acquisition, Funding Source and Deed Restrictions

The King County Department of Natural of Natural Resources and Parks (DNRP) acquired Neely Bridge Natural Area in fee from the Washington Parks Foundation in November 1978 for \$10,500 in general county funds. In December 1977, Val Bain donated the property to the Washington Parks Foundation with the stipulation that the land be used as a public recreation area.

## Part 3. Ecological Resources

This section describes the natural resources and ecological processes present at the Neely Bridge Natural Area. An ecological assessment has not been conducted at this location. Therefore, the information presented here is not comprehensive. Neely Bridge Natural Area lies within the Middle Green River Reach. Please refer to the Middle Green River Reach paper (King County 2003) for landscape-level natural resource and land use information.

### Topography and Soils

The southern flat river valley section of Neely Bridge Natural Area is comprised of Pilchuck fine sandy loam. The northern steeply sloped section of the property is comprised of Alderwood and Kitsap soils. The Alderwood and Kitsap designation is comprised of about 50 percent Alderwood gravelly sandy loam and 25 percent Kitsap silt loam. Characteristics of this soils designation are 25-70 percent slopes, rapid runoff, severe erosion hazards and severe slipping potential (USDA 1973).

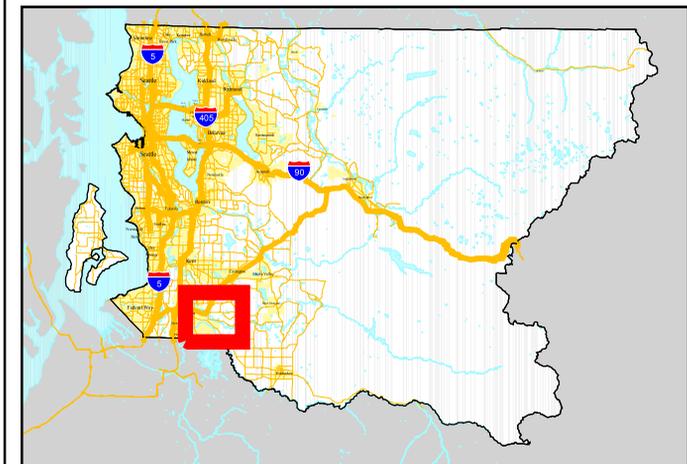
The downstream 400 feet of the site bordering the river is a steep portion of the valley wall with the river flowing along the base of the slope. The hillslope is currently at a near-vertical angle created by several medium-scale, localized landslides. Landslide deposits intermittently enter the river at this location, and provide a significant input of sediments, and possibly also LWD. Flooding events mobilize and transport these materials downstream, where they likely comprise an important portion of the sediment and LWD recruitment budget for affected reaches. These affected reaches likely include the Porter Levee and Auburn Narrows Natural Areas. (Levesque pers.comm.)

# Figure 1

## Neely Bridge Natural Area

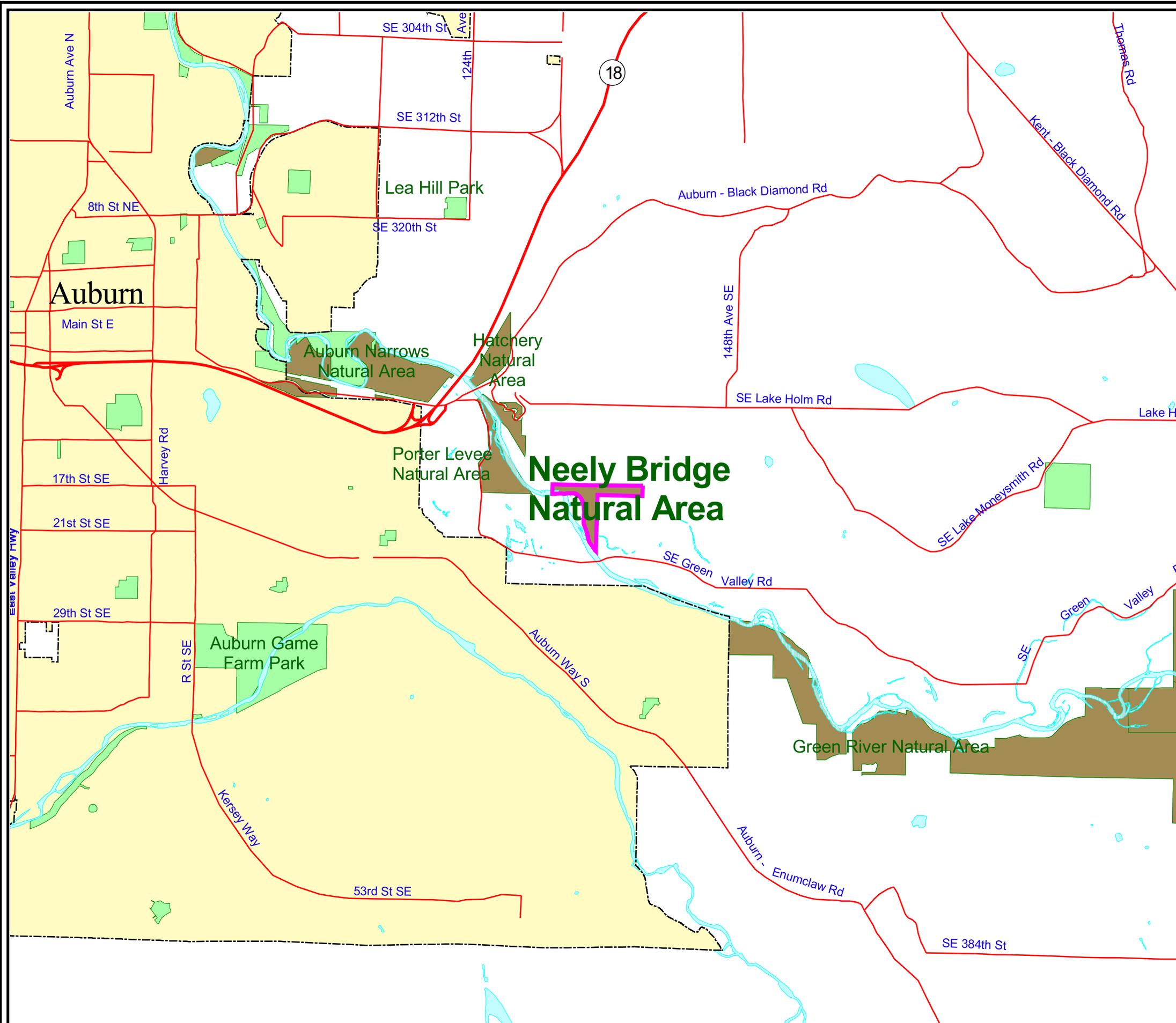
### Vicinity Map

-  Neely Bridge Natural Area
-  Parks
-  Natural Areas
-  Cities



 **King County**  
Department of Natural Resources and Parks  
**Water and Land Resources Division**  
September 2, 2003

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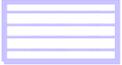


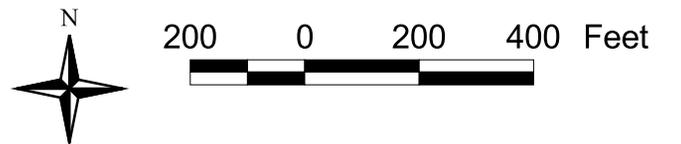
# Figure 2

## Neely Bridge Natural Area

### Natural Resources



-  Site Boundary
-  Parcels
-  Contours (20 foot)
-  100 Year Floodplain



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## Hydrology

Neely Bridge Natural Area is located on the right bank of the Green River. Unnamed perennial stream 09.0098, a 2.3 mile stream, passes through the natural area and enters the Green River at RM 35.2. It is classified class 2 with salmonids, specifically coho (WDF 1975). Most of the tributary is outside of the park. Lowland portions of the site are within the mapped FEMA 100-year floodplain.

An older levee and armored revetment flood protection facility confines the Green River against lateral migration to the west and protects the agricultural property located on the left bank of the Green River across from Neely Bridge Natural Area. This levee system was apparently constructed in the 1960's, but has not been actively maintained for at least the past 15 years. As a result, native riparian species, predominantly willow, as well as some cottonwood and maple trees, are growing on a thin strip along the left bank of the river. (Levesque pers.comm.)

## Vegetation

Park Resource Specialist Jack Simonson evaluated the site in 2001. The following is his vegetative description. No other known information on the vegetation exists for the property. His complete report is in the appendix.

The eastern boundary of the park bordering a pasture is heavily overgrown with blackberry, although in some areas salmonberry is the dominant undergrowth... From what I could discern from viewing outside the park boundary looking in [the property has significant access issues due to high water in the winter], the vegetation in the south section of the park consists of willow forming the overstory directly along side the river, and cottonwoods and alder predominating the rest of the area. The understory is predominantly blackberry and salmonberry and very tall and thick. The vegetation on the steep banked northern end is similar to the vegetation on the north side of nearby Porter Levee Park with the exception of having a slightly higher percentage of coniferous trees. Alder, Bigleaf Maple, Western Redcedar, and Douglas fir dominate the overstory. The only understory I was able to view consisted of primarily sword fern (Simonson, unpublished report).

## Fish and Wildlife

The lower reaches of the wall-based streams in this area, including stream 09.0098, are "utilized for spawning by coho and chum, and rearing for chinook, coho, chum and winter steelhead." (Kerwin and Nelson, 2000.) (Wall-based streams channels flow against the valley walls, usually in an abandoned river channel. Flow emanates from springs or wall seeps, and often from gravel interflow as well.) Cutthroat trout have also been reported in stream 09.0098.

According to the Green/Duwamish Ecosystem Restoration Study (2000):

The Middle Green River supports populations of coho, chinook, and chum salmon, steelhead, rainbow, and resident and sea-run cutthroat trout. Bull trout have also been found in the Middle Green River sub-watershed, but their use of this portion of the river is not understood. The reach between RM 33.6 to 41.5 is noted to be particularly good chinook spawning habitat.

We know of no other documentation of wildlife in the natural area at this time. The Wildlife Habitat Network, established in the King County Comprehensive Plan, runs through the Green River Corridor at the Neely Bridge Natural Area. A forested buffer along the river continues east from Neely Bridge Natural Area. The buffer thins out considerably after Neely Bridge, yet may

provide connectivity for some terrestrial species at least as far as Green River Natural Area, and possibly beyond.

## Part 4. Land Use and Infrastructure

This section describes current public use, access opportunities, trails, roads and utilities.

### Public Use

Although the public is welcome to engage in passive recreation activities such as walking, fishing or hiking at Neely Bridge Natural Area, the site does not appear to be visited often. There have been no reports of inappropriate use at the site.

### Trails, Roads, Other Infrastructure

No known trails, roads, signs or other infrastructure exist on the property.

### Access

No physical or legal access exists to Neely Bridge Natural Area. Anglers probably access the property via the river at lower water levels. The Washington Department of Game obtained a 25-foot fishing easement on the property in 1955, however, there is no easement of this nature allowing public access for the private property to the south. We do not know if the property on the northwest has a fishing easement or not, however, even if it did, the steep banks extending to the river would prevent access from that direction.

Park staff access the park from the southern side (from SE Green Valley Road). They request prior permission from the farmer whose private property must be crossed. Access from the north is blocked by residential housing developments south of SE Lake Holm Road (Simonson, unpublished report; see appendix).

## Part 5. Site Management History

Management of the site has consisted of periodic site inspections by King County Park staff.

## Part 6. Analysis

In this section, site specific information is integrated with larger landscape conservation considerations and fiscal and political constraints to formulate management recommendations which will be summarized in Part 7.

### Information Gaps

Little biological and ecological information exists on this site. A comprehensive ecological assessment would provide an understanding of the species that use this natural area and a characterization of river habitat forming processes such as channel migration, LWD sources, sediment accumulation, current flood flows, and channel complexity. This information would be useful when evaluating the spectrum of ecological impacts from proposed habitat restoration and management activities in the Middle Green River Reach.

There is uncertainty regarding the boundaries of the natural area. Current computerized parcel information indicates that the west boundary of the property does not extend to the Green River.

The acquisition information indicates that it does extend to the river. Channel migration or sediment deposition may explain this discrepancy. The questionable piece of property is most likely undevelopable and unfarmable, and at the present time there appear to be no management concerns. However, resolving this question is recommended.

## **Enhancement Opportunities and Invasive Control**

The Habitat Limiting Factors and Reconnaissance Assessment Report (Kerwin and Nelson 2000) states that the unnamed stream running through a small part of the property provides habitat for several salmonid species including chinook. Chinook are listed as threatened under the Endangered Species Act. Therefore, it is possible that enhancement opportunities such as instream wood placement to improve fish habitat might be appropriate.

The Green River Basin Steward has suggested formally naming the stream running through the property because he believes the stream's length, perennial flow regime and fish presence justifies a formal name.

Flooding processes have likely been greatly altered in this reach as a consequence of operations at Howard A. Hanson Dam since 1961. Therefore floodplain modifications may be useful to re-establish functional habitat components to the river system. This might include possible setback of the levees on the opposite bank of the natural area. (Levesque pers. comm.)

There are no known noxious weeds on the site that the County is legally obligated to remove. Although invasive species such as Himalayan blackberry exist on the site, King County currently has initiated no invasive plant control at Neely Bridge Natural Area.

Three planning processes are underway that may result in additions or changes to the enhancement recommendations mentioned in this document. King County Stewardship staff is developing the Middle Green River Restoration Blueprint (scheduled for completion in 2005), King County Flood Hazard Reduction Services Section staff is revising the Flood Hazard Reduction Plan and WRIA 9 staff is working on the WRIA 9 Habitat Plan (scheduled for completion in 2005).

## **Public Use**

Although part of the Neely Bridge Natural Area is within the Upper Green River Valley Agricultural Production District, it has been determined that the site is not suitable for farming because of its small size, heavily vegetated state and access issues.

Site inspections indicate that Neely Bridge Natural Area currently supports low numbers of visitors engaged in recreational activities, mostly fishing. The current level and types of use appear to have no adverse effect on the ecological resources of the site. At this time, there appears to be no reason to install visitor support infrastructure at Neely Bridge Levee Natural Area. Due to a lack of legal and physical access and the resulting low public use levels, quarterly site inspections will probably be sufficient at this time.

## **Revenue Generating Opportunities**

There are no obvious revenue generating opportunities at the site at this time.

## Part 7. Management Goals, Objectives and Recommendations

The objectives and recommendations that follow are derived from the analysis in the previous section. Office of Rural Resource Programs staff will revise the recommendations for the Neely Bridge Natural Area when new information from site monitoring programs and other initiatives indicate a need for a change in management strategies.

### Goals for Ecological Lands

King County Department of Natural Resource and Parks goals for Ecological Lands are to:

- conserve and enhance the site's ecological value, and
- support appropriate public use that does not harm ecological resources.

The objectives and recommendations that follow are designed to support these goals when practicable at the Neely Bridge Natural Area.

### Objective: Understand implications of management strategies

#### ➤ *Recommendation: Fill in data gaps*

The Science, Monitoring and Data Management section should complete an ecological assessment to gain a more thorough understanding of the ecological characteristics of the area. This should include species use. (Schedule: 2005 or 2006)

#### ➤ *Recommendation: Resolve boundary question*

NRL staff should contract with a forester to determine the age of trees existing on the parcels between the known west boundary of the site and the river. This evaluation can be used to help make a determination about whether the property to the west of the known boundary is legally part of Neely Bridge Natural Area or part of the parcel on the left bank of the river. (Schedule: 2005)

#### ➤ *Recommendation: Coordinate site enhancement opportunities*

King County Natural Resource Lands (NRL), Land and Watershed Stewardship (LAWS), Flood Hazard Reduction Services (FHRS), and WRIA 9 staff should coordinate to ensure that any recommendations for Neely Bridge Natural Area presented in the Middle Green River Restoration Blueprint, the Flood Hazard Reduction Plan, and the WRIA 9 Habitat Plan are coordinated and maximize the ecological potential for the site. (Schedule: 2004-2008).

### Objective: Support current level of passive recreation opportunities

#### ➤ *Recommendation: Monitor public access*

Park staff should note visitor impacts on the ecological values of the site during quarterly site inspections. (Schedule: quarterly)

## **Objective: Protect the site from inappropriate public uses**

### ➤ *Recommendation: Implement Preserve and Protect Measures*

Park staff should recommend, install, and maintain any necessary capital improvements to protect the site from inappropriate public uses. This could include bollards, signs, concrete blocks, and boundary markers.

Park Resource staff should install natural area identification and rules signs. (Schedule: 2004)

### ➤ *Recommendation: Control Litter/Dumping and Encroachment Activities*

Park staff should monitor the site for encroachment, dumping, and other trash and respond as necessary to maintain a clean and safe property. As part of this effort, Park staff should evaluate access opportunities to the natural area. (Schedule: quarterly).

### ➤ *Recommendation: Negotiate an access agreement*

NRL staff should pursue an access agreement with the landowner to the south to allow DNRP staff to carry out management activities on the site. (Schedule: 2005)

## **Objective: Implement site management guidelines recommendations**

### ➤ *Recommendation: Site Maintenance Plan Creation*

Park Resource staff should prepare a site maintenance plan (a work plan) to include the litter/dumping, inspection, visitor monitoring and sign installation and maintenance activities identified in the recommendations. NRL staff and the Green River Basin Steward will coordinate with Park staff on this effort. (Schedule: annually).

### ➤ *Recommendation: Coordinate implementation*

NRL staff should coordinate with the various programs responsible for implementing these recommendations to facilitate their timely accomplishment. (Schedule: ongoing).

NRL staff should coordinate with the Green River Basin Steward and Park Resource staff to review site conditions and revise the site management guidelines. (Schedule: as needed or 2008).

**Table 3. Neely Bridge Natural Area Recommendations: budget, schedule and staff matrix**

Recommendations	Cost	schedule	Park Resource Staff	GR Basin Steward	FHRS	WRIA 9	WEAT	NRL staff
<b>Priority One</b>								
create site maintenance plan		annually	x	x				x
inspect site/litter removal/visitation monitoring/other preserve and protect actions		quarterly	x					
update site management guidelines		as needed or 2008	x	x				x
coordinate smg recommendation implementation		ongoing						x
Install natural area rules and boundary signs		2004	x					
<b>Priority Two</b>								
complete ecological assessment		2005 or 2006					x	
coordinate site enhancement opportunities		2004-2008		x	x	x		x
resolve boundary question		2005						x
negotiate an access agreement		2004						x

## Appendix: Neely Bridge Park Report

Jack Simonson  
Nov. 20, 2001

Neely Bridge Park is the next park upstream from Porter Levee Park. The western edge of Neely Bridge is only about 500 feet from the southeastern corner of Porter Levee. The entirety of the park is located on the north side of the Green River. Access to the park is difficult, especially during months when the river is high. To access the park from the southern side from SE Green Valley Road it is advisable to contact the local farmer whose farm you must cross to get into the property. The access from the north is blocked by residential housing developments south of SE Lake Holm Road.

I did not have a lot of success entering inside the boundaries of the park. I entered the farmer's field from the first barb wire gate east of the bridge that crosses over the Green River on SE Green Valley Road. I first attempted to enter our property by accessing the narrow strip of land just north of the bridge. The undergrowth was thick blackberry and impassable. I then tried accessing from beneath the bridge to get to the river and proceed up the riverbank through the property. The river was high and the stream bank covered with water again impending access. I then hiked north across the pasture, walked over a dike that crossed a small stream that bisected the farmer's land, and proceeded to northwest corner of the pasture. The whole eastern boundary of the park bordering the pasture is heavily overgrown with blackberry, although I did notice areas where salmonberry was the predominant undergrowth. I saw no trails passing throughout this thick underbrush. At the northwest corner I was able to peer into the northern part of the park but was not able to enter it. This was because the northern edge of the pasture was inundated with water. Crossing into the park from here may be possible during the warmer, drier months when water levels are lower.

From what I could discern from viewing outside the park boundary looking in, the vegetation in the south section of the park consists of willow forming the overstory directly along side the river, and cottonwoods and alder predominating the rest of the area. The understory is predominantly blackberry and salmonberry and very tall and thick. The vegetation on the steep banked northern end is similar to the vegetation on the north side of nearby Porter Levee Park with the exception of having a slightly higher percentage of coniferous trees. Alder, bigleaf maple, Western redcedar, and Douglas fir dominate the overstory. The only understory I was able to view consisted of primarily sword fern.

## References

King County. 2003. King County Water and Land Resources Division Ecological Lands Handbook, King County Department of Natural Resources and Parks, Water and Land Resources Division, Seattle, WA.

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### **Personal communications:**

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