Lower Daybreak Master Plan Report

JUNE 2010

VANCOUVER-CLARK PARKS & Recreation

Clark County Environmental Services Vision

Clark County Environmental Services envisions a county rich in natural resources, parklands, and open spaces, which sustain and support our local economy, while enhancing our high quality of life.

Clark County Environmental Services Mission

Environmental Services strategically protects and enhances our natural environment.

Vancouver-Clark Parks and Recreation Department Vision

Vancouver-Clark Parks and Recreation will help build a healthy community, protect the natural environment, and support a high quality of life for all residents.

Vancouver-Clark Parks and Recreation Department Mission

Meeting community needs by providing an interconnected system of parks, trails, recreation facilities, and natural areas that support environmental stewardship and diverse recreational programs and opportunities.

Acknowledgements

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I. Executive Summary

Lower Daybreak is envisioned as a very special place in the region. As an integral component of the larger East Fork Lewis River Greenway and an extension of the existing Daybreak Regional Park, the site will serve as a reminder of the region's natural heritage, and it will look to the future as a place where residents and visitors will learn to be better stewards of the environment and recreate in harmony with the surrounding landscape.

The intent of this master plan is to provide a clear vision of future park uses and activities, trail improvements and linkages, restoration activities and property connections within the context of the County's regional park and greenway system. Also, it considers the relationship of this site to the larger East Fork Lewis River Greenway, as well as the on-going habitat and riparian restoration efforts by the County and local non-profits.

The master plan for Lower Daybreak balances active and passive recreational use with the enhancement of the riparian and lowland habitats. The design integrates and unifies the Lower Daybreak properties with Daybreak Park to establish a single, robust regional park. The master plan design also balances the impacts of programmed park elements in such a way as to minimize intrusions into wetlands, habitat areas and buffers. The combined site will consist of 167 acres, of which only 20 acres are identified as developed for recreational use. Overall, the footprint of the planned, developed areas covers approximately 11% of the parkland.

The master plan includes the following elements:

- Re-aligned park entry with fee booth, caretaker residence and access management
- Three special use areas
- Two large group shelters and 8 small shelters
- Playground and 4 acres of mown turf
- Over 4 miles of trails
- Significant habitat and riparian restoration, along with reforestation

The master plan considers the impacts of the proposed park development with regard to project cost, phasing, funding opportunities and maintenance requirements. While opportunities for grant funding and partnership projects exist, the future development of the park will need to be phased due to the projected capital expenses and operating demands resulting from implementation of the master plan.

Clark County, Vancouver-Clark Parks & Recreation and the Lower Daybreak Master Plan consultant team would like to extend gratitude to the community members who participated in this effort and supported, enriched and improved the master planning process to keep this park as a treasured regional resource. The response from citizens of all ages and interests was passionate, and this feedback played an important role in organizing design elements and prioritizing near-term development and restoration activities.

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II. Introduction

Purpose of the Master Plan

In September 2008, the Clark County Legacy Lands Program and the Vancouver-Clark Parks & Recreation Department initiated a planning effort to prepare a conceptual master plan for the Lower Daybreak properties – an extension of Daybreak Regional Park. The intent of this master plan is to provide a clear vision of future park uses and activities, trail improvements and linkages, restoration activities and property connections within the context of the County's regional park and greenway system. In addition, the master plan considers the long-term importance of this site as part of the interconnected system of habitat, recreation and conservation lands on the lower East Fork of the Lewis River, along with on-going habitat and riparian restoration efforts by the County and local non-profits. The master plan includes the following:

- A description of the planning approach, proposed master plan elements and guiding principles
- An inventory and assessment of ecological values and the potential for park and trail development
- Implementation and phasing recommendations, cost estimates and permitting considerations
- A discussion of site management issues and the potential re-use of existing structures.

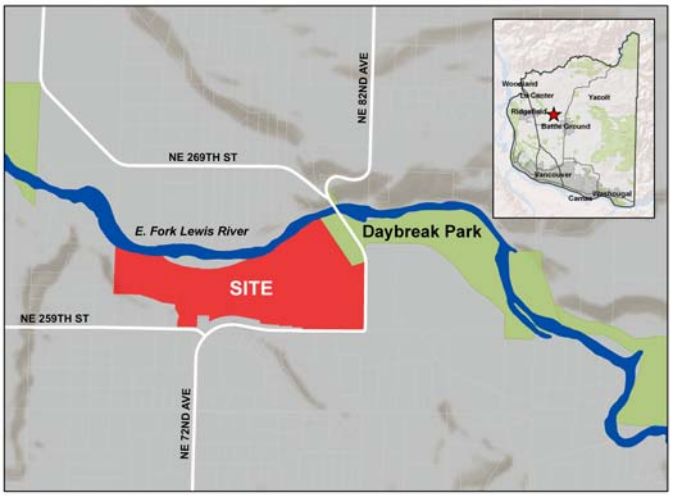
A Contemporary History of the Site

The Lower Daybreak site is the undeveloped, future regional park property adjacent to and downstream of the existing Daybreak Park. The property is situated along the southern bank of the East Fork of the Lewis River, and Manley Creek flows westward through the southern section of the property before draining into the East Fork. The 112-acre site had been previously managed as an agricultural, open field that was used to grow hay. Currently, the site experiences limited use by local residents for shoreline fishing, walking and dog walking. The project site is located in central Clark County, north of NE 259th Street and west of NE Daybreak Road/NE 82nd Avenue and consists of six parcels (225383-000, 225396-000, 225190-000, 225220-000, 225189-000 and 225219-000).

The properties were acquired in 2002 by the Columbia Land Trust, a local non-profit conservation agency, acting as an interim trustee on behalf of the county. Clark County and Columbia Land Trust agreed to a Memorandum of Understanding (MOU) for both the interim management of the site and the future transfer of title. The land trust will donate the site to the county upon the county's request for the development and management of the site for public open space and recreation.

The Lower Daybreak properties were acquired using Clark County's Conservation Futures Fund, which is funded by a property tax on all taxable properties in the county. These funds

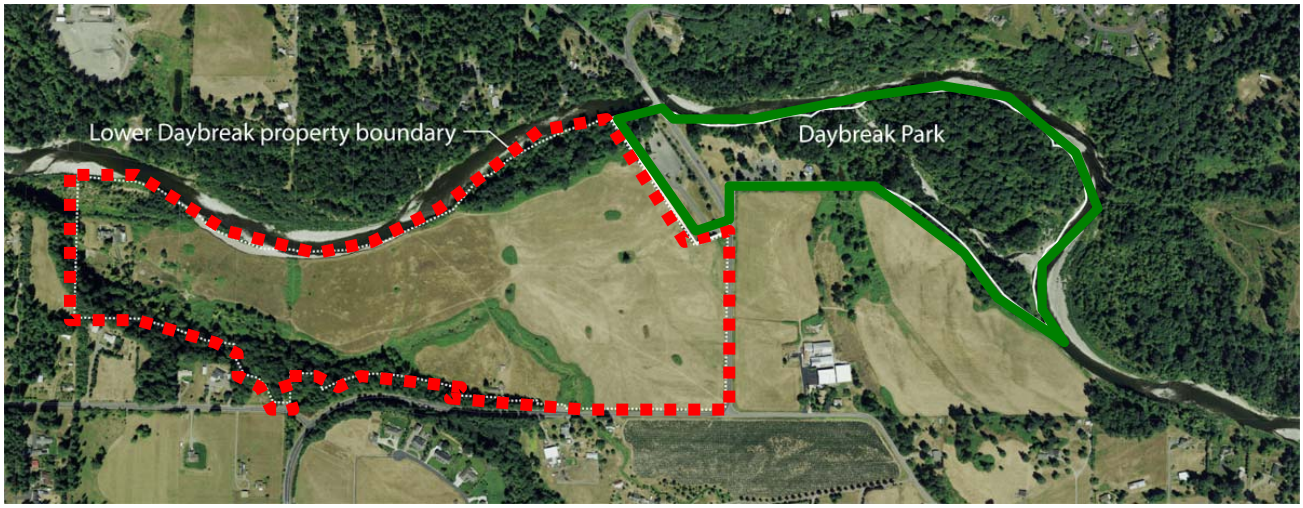
Map 1. Site Location Map

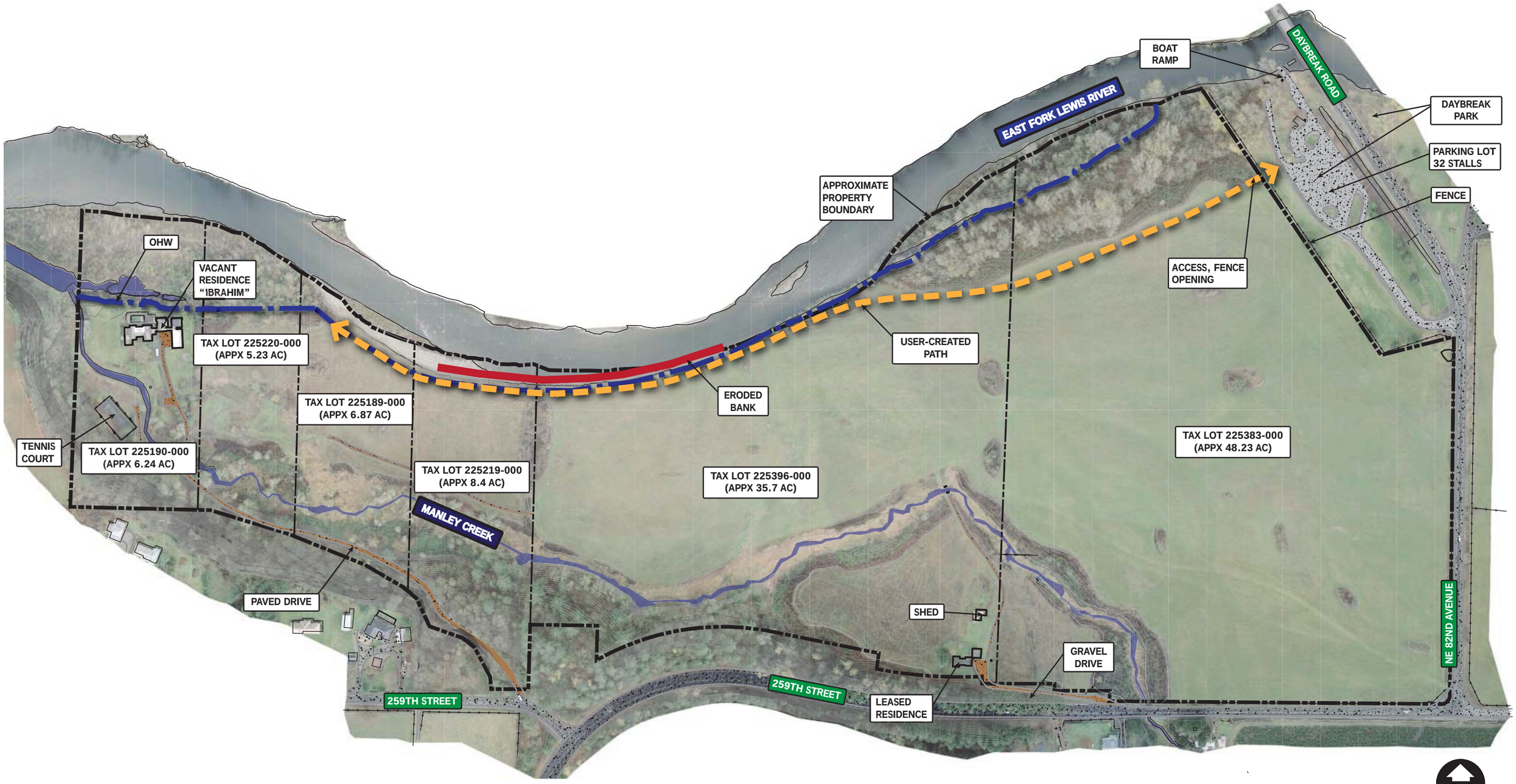


are dedicated to the acquisition of farm, forest, open space and recreation lands and are intended to preserve and enhance environmentally sensitive properties, provide opportunities for recreation and enhance the value to the public of abutting or neighboring parks or other open space. Lower Daybreak has the capacity to fulfill each of these program goals, and this master plan provides the vision to guide the future uses and improvements of the site.

Additionally Manley Creek, a tributary to the East Fork, flows through the Lower Daybreak properties and has been the focus of fish habitat restoration efforts in support of salmon recovery within the Lower Columbia Region. This master planning effort also incorporates a detailed inventory and assessment of environmental conditions, as well as identifies opportunities for improving and enhancing the ecological value of the site. These assessments and recommendations will directly support future fish enhancement and stream restoration projects that are targeted for this section of the East Fork of the Lewis River.

Map 2. Property Boundaries: Lower Daybreak and Daybreak Parks





alta PLANNING + DESIGN

March, 2010

Lower Daybreak Park Master Plan

EXISTING CONDITIONS

VANCOUVER-CLARK PARKS & Recreation

CLARK COUNTY, WASHINGTON

Public Engagement & Process

Public outreach and involvement played a vital role in establishing a clear framework of development priorities for Lower Daybreak. Commencing in the fall of 2009, the master plan process provided several opportunities for community members and stakeholders to discuss the project with Clark County and Vancouver-Clark Park & Recreation staff and consider a vision for the park's development and restoration. Community outreach methods were varied and extensive, including:

- Two community meetings
- Stakeholder discussions
- Parks & Recreation Advisory Commission meetings
- Website content

Through these forums, participants of the master planning process were prompted to address the following key issues:

- Recreational needs of the immediate community and that of the broader county given the site's classification as a regional park
- River access and water contact opportunities
- Habitat and riparian enhancements
- Special use opportunities, such as for events, banquets, equestrian activities
- Internal circulation, including roadway, trails and paths
- Re-use of existing buildings

As was noted throughout the process, most residents care deeply about the future of this site, especially in relation to the adjacent Daybreak Park and nearby Lewisville Park. The response from citizens of all ages and interests was passionate, and this feedback played an important role in organizing design elements and prioritizing near-term development and restoration activities. Clark County, Vancouver-Clark Parks & Recreation and the Lower Daybreak Master Plan consultant team would like to extend gratitude to the community members who participated in this effort and supported, enriched and improved the master planning process to keep this park as a treasured regional resource.

Public Meetings

Two public, open house meetings were held during the planning process. Direct mail newsletters, newspaper ads, newspaper articles and email announcements were used to publicize the events. Each meeting lasted approximately two hours, and summary responses from each meeting are provided in Appendix B. At each of the public open houses, comment cards were used to record responses and ideas. A written survey also was distributed at the first open house to elicit general concerns and comments.

Meeting participants reviewing the site's opportunities and constraints

The first session included an overview of the planning process and project purpose. The intent was to elicit local insights on the future vision for the Lower Daybreak site and to begin to explore park program opportunities. Held at Daybreak Primary School on October 14, 2009, approximately 65 people attended the open house. Display stations provided graphic and narrative information boards for residents to review, comment and discuss and covered content such as, aerial imagery, property use and history, regional park definition and a conceptual master plan layout. Additionally, small group discussions were facilitated to review the conceptual plan and seek feedback on the layout and the range of recreational spaces presented.

Local residents discuss and offer feedback on the conceptual design

The second public meeting was held on December 8, 2009 and provided residents with a project update, along with a summary of comments received during the first community meeting. Over 50 participants attended to review and comment on a revised master plan graphic. The primary focus was toward the balance of active and passive recreational spaces, as well as the overall extent of proposed reforestation and habitat restoration. As with the first open house, comments were recorded at display stations and on comment forms.

Stakeholder Discussions

Several regional stakeholder were contacted during the conceptual design process to elicit their feedback and gain an understanding of their specific needs and potential for future or extended partnership arrangements. While the specific interests of each stakeholder may not be able to be accommodated at Lower Daybreak, their insights helped frame the development potential of the park, along with site layout considerations.

- **Fish First:** Fish First is a local non-profit organization founded in 1995 to restore fish runs in the Lewis River system. They have previously worked with and coordinated with Clark County for grant writing and restoration activities along the river. Most recently, Fish First was active in leading restoration effort along the western edge of the Lower Daybreak Park. The organization is interested in streambank restoration and other riparian area enhancements for the benefit of salmonid populations in the East Fork Lewis River.

- **Clark County Executive Horse Council:** CCEHC is a local non-profit dedicated to representing the equine industry in Clark County, and it's goal is to protect and preserve the interests of horse owners and enthusiasts. This group is interested in finding a publicly-owned location for the development of a horse arena (outdoor and covered) in support of their events and need for rider and horse training.

- **4-H:** This national non-profit operates a Clark County club with support from the WSU Extension office, and their mission is guided toward youth development. Specific to this project, the local 4-H has voiced interest in securing a venue for animal husbandry shows, events and training and considered the project site a viable location.

- **Disc golf advocates:** A group of local disc golf players approached the Parks & Recreation Department for potential sites to establish other disc golf courses. This group is interested in

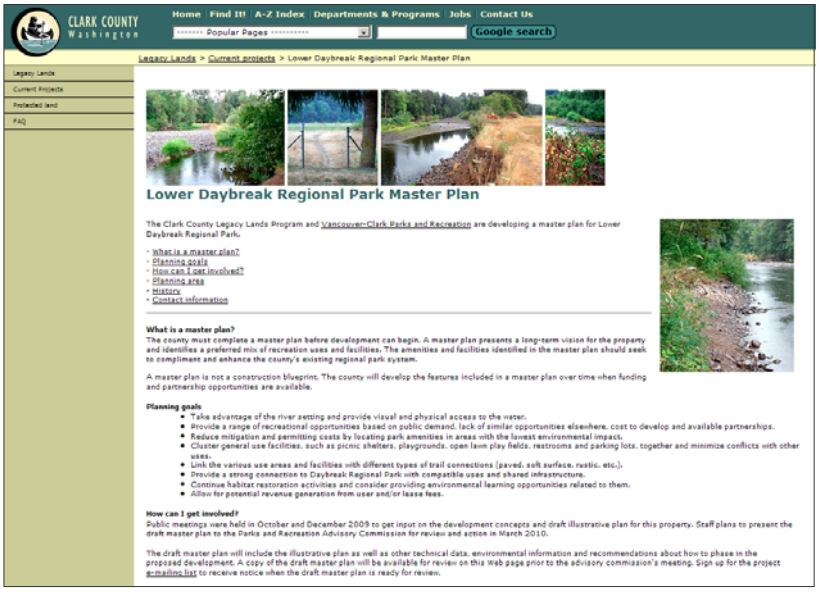
helping design and install an 18-hole course at Lower Daybreak, to include the potential for tournaments and related events.

Discussions with several other potential stakeholders in the project occurred and included a radio control (RC) vehicle club, paintball players, Clark Public Utilities, a curling group and the Southwest Washington Llama Association. For example, the RC club voiced interest in an area for an obstacle course and dirt track for their vehicles, paintball enthusiasts were seeking an outdoor course for gaming, and the curling group was interested in the potential to share space within an equestrian arena for their sport.

These interests and the potential for partnership opportunities were documented. Although the broader intent of the regional park system is to provide for a full range of recreational demands, no single regional park property is able to accommodate all of the desired uses, and the master planning process is one of defining the most appropriate blend of uses for the site's constraints and capacity.

Project Website

A project website was maintained by Clark County throughout the duration of the project. The site provided information about the master planning process, master plan concepts and meeting schedules, presentation materials and summary notes.



Current Financial Context

As noted above, the purpose of this master plan is to provide a clear vision of and framework for the future development of Lower Daybreak. At the present, Clark County does not have identified or dedicated funds to support the implementation of this master plan. The future development of this site will be phased to maximize the potential for grant awards and partnership opportunities, in balance with requisite park infrastructure (park roadway, parking areas, utilities, etc) and within an optimal permitting and mitigation framework.

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III. Existing Conditions / Site Analysis

Overview of Existing Uses

The Lower Daybreak properties are largely undeveloped, consisting of an agricultural field that is mowed occasionally and includes two residences. While no programmed activities presently occur on the site, the small house on the southern edge is currently leased as a rental, and the larger house with access from Septan Road is unoccupied. The site accommodates informal use, such as walking, fishing and dog walking and training. The County has partnered for streambank restoration and limited habitat restoration, including blackberry removal. Additionally, VCPRD entered into a two year agricultural lease in September 2009 for the care and management of the site's field area.

Open field of Lower Daybreak Park, view to the east toward NE Daybreak Road

The existing 76-acre Daybreak Regional Park is adjacent to the northeast corner of the site and straddles both sides of NE Daybreak Road/NE 82nd Avenue. On the east side of NE Daybreak Road, the park features picnic sites, play equipment, restrooms and parking. On the westside of Daybreak Road, the boat launch, which was developed jointly by the Washington State Department of Fish and Wildlife and Vancouver-Clark Parks and Recreation Department, provides a parking lot with 32 stalls for vehicles with trailers. Fishing occurs from the river banks and from boats.

Water Access & Paths

The primary water access to the East Fork Lewis River is from the boat launch, and shoreline fishing opportunities exist along much of the south side of the river. Drift boaters, kayakers and canoeists access the water from this location year round. The Daybreak Park launch is one of three developed facilities located along the East Fork Lewis River, and it is situated between the launch sites at Lewisville Park and Paradise Point State Park. Due to recent budget shortfalls, the County closed vehicle access to regional parks during the winter months and formed a partnership with local conservation groups to maintain access to this launch.

The Daybreak Boat Launch is one of only three boat access points on the EFLR

Several paths traverse the site. A worn earthen path extends from the boat launch parking lot westward into

the open field and parallels the riparian forest edge. Also a series of paths extends westward from the boat launch through the woodland and are heavily used for shoreline fishing. In the certain areas, worn pathways have worsened streamside erosion.

Rogue paths follow the river for approximately a ¼ -mile from the western edge of the bridge

Earthen paths have accelerated erosion in areas of the site

Shoreline fishing remains very popular west of the bridge.

Existing Structures

Two residential buildings are located on the property. One is situated in the southwest corner of the site and is currently occupied as a rental via a lease administered by Clark County. The second is a vacant residence located on the westernmost parcel (known as the "Ibrahim property"), and it is accessed via Septan Drive - a steep driveway following the wooded slope along the southern property boundary. The County is considering various options for the Ibrahim house (e.g., re-use, demolition) through an evaluation process separate from this master planning effort; however, several ideas were offered by residents during the first open house meeting.

Paved entry drive to the Ibrahim house

Access, Parking & Utilities

Access to Lower Daybreak is not currently restricted or controlled and is provided via the boat launch parking area from NE Daybreak Road. A constructed fence opening separates the boat ramp parking lot from the open field, and a footpath has been worn into the grass paralleling the river. This path proceeds west and appears to be used primarily by people accessing the riverbank for fishing and occasionally by dog walkers.

Each residence is served by separate, private driveways. The Ibrahim property drive is paved, and the rental drive is gravel. Formerly an unimproved drive crossed Manley Creek near the rental, but it now terminates at the southern

bank since the culvert has been removed. Water (on-site well & septic system for both houses – not a "water utility"), electric and phone utilities serve the residential buildings. Clark Public Utilities operates a north-south electric distribution line that bisects the site, and residential house drops connect to each residence. An overhead utility line and poles terminate near the middle-west portion of the site.

Planning & Land Use Conditions

Land use zoning for the site includes two classifications: the two larger, eastern parcels (225383-000 & 225396-000) are zoned R-20 (20 acre minimum lot area), and the four western parcels are zoned R-5 (5 acre minimum). All six parcels have a Comprehensive Plan designation of R-Rural. As per the Clark County Unified Development Code, Section 40.210.020 "Rural Districts," publicly-owned recreational facilities, services, parks and playgrounds are allowed uses subject to approval of applicable permits.

In the surrounding area, land uses are primarily low-density, rural residential with some farming activity. Barns and stables are common, as are agricultural fields for crops and livestock. While this area originally developed with agricultural uses, it appears the majority of properties are too small to support large-scale, production farming and more dense ranchettes are encroaching from the northeast and southwest.

Plans for the larger East Fork Lewis River Greenway include the subject property and indicate that future development should consider the site's relevance to the Greenway and the cohesive corridor that it creates, both for land- and water-based recreation and for riparian and aquatic habitat. The site is identified in the current Vancouver-Clark Comprehensive Parks, Recreation, and Open Space Plan as a "Greenway Trail" facility. The intent of this designation is to develop trails along greenway corridors that follow linear features (e.g., streams, rivers, power lines, and rights-of-way). Greenways trail sites provide public access to trail-oriented activities, including walking, biking, or running, horseback riding and preserve open space, while also providing a buffer from development when placed along riparian corridors. In addition, greenway trails often include viewpoints, seating areas and interpretive displays.

The East Fork of the Lewis River Greenway Trail is also identified in the 2006 Regional Trail & Bikeway Systems Plan. The trial corridor extends from the confluence of the East and North Forks near La Center Bottoms upstream to Moulton Falls Park before heading north along the Chelatchie Railroad Trail corridor. Daybreak Park and its boat launch are identified for their important water access point along the future regional trail alignment. The regional trail would provide over 28 miles of a significant regional recreation amenity for walkers, bikers, equestrians and paddlers through the heart of Clark County.

Natural Resource Conditions

A component of the conceptual site planning effort included the preparation of a detailed, natural resources report entitled "Lower Daybreak Park Natural Resources Existing Conditions Memo." The complete report is provided in Appendix D and summary findings are provided below. A map of critical environmental characteristics and development constraints appears on page 19.

Terrestrial Resources

The historical vegetation within the park would have been a gallery forest with patches of even-aged hardwoods and conifers reflecting flood disturbance and shifting channel locations. The higher terraces

would have been dominated by mature conifers. Rural development and agriculture have significantly altered the floodplain terraces, principally by clearing vegetation.

The vegetation observed at the site varied from a grass-dominated field to well-forested areas. Forested areas exist within the northeast corner of Lower Daybreak and in the southwestern portion of the site along Manley Creek. The open field has been regularly mowed. A complete list of species observed at the park is shown in Table 1.

Table 1. Site Vegetation

Botanical Name	Common Name
Ground Cover	
Agrostis exarata	Spike bentgrass
Carex deweyana	Dewey's sedge
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Dactylis glomerata	Orchardgrass
Festuca arundinacea	Tall fescue
Festuca rubra	Red fescue
Galium aparine	Cleaver's bedstraw
Geum macrophyllum	Largeleaf avens
Heracleum lanatum	Cow-parsnip
Lemna minor	Duckweed
Lolium perenne	Perennial ryegrass
Phalaris arundinacea	Reed canarygrass
Plantago lanceolata	Rib plantain
Nasturtium officinale	Water-cress
Scirpus microcarpus	Small-fruited bulrush
Tolmiea menziesii	Piggy-back plant
Urtica dioica	Stinging nettle
Shrubs	
Cornus sericea	Red-osier dogwood
Rubus procerus	Himalayan blackberry
Rubus ursinus	Trailing blackberry
Sambucus racemosa	Red elderberry
Spiraea douglasii	Douglas spirea
Symphoricarpos albus	Common snowberry
Trees	
Physocarpus capitatus	Pacific ninebark
Populus balsamifera	Black cottonwood
Salix sp.	Willow sp.

Rare Plants

The Washington Natural Heritage Program (WNHP) collects and distributes information on rare plants and ecological communities. There are 25 identified rare plant species within Clark County; however, the

WNHP GIS data does not identify any WHNP-plant species, high-quality or rare plant communities existing within the site.

Wildlife

Wildlife observed within the project area include beavers, voles, red-tailed hawks, kestrals, blue heron, geese, stellar jays and juncos. Other species that may be found includes deer, elk, raccoon, coyote, rabbits, other small mammals, bald eagles, osprey, various waterfowl species and songbirds. The East Fork Lewis River and Manley Creek provide adequate habitat and foraging habitat for these species; however, sections of each waterway lack significant riparian canopy cover and, public use of these areas may limit wildlife activity during the day. This is especially true along the southern bank of the East Fork Lewis River where a network of worn, dirt trails exist.

Amphibians and reptiles were not observed at the time of the site assessment; however, it is likely that they utilize the waterway and riparian zone for burrowing, nesting and feeding. Amphibians and reptiles are likely to be found near Manley Creek inhabiting damp meadows, dammed ponds, streamsides and wetland areas. They are also to be found in similar habitats along the East Fork Lewis River. Species that have been seen within the immediate area include rough-skin newts, red-legged frogs and northwestern salamanders. Other species that have not been observed, but may be present, include the Pacific tree frog, western pond turtle, northwestern garter snake, Dunn's salamander and western red-backed salamander.

Fish

The Washington Department of Fish & Wildlife (WDFW) Priority Habitat and Species (PHS) report identifies fish present in the East Fork Lewis River and Manley Creek. The East Fork Lewis River supports several populations of salmonid species listed as threatened by the federal Endangered Species Act (ESA). Chinook salmon, coho salmon, chum salmon and steelhead are all listed and potentially present in the vicinity of the park.

Table 2. Listed Fish Species Present on Adjacent Waterways

Fish Species	Waterway	Status		Critical Habitat
		State ESA	Federal ESA	
Chinook Salmon	East Fork Lewis River	Candidate	Threatened	Yes
Coho Salmon	East Fork Lewis River Manley Creek	—	Threatened	Under Development
Steelhead	East Fork Lewis River Manley Creek	Candidate	Threatened	Yes
Chum Salmon	East Fork Lewis River	Candidate	Threatened	Yes

Other fish species, including cutthroat trout, are likely present in Manley Creek and the East Fork Lewis River.

Soils & Groundwater

The site consists primarily of river and glacial deposits over bedrock lava flows. Clark County data indicate that the steep slopes along the south edge of the site are a severe erosion hazard. Hydric soils, which are indicative of wetlands, exist in the open field. Groundwater occurs in the alluvium beneath the property at a relatively shallow depth, and hydraulic continuity exists between the groundwater system and the river.

Unstable soils show recent erosion along the south bank of Manley Creek.

Wetlands

The National Wetland Inventory (NWI) and the Clark County Wetland Inventory both identify potential wetland areas within the boundary of the site. Presence of these wetlands was field-verified in late fall of 2008. These wetlands are associated with the Manley Creek stream channel, the East Fork Lewis River and a swale located in the woodland west of the Daybreak Park boat ramp parking lot. The majority of wetlands are located along Manley Creek.

In addition to the inventory-mapped wetlands, potential wetland areas were identified during field reconnaissance. These areas are located in the pasture areas to the north and south of Manley Creek, and additional wetlands bordering the Manley Creek stream channel. The Clark County Geographic Information System (GIS) data also identifies the locations of high quality wetlands north of the East Fork Lewis River and east of the project site within Daybreak Park.

Streambank erosion on the site adjacent to the East Fork Lewis River.

The wetland delineation identified wetlands in the following rating categories: Category II, Category III and Category IV. Wetland buffer widths are determined by comparing the wetland rating category to the intensity of the proposed land use. The buffer width is also based on the protection of habitat and water quality functions.

Table 3. Potential Wetland Buffers Widths

Wetland Rating	Land Use Intensity	Buffer Range*	
		Min.	Max.
Category II	Low	50’	150’
	Moderate	75’	225’
	High	100’	300’
Category III	Low	40’	75’
	Moderate	60’	110’
	High	80’	150’
Category IV	Low	25’	
	Moderate	40’	
	High	50’	

Stream/Riparian Areas

The East Fork Lewis River flows westward past the property and forms the northern site boundary. Accelerated erosion of the bank is obvious and is likely due to a combination of short- and long-term issues including changes to the watershed from agriculture and development, constriction of the channel from upstream bridge abutments for Daybreak Road and lack of vegetation along the river's edge to stabilize it. A bank stabilization and fish habitat improvement grant proposal for the East Fork Lewis River abutting the property is pending review before the Lower Columbia River Salmon Recovery Board, and additional near-term measures may be needed to improve the bank.

Location of culvert removal on Manley Creek.

Also, various improvements have been made to Manley Creek since the Lower Daybreak properties were acquired in 2002. An in-stream pond that was associated with the vacant house was removed, and the banks were restored. As noted above, the culvert near the occupied house was removed, leaving a single bridge near the middle of the southern boundary as the only access across Manley Creek on the site. Additionally, an active fish habitat enhancement project is underway in the lower reach of the creek.

Riparian habitat includes both water and land resources.

Both the East Fork Lewis River and Manley Creek have Riparian Habitat Conservation areas associated with them. The East Fork Lewis River is a designated shoreline of the state and is classified as a "Type S" water – defined as having flows averaging 20 cubic feet per second (cfs) or more. The Clark County Habitat Conservation Ordinance designates riparian priority habitat as extending outward a specified distance from the ordinary high water mark (OHW) of the stream or to the edge of the 100-year floodplain, whichever is greater. For Type S streams the specified distance is 250 feet.

Manley Creek is classified as "Type F" water; Type F streams are defined as those that are not Type S but still provide fish habitat. Riparian priority habitat for Type F streams extends 200 feet from OHW. In some areas at Lower Daybreak Park, the 100-year floodplain marks the boundary of the riparian habitat area. Overall, a large portion of the site falls within a Riparian Habitat Conservation area.

Lack of riparian canopy cover reduces wildlife habitat.

Priority Habitats and Species

The Priority Habitats and Species identified by the WDFW are discussed below.

Riparian Zones (RIPAR)

Riparian Habitat Conservation Areas are those areas adjacent to aquatic systems with flowing water containing elements of both aquatic and terrestrial ecosystems that mutually influence each other. Riparian habitat begins at the ordinary high water mark and extends to that portion of the terrestrial landscape influenced by, or directly influences, the aquatic ecosystem. Riparian habitat includes the entire extent of the floodplain and riparian areas of wetlands directly connected to stream courses.

The East Fork Lewis River and Manley Creek riparian habitat corridor extends over a majority of the site. The East Fork Lewis River riparian area is described as providing high quality habitat with a multiple layered canopy.

Manley Creek offers higher quality riparian habitat and currently includes a beaver dam

Waterfowl Concentrations (WAFO)

Waterfowl habitat is primarily associated with wetlands and wetland fringe areas. Areas commonly or traditionally used on a seasonal or year-round basis are defined as "Regular Concentrations." Areas commonly or traditionally used by significantly large aggregations of animals, relative to what is expected for a particular species or geographic area are referred to as "Regular Large Concentrations." The PHS report identifies wetlands and agricultural lands associated with the East Fork Lewis River as supporting Regular Large Concentrations of breeding and wintering concentrations of waterfowl.

Bald Eagle

The Bald Eagle is a state sensitive species and a federal species of concern. The PHS report identifies the presence of two bald eagle nests 1.0 to 1.5 miles west of the Lower Daybreak properties, which is also outside of the identified 800-foot buffer around each nest.

Osprey

Osprey are listed on the Washington State Monitor List. State monitor species are not considered species of concern, but they are monitored for status and distribution. These species are managed by the WDFW, as needed, to prevent them from becoming endangered, threatened or sensitive. The PHS Report identified the presence of osprey nests located on power poles at the Storedahl mine, located approximately one-quarter mile from the southeast corner of the site.

Designated (Regulated) Areas

Portions of the Lower Daybreak site fall within special regulatory areas.

Areas of Special Flood Hazards

Areas of special flood hazards are those areas identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Rate Maps for Clark County. These areas include the floodway, floodplain and flood fringe. Areas of special flood hazards along the East Fork Lewis River and Manley Creek have the potential to be impacted by the proposed development.

Geologic Hazard Areas

Geologic hazards include areas with steep slopes, historic or active landslides, areas of potential instability and areas with a severe erosion potential. In addition, geologic hazards can also include seismic and volcanic hazards. Clark County GIS data identifies a Severe Erosion Hazard Area along the southern side of Manley Creek in the western half of the park.

Critical Aquifer Recharge Areas

The entire project site is located within a Category II Critical Aquifer Recharge Area (CARA). A CARA is an area that has a critical recharging effect on aquifers used for potable (drinking) water. A Category I CARA is defined as the highest priority critical aquifer recharge area, whereas a Category II CARA is a primary critical aquifer recharge area. No aquifer recharge areas are known to be within the Lower Daybreak properties, but a Category I CARA is located less than 500 feet southwest of the western property boundary. Activities and uses commonly associated with park development, including stormwater collection systems, are exempt from requiring a CARA permit from Clark County (Clark County Unified Code, Chapter 40.410.010(B)3).

Archaeological & Cultural Resources

A review of data provided by Clark County indicates that the majority of the site has a high probability (80 – 100 percent) of containing archaeological resources, and a small portion of the site is within the area of moderate-high probability (60 – 80 percent) of resource presence. This is likely due to archaeologists' estimates that Chinook, Klickitat and Cowlitz peoples historically used areas along waterways within Clark County. The data also indicate that there are no registered historic sites on the subject property. A more complete archeological assessment will be required for future design development and in preparation for permitting and site planning.

The map on the following page illustrates the extent of known environmental and topographical constraints on the property.

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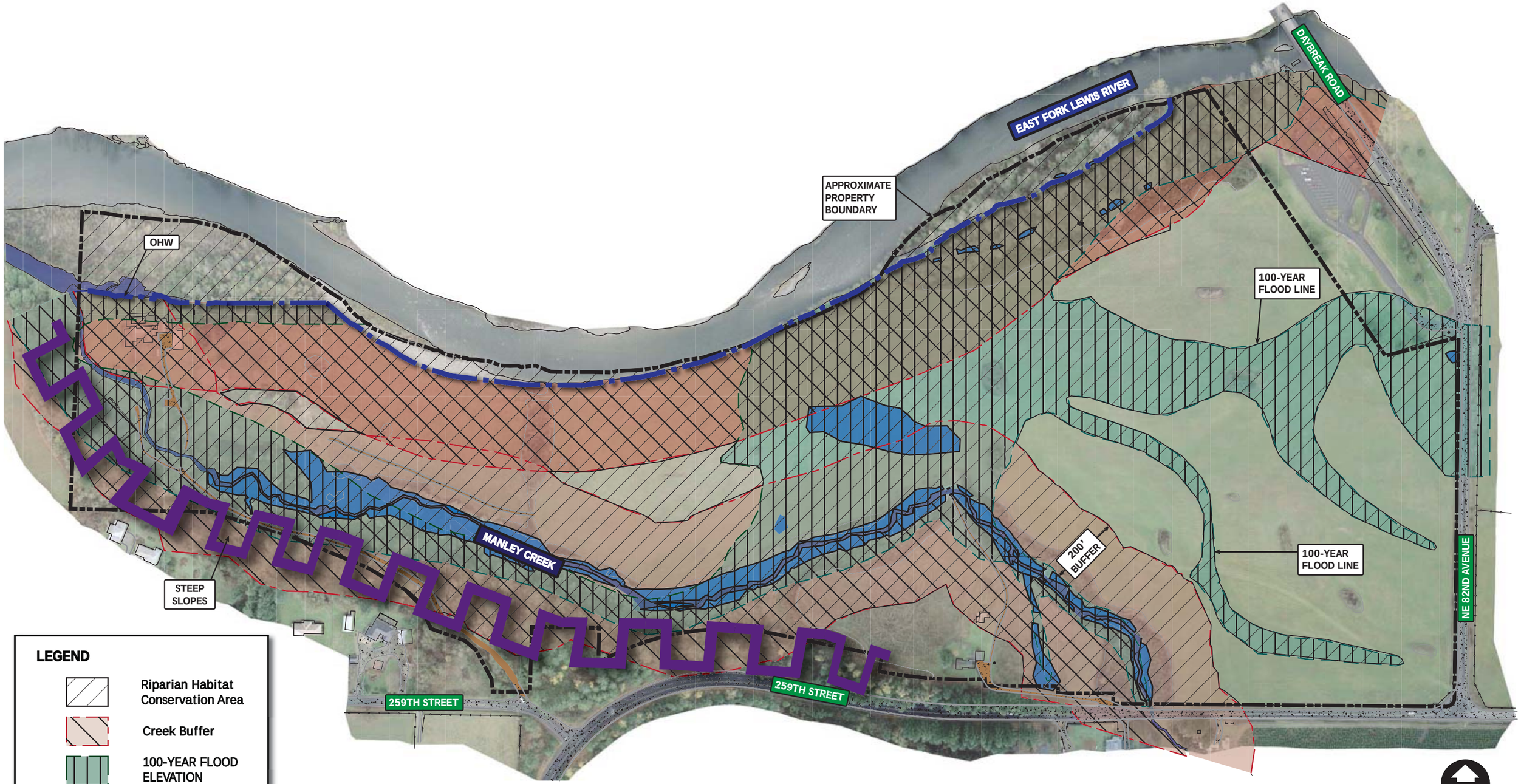


alta PLANNING + DESIGN

March, 2010

Lower Daybreak Park Master Plan

SITE CONSTRAINTS

VANCOUVER-CLARK PARKS & Recreation

CLARK COUNTY, WASHINGTON

IV. Recreation & Resource Opportunities

Regional Park Planning Framework

The Lower Daybreak properties can serve a supporting role in the Vancouver-Clark Parks and Recreation Department's mission to meet community needs by providing "*an interconnected system of parks, trials, recreation facilities, and natural areas that support environmental stewardship and diverse recreational programs and opportunities,*" as per the 2007 Vancouver-Clark Comprehensive Parks, Recreation and Open Space Plan. Lower Daybreak is classified as a greenway/trail area and as part of the larger East Fork of the Lewis River Greenway. The parks plan further identified the value of greenways as linear corridors for the preservation of open space, protection of water and habitat quality and the location of potential trail connections.

Furthermore, the 112-acre Lower Daybreak site will contribute to the needs of the overall regional park system. The site expands public ownership along the East Fork Greenway and offers crucial opportunities to enhance water quality and habitat values, along with enabling riparian greenway connections and recreational uses. The 2007 Parks Plan identified a significant deficit in developed acres (438 acre deficit) for regional parks within Clark County. It also projected a growing shortage of regional parkland acreage and identified the need to acquire an additional 1,891 acres based upon population growth forecasts and adopted park service standards. The development of recreational acreage at Lower Daybreak will help reduce some of the overall system's regional park deficit.

Map 5. E. Fork Lewis River Greenway Map

The site also can play a critical role in providing regional non-motorized connectivity if it is developed in accordance with the East Fork Lewis River Greenway Trail as identified in the Clark County Trail and Bikeways System Plan. That plan shows a non-motorized route paralleling the East Fork Lewis River from Interstate 5 east to the Cascade Mountains, and when implemented, would provide a scenic, vehicle-free transportation and recreation connection east-west through the center of the county. This facility would also create a significant, attractive destination for visitors.

The Parks, Recreation and Open Space Plan identifies additional regional trail connections that will be integrated into the East Fork Lewis River Greenway Trail, creating an extensive pathway system throughout the county. Currently, only two portions of the East Fork Lewis River Greenway Trail have been developed. The trail segment within Lewisville Park is the nearest section to Lower Daybreak and is approximately two miles to the east.

The project site also holds the potential to become a regional trailhead for the East Fork Lewis River Greenway Trail, which allows convenient access and is critical to the success of the corridor. Other trails within the Vancouver-Clark system have facilities (access points, parking, rest rooms, or other amenities) located every 3-4 miles along the corridors.

Most significantly, the integration of the Lower Daybreak properties with the adjacent Daybreak Regional Park will improve park users' experiences through expanded recreation opportunities and may improve operating efficiencies as a single, larger site. A successful approach to integration also will require review of design solutions for crossing NE Daybreak Road, which will be necessary for user safety and operations and to provide seamless access to the unique facilities located at each site.

Park & Recreation Trends

Vancouver-Clark Parks, Recreation and Open Space Plan

The 2007 system-wide parks plan documented recreation trends and local needs. The assessment discussed the need for each of the community's six major park types, including neighborhood parks, community parks, natural areas and open space, regional parks, trails and greenways, and special facilities. Needs were defined based on input gathered through a community survey, public outreach and a technical analysis of parkland distribution and standards. The following statements highlight the demand for regional park facilities and the recreational experiences they provide.

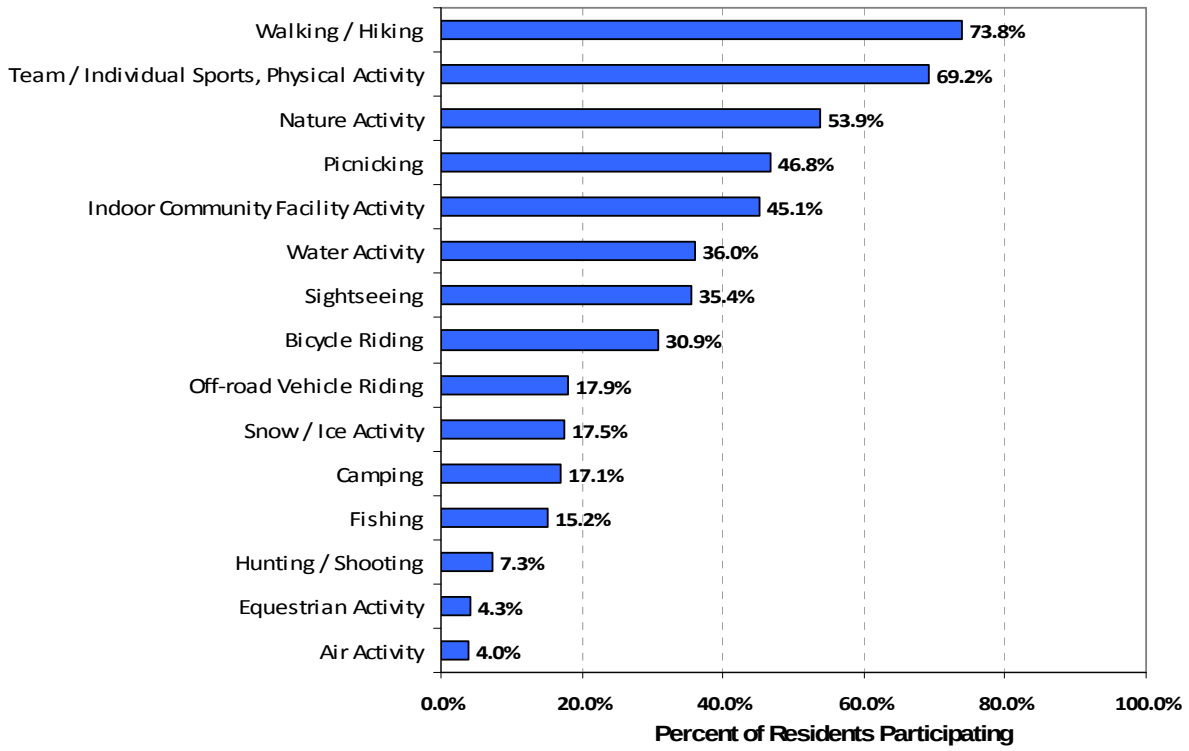
- Large percentages of survey respondents reported participation in activities that might take place in regional parks. Over 50% of respondents reported observing wildlife and 50% camping in the prior year.
- Trails and natural areas were among the most popular amenities as exhibited by respondents to the survey. Approximately 50% of residents responding to the survey had used these types of facilities at least once a month during the year preceding plan adoption.
- Trails were repeatedly mentioned in public meetings as a major facility. Trails and trail-related activities were also repeatedly mentioned in both stakeholder interviews and by regional meeting attendees. Survey respondents considered trails along rivers as the most important trail type within Vancouver and Clark County. Also, over 60% of survey respondents indicated that they would either somewhat or strongly support the development of equestrian trails by the VCPRD.

- Although recreation preferences are constantly evolving, certain activities have shown especially strong growth over the past several decades. Trail-related recreation is becoming increasingly important, locally, regionally and statewide, and outdoor activities/nature programming is also among the most popular activities in Washington.

Washington SCORP

The 2008 Washington State Comprehensive Outdoor Recreation Planning (SCORP) document guides decision-makers in better understanding statewide recreation issues and highlights recreation needs at the statewide level. Also, the SCORP included a listing of outdoor activities by frequency, as shown below. Broad similarities exist between the most popular statewide activities and those documented in the Parks, Recreation and Open Space Plan survey, such as the popularity of walking/hiking, nature activity, water activity and picnicking.

Table 4. Washington SCORP: Ranking of Major Activity Areas (2006-7)



Recreation Demands

Within the Vancouver-Clark County park system, regional parks are defined as recreational areas larger than 50 acres in size that provide opportunities for diverse recreational activities. Facilities may include sports fields, extensive trail systems or large picnic areas. In addition, regional parks often include passive recreation space and unique features, such as significant natural areas or access to lakes or rivers.

System-wide, the development standard is to have 18% of the total regional park acreage developed with recreational amenities; the remaining acreage is intended to remain in an undeveloped, natural condition.

Although the 112-acre Lower Daybreak site is large in size and appears as though it may be able to accommodate a range of recreational uses, limited space is available for high-impact improvements due to the constraints of wetlands, topography and riparian/habitat buffers. Given these limitations, a variety of potential recreational uses were explored and considered during the master planning process in an effort to examine with residents the most desired amenities and in the context of suitability to the site's natural features.

Active Recreation

The open spaces of the site make possible a variety of active recreation opportunities. Walking, running, bicycling and equestrian use can be accommodated and supported by connections to the larger, planned East Fork Lewis River Greenway Trail and to varying degrees through on-site trails. Smaller-scale recreation programming could include free or fee-based activities such as ropes course, volleyball, disc golf or specialized play equipment.

Play Areas

Overall access to playgrounds is limited in the area north of Battle Ground city limits. At the present, the nearest public playgrounds include the adjacent Daybreak Park, Lewisville Park and Daybreak Primary School. While the Lower Daybreak site is not intended to provide an urban-level play experience, the addition of a playground within the site design is consistent with regional park uses and can complement other potential amenities, such as picnic and open lawn areas. Also, the existing children's play equipment at Daybreak Park could be upgraded with new play equipment to strengthen the integration between the sites or relocated to an area within the Lower Daybreak site to create additional programming space within Daybreak Park. Additionally, given Lower Daybreak's unique riverine and natural setting, specialized or unique play equipment components, such as climbing boulders, could be considered.

Sport Fields

Significant effort has been made by local jurisdictions over the past decade to locate suitable areas for, and develop, athletic fields in central Clark County. However, an existing demand for baseball, softball and soccer fields remains, and specific interest exists for sport complexes to support competitive league play and tournaments.

A limited number of baseball, softball and/or soccer fields, along with associated support amenities, could be developed in those areas of Lower Daybreak Park not restricted by environmental constraints, but these fields would likely require an additional investment in under drainage and water conveyance due to the high ground water condition and extent of the floodplain across the site. Given these constraints, a sports complex of 12-16 fields with buildings for support operations, lighting for extending hours of play, the addition of parking to meet tournament demand and the

associated increase in traffic impacts would be cost prohibitive. In addition, users prefer these facilities to be more accessible and closer to urban areas, than this site can accommodate.

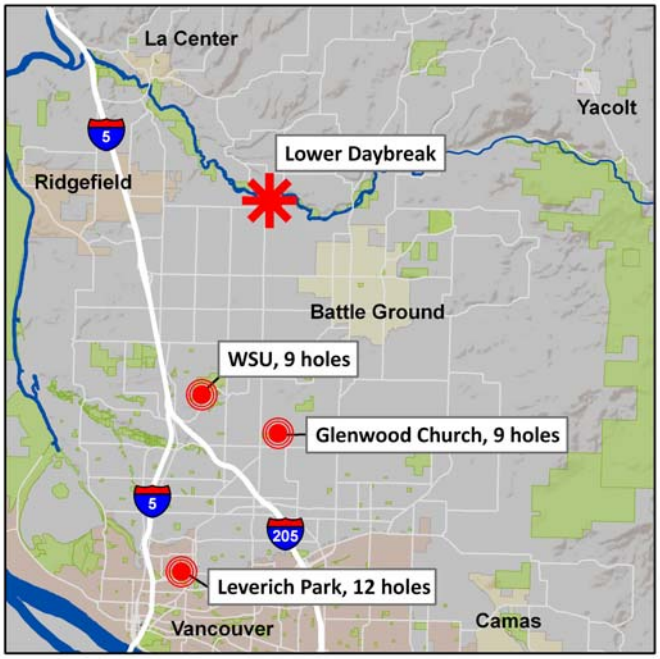
A less-intensive option could be a "multi-use playfield" that allows a variety of unprogrammed and unscheduled play as a complementary use to picnic shelters and playground. With the inclusion of one or two backstop structures, a multi-use playfield would have reduced costs and impacts while still provide a valuable amenity to families, especially in comparison to more structured sport facilities that frequently have limitations on use (e.g., restricted hours, no non-league play or practice).

Disc Golf

Disc golf has grown tremendously since the 1990's with over 1,200 courses throughout the U.S.; however, only 3 disc golf courses exist within Clark County, and all are within the Vancouver urban growth area (see map). VCPRD staff recently worked with local disc golf advocates to open a 12-hole course at Leverich Park in Vancouver, but the demand for additional facilities is strong.

Given the low-impact nature of the amenity, Lower Daybreak potentially can accommodate a 9-hole or an 18-hole course. Courses can be laid out in an unobtrusive manner to be sensitive to other park users and the surrounding landscape. Disc golf courses typically include designated tee areas (concrete or hard surfaced, turf or chip), pole-hole/basket, wayfinding signage and a course layout map. Additionally, multiple pole-hole footings could be installed to accommodate a wider range of layouts for distance, difficulty and diversity.

Map 6. Disc Golf Opportunities in Clark County



Passive Recreation

As noted in the SCORP and recent park system plan, passive recreational activities, such as wildlife observation, self-guided nature tours or photography, are increasingly popular. These activities could be integrated into an interpretive program focusing on site restoration to help visitors better understand how recreation and habitat preservation can be mutually accommodated. Also, passive recreation can be furthered by the development of an on-site trail system.

Picnicking is another primary passive activity that can be accommodated on site. As a regional destination, the Lower Daybreak site should offer opportunities for sheltered, year-round picnicking. VCPRD currently manages the picnic shelter reservation and special use permit application processes for the County, and the installation of future shelters at Lower Daybreak and Daybreak Park should be added to the reservation system. This will further facilitate the scheduling of group and family events.

Specialty Programming

Regional parks are appropriate locations for specialty recreation programming, in part due to their large size and unique site characteristics. Recognizing the environmental constraints at Lower Daybreak, intensive developments will likely be costly to permit, construct and mitigate. The opportunities are greater for low-impact, specialty recreation programming on site.

Equestrian

As is noted in the park system plan, community members have expressed interest in additional equestrian trails and facilities, primarily through the Clark County Executive Horse Council. While equestrian trails exist at Whipple Creek, Salmon Creek and Frenchman's Bar Regional parks, limited facilities exist to accommodate training, horse club or event activities. The Clark County Fairgrounds is the only publicly-owned facility in the county for these activities, but use is limited due to the amphitheater scheduling.

The Lower Daybreak site may offer an opportunity for a limited, special use equestrian arena for training and club gatherings. Due to likely limitations on parking and the environmental constraints, Lower Daybreak would not be suitable for large-scale events or provide significant revenue generation potential. If this use can be sited, adequate parking facilities should be provided for trailers, and shared-use or parallel trails should be of sufficient length. To encourage use by equestrians and limit user conflicts, equestrian trails should be soft-surfaced and separated from walking and bicycling trails.

Off-Leash Dog Areas

A recent trend in park programming is to provide fenced, off-leash areas for dogs. The need for this type of facility may be diminished by the large-lot, rural residential home sites typical of the area, as residents do not face the same limitations on private open space as those who live in more dense urban areas. While the demand for an intensive off-leash area might not be high given the area's rural character, opportunities exist to accommodate special, dog-oriented activities and events. Specifically, dog agility training and events may be suitable activities, via special use permit, in flexible use or reservable areas of the Lower Daybreak site. Existing dog walking enthusiasts using the site have indicated local interest in accommodating off-leash dog areas.

Radio-Controlled (RC) Vehicles

In recent years and during past park system planning public meetings, community members have advocated for space to operate radio-controlled vehicles (aircraft, cars). Currently, the Clark County Radio Control Society, a local non-profit, operates and maintains an RC airfield at Clark County Fairgrounds. This site is geared toward RC aircraft and opportunities for RC cars are limited. While a modest demand for additional RC space may exist, this use might not be best suited to the Lower Daybreak due to noise and other potential impacts to other park users and to local wildlife. A special use arrangement should be considered if a significant demand for additional RC space is documented.

Trails

Lower Daybreak holds the potential to serve as a regional trailhead and access point for the planned East Fork Lewis River Greenway Regional Trail, and a discussion of the development of single-use, pedestrian paths or a shared-use trail system is especially poignant.

Trails can be both an end and a means; trails can serve as destinations in and of themselves for exercise and other passive pursuits or as mere access ways connecting specific amenities (e.g., wildlife viewing

areas or fishing spots). Trails are extremely popular with a wide range of users and should be designed with loops and connections to maximize variety and provide important access routes to and throughout the site. A trail paralleling the East Fork Lewis River would have particular value to both active and passive users and provide views to the water.

Trails on the site may vary in width and surfacing, depending upon the intended uses. Wider trails (10 – 12 feet) with improved, impervious surfaces may be necessary to accommodate greater numbers of users and a wider range of users (e.g., walker, runners, equestrians and cyclists). These types of trails may create impacts to natural areas and may not be appropriate in all locations or permitted without significant mitigation. To minimize impacts and improve the likelihood of permit approval, trails segments traversing or in proximity to regulated natural features should be boardwalked or designed as narrow segments (less than 48 inches in width) with a pervious or soft surface. Soft-surfaced trails are defined as low-impact recreation facilities and are allowed in habitat and buffer zones, and as such, they can provide a valuable recreation experience within portions of the site that otherwise would be restricted.

Also equestrian-specific trails could parallel the shared-use trails and be considered in less environmentally-sensitive areas of the site. These trails may be designed to provide a specific challenge to horses and riders and fulfill a critical need for facilities in support of horse training and trail etiquette. Additionally, if other equestrian facilities are developed on site, such as a corral or stable, a loop trail connecting these elements would be ideal.

Water Access & Contact

While the East Fork Lewis River is a central feature of Clark County's landscape, county residents have relatively limited opportunities to access the river's edge and to see the dynamic forces and unique habitat that are present. Lower Daybreak provides another opportunity, among the limited existing parks and public accesses, for both active and passive enjoyment of the river.

The boat launch at the adjacent Daybreak Regional Park is one of the few public boat launches along the entire East Fork Lewis River. This considerable public asset has the potential to be expanded or improved to better serve the boating community through the appropriate design and use of lands available within the subject property in support of access, parking and staging areas.

River-based recreation and river access could be enhanced. Swimming in the East Fork Lewis River is a seasonal activity and is popular at other sites along the river, such as Lewisville Park. Since the existing Daybreak Park does not have good swimming access, the Lower Daybreak site could provide this access and opportunity for swimmers.

Shoreline fishing also could be enhanced with more formalized access points and facilities to control and reduce impacts and disturbance to the banks of the East Fork. Amenities for river-based fishing (such as a fish-cleaning station) and boating (including rafting and kayaking) could be provided in conjunction with improvements to the existing boat ramp. The concept of the East Fork Lewis River Greenway Trail could be expanded to include a water trail that provides a low-impact river experience that connects to and maximizes the use of existing and proposed water access support facilities such as parking, boat launches, picnic areas and restrooms.

Natural Resource Management & Restoration

The Clark County Conservation Futures Fund, which provided the monies to purchase Lower Daybreak, emphasizes the preservation and enhancement of environmentally-sensitive properties. Considerable opportunities exist to enhance the habitat on this site. Removing invasive species, planting native vegetation, closing user-made (rogue) trails in sensitive areas and reconstructing stream banks could be done to complement restoration efforts already initiated on the property.

The value of this work to aquatic and terrestrial plant and animal species would be significant, and an integrated and comprehensive approach could result in the creation of enhanced and restored wildlife habitat. This work could be coupled with the development or promotion of an environmental learning program that utilizes volunteers, including school children, in partnership with trained professionals to conduct components of the site restoration work.

The use of the site for wetland banking is also a possibility. Establishing the site as a wetland bank would help fund some of the on-site restoration enhancements through the sale of mitigation credits exchanged for off-site wetlands impacts created by other public or private developments. This would bring economic value to the project and enhance its habitat capabilities, while facilitating project development elsewhere. Recognizing that much of the Lower Daybreak site is constrained and unable to accommodate high-intensity park development, this option may provide a valuable use for a limited portion of the property.

The same features that limit development on the site also make it valuable. Having regionally significant fish-bearing waterways on and adjacent to the site creates opportunities for recreational uses such as fishing, boating, wildlife viewing and swimming. Although development near the East Fork Lewis River and Manley Creek may present permitting and design challenges, these riparian corridors are critical, unique elements of the site and a successful site design will integrate and maximize their value into the park. In its original (pre-settlement) condition, the Lower Daybreak site would have been mostly forested providing cooling shade and integral ecological value to the East Fork. Incorporating reforestation areas throughout the future park development will assist in re-establishing the site's value to the aquatic resources.

Agricultural Preservation

A large portion of the site historically has been used for the cultivation of agricultural products. The goals supporting the acquisition of the park via the Conservation Futures Fund include agricultural preservation, habitat enhancement and recreation. The continuation of limited agricultural activities on the property may be a viable near-term, interim use strategy. Agricultural leases for haying or other activities reduce maintenance burdens and provide modest revenue until site development begins. This approach is consistent with the 2009 Clark County Agriculture Preservation Strategies Report (Section V) which recommends using existing publicly-owned land to create a "lease-back" program to support a local agricultural industry that has been constrained by, among other issues, high land costs and conflicts with non-agricultural development.

Revenue Generation

To best provide services and amenities to its constituents, Clark County is broadly examining cost recovery programs for parks and open spaces. With the potential for site-based revenue generation to

defray operations and maintenance expenditures, more and better park amenities may be provided. For example, controlled site access could support the establishment of fee-based parking, consistent with other regional parks, since limited opportunities for off-site parking exist for those seeking to avoid the fee. Also if the site design can address the integration of parking and boating facilities at the Daybreak Park, it may be easier to consolidate fee collection from users visiting this important regional park.

Program offerings could also be developed in such a way as to enhance fee generation. The adaptive re-use of existing structures or the development of new facilities (e.g., enclosed meeting rooms or picnic shelters) could be rented for special events such as weddings, meetings, retreats or family reunions. Specialty facilities such as unique play equipment, disc golf course fees or a multi-sport field could also be bundled with a special use permit or rental. Additionally, third-party concessionaires might be able to operate on site via lease agreements with the County to provide special services to the public. This could include equestrian-oriented concessions and services, the rental of kayaks and canoes or the rental of bicycles to take advantage of the future East Fork Lewis River Greenway trail.

Park Management: Facilities

The existing residential structures on site present a number of opportunities. They could be leased to private parties for continued residential use or for uses associated with the proposed programming of the site (e.g., an environmental learning center or a bed-and-breakfast). They could be sold with revenues returning to the Conservation Futures Fund. The buildings could also be re-programmed by the County for use as residences for park department employees or caretakers or as offices for park staff. Also, since the Ibrahim house is located within regulated riparian zones and environmental buffers, any adaptive re-use of this structure will be limited to the extent of the current building footprint, but its re-use might provide an opportunity for a different, park-appropriate structure, such as a large shelter or educational facility, if deemed financially and operationally practicable.

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V. Conceptual Master Plan

A Vision for Lower Daybreak

Lower Daybreak is envisioned as a very special place in the region. As an integral component of the larger East Fork Lewis River Greenway and extension of Daybreak Park, the site's development will serve as a reminder of the region's natural heritage, and it will look to the future as a place where residents and visitors will learn to be better stewards of the environment and recreate in harmony with the surrounding landscape.

Guiding Principles

The master plan is based on a set of fundamental principles that provide a foundation for the plan's recommendations and can guide future actions and activities at the park, as a combination of the existing regional park and the adjacent properties. The principles are derived from the long-term vision for the site and its role as a park.

- Maintain the overall rural character of the site consistent with the intended uses of a regional park.
- Optimize site design to take advantage of the river setting and provide visual and physical access to the water.
- Provide facilities and improvements that support the park's purpose and integrate these into the park's natural features and landscape.
- Provide a range of recreational opportunities based on public demand, lack of similar opportunities elsewhere, cost to develop and available partnerships.
- Cluster general use facilities, such as picnic shelters, playgrounds, open lawn play fields, restrooms and parking lots, to minimize conflicts with other park uses.
- Connect the various use areas and facilities with different trail types (paved, soft surface, rustic, etc.), as appropriate.
- Provide a strong connection to Daybreak Regional Park and integrate compatible uses and shared infrastructure to create one park identity.
- Respect the ecological sensitivity of the site and reduce mitigation and permitting costs by locating park amenities in areas with the least environmental impact.
- Continue and expand habitat and riparian restoration activities and consider providing environmental learning opportunities (e.g., interpretive signage, programming, etc.) related to them.
- Protect the site's natural resource values when improvements are planned and carried out.
- Allow for potential revenue generation from user and/or lease fees.

- Establish partnerships as a key strategy in the park's management, operations, programs and improvement.

Overall Site Concept

Consistent with the guiding principles, the master plan for Lower Daybreak seeks a balance between active and passive recreational use with the restoration and enhancement of the riparian and lowland habitats. The design creates a strong connection to Daybreak Park and integrates access and amenities to establish a future, unified regional park. The combined site will consist of 167 acres, of which only 20 acres are identified as developed for recreational use. Overall, the footprint of developed areas would cover approximately 11% of the parkland.

With guidance from the assessment of environmental constraints and review of potential developable areas, the master plan design[1] balances the impacts of park development in such a way as to minimize intrusion into wetlands, habitat areas and buffers. In general, the more intensive park uses are located within drier, less constrained areas of the site, and the master plan proposes a gradation of development intensity from active uses to passive uses to habitat areas. Also, the main park road and special use area access along NE 259th Street avoid encroachment into wetlands and sensitive areas, and the parking lots and associated shelters are located within the most developable regions of the park, as per the constraints analysis. In addition, the master plan includes the following elements, which will be discussed in detail on the following pages:

- Re-aligned park entry with fee booth, caretaker residence and access management
- Three special use areas
- Two large group shelters and 8 small shelters
- Playground and 4 acres of mown turf
- Over 4 miles of trails
- Significant habitat and riparian restoration, along with reforestation

Phasing park development will be necessary due to the projected capital expenses and operating demands resulting from implementation of the full master plan. Project phasing is discussed in more detail in the following chapter, but the primary intent of the proposed first phase is to establish safe access to the park, provide a modest array of amenities and install critical infrastructure to facilitate future phases and partner-based development opportunities. Specifically, phase 1 proposes the development of the interior park roadway, parking, shelters, restrooms and trails, as well as addresses the re-alignment of the park entrance and roadway improvements along NE 82nd Avenue.

The illustrative graphics on the following pages depict the complete master plan and the phase 1 plan for Lower Daybreak.

[1] The master plan was conceived and designed within the framework of current regulations and codes. Pending updates to the Shorelines Master Program, among others, may affect the layout and subsequent development of park amenities.

Illustrative Plan

Lower Daybreak Master Plan
April 2010

0' 50' 100' 200'
SCALE : NTS

VANCOUVER-CLARK PARKS & Recreation

CLARK COUNTY, WASHINGTON
Legacy Lands Program

Illustrative Plan Phase I

Lower Daybreak Master Plan
March 2010

0' 50' 100' 200'
SCALE : NTS

VANCOUVER-CLARK PARKS & Recreation

CLARK COUNTY, WASHINGTON
Legacy Lands Program

Summary of Public Feedback

As was noted in the Introduction, community feedback and comments were instrumental in guiding the evolution and maturation of the master plan design. As is the case in any design process, conflicting opinions and perspectives were voiced regarding the preferred use and development of the site; however, even amidst diverse viewpoints, several common themes emerged that were consistent with the guiding principles and general public sentiment. The following highlights the range of comments offered during the process.

- **Maintain the site as natural area and open space:** Attendees to both open house meetings strongly favored keeping Lower Daybreak as a natural area. Based on comment forms received, this concept was ranked the most important, with 69% of respondents in favor. During small group discussions and through one-on-one discussions at display stations, residents also voiced interest in restoring the riparian areas of the site, improving fish habitat and not interfering with the beaver in Manley Creek.
- **Ensure future river access:** Another common theme was for access to the river. Residents noted the special quality of this site with its long stretch of shoreline, which is not common along the East Fork Lewis River. Some attendees to the meetings remarked that they did not want this site developed to the extent that Lewisville Park is built, and that they want to maintain the site's easy access to the water's edge.
- **Provide space for special uses:** Advocates for various special uses attended both public meetings and included those in favor of equestrian facilities, disc golf, paintball, radio-controlled vehicles, athletic fields, off-leash dog areas, among others.
- **Re-use the existing buildings on site:** In comments that were often tied to requests for special uses, residents voiced interest in seeing the existing structures on site re-used in some manner to enable special events, festivals and gatherings. Ideas were offered for the re-use of the Ibrahim house as a location for an environmental center, a meeting hall or a rental venue for weddings and banquets.
- **Add trails and provide passive recreation opportunities:** Residents were generally in support of the inclusion of trails in the park and the addition of picnicking facilities. Several attendees commented that Daybreak Park has recreation amenities that suffice, while others voiced interest in additional picnic shelters, new play areas and general access to the park.

The conceptual master plan presented at the first public meeting was modified as a result of public sentiment and discussions about the site's environmental conditions and constraints, interest in balancing recreational use and restoration, and preserving the natural qualities of the site. The majority of participants at the second meeting commented on how the draft plan met their ideal balance for recreation and restoration. Minor adjustments were incorporated after the second public meeting in response to feedback from environmental regulators and Clark County grounds maintenance staff.

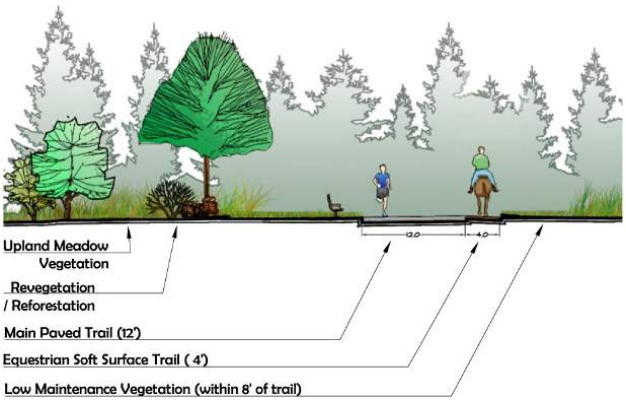
Park Experiences & Elements

Trails

Overall there are approximately 4.5 miles of trails provided as per the master plan design. Two trail types are proposed: primary and secondary.

Primary / Paved Trails

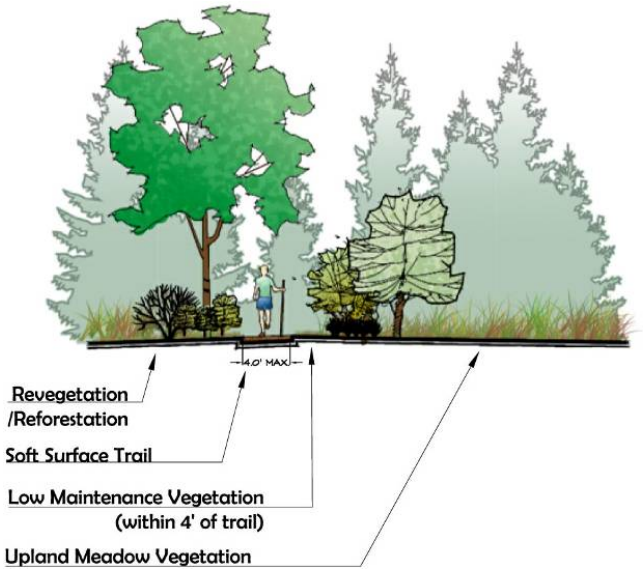
Primary or main trails are shared-use trails with a 12' wide paved surface and an adjacent 4' equestrian soft-surfaced trail. These shared-use trails will be used by walkers, runners, cyclists and equestrians. Approximately 2.3 miles of shared use trails are planned.



Main Trail Section (typ.)

Secondary / Soft-Surfaced Trails

Secondary trails include spur and loop trails that are 4' wide, soft-surfaced paths. These trails are located in or near more sensitive areas of the site and within critical area buffers. Approximately 2.2 miles of secondary trails are planned. Additionally, these secondary trails connect to the main trail and will offer users a more rustic experience with the natural setting of the site and facilitate closer access to the East Fork Lewis River. To further minimize impacts to sensitive areas and/or buffers, boardwalked trails may be appropriate in limited areas.



Secondary Trail Section (typ.)

Connection to the East Fork Lewis River Greenway Trail

While current planning recommends that the EFLR Greenway Trail pass through Daybreak Park on the south side of the East Fork and then cross the river at the existing Daybreak Road bridge, the Lower Daybreak site was considered to potentially contain a segment of the trail alignment. Upon review of the county-wide trail and bikeway plan and as discussed by staff, the likely future alignment of the EFLR Greenway Trail will not located within the Lower Daybreak site and be on the north side of the East Fork in this area. The master plan seeks to reinforce the role of the regional park as an important activity node and support facility along the future regional greenway trail, and as such recommends that future improvements to the bridge be completed to safely accommodate trail users.

Special Use Area 1 – Equestrian Facility

The master plan identifies the southeast corner of the site primarily as an equestrian facility and includes an outdoor fenced arena, covered arena, a warm up corral, horse stalls, washing area and parking to accommodate cars and trailers. These facilities will be accessed from the main park roadway and connected to the perimeter shared-use trail. The future development of this special use area will be contingent upon the installation of the park roadway and other support infrastructure, along with a partnership arrangement for the construction, management and maintenance by equestrian advocates.

Covered and outdoor facilities offer a variety of training conditions

Special Use Area 2 – Reservable

A second special use area is identified in the south-central area of the park. This area will be served from a separate access drive from NE 259th Street and gated, as appropriate, to manage use and access. The intent of this area is to provide a reservable, rentable special facility within the park. It will include a large picnic shelter with restroom, parking and mown turf area, and it can be used for retreats, weddings, family gatherings and a range of special activities such as dog agility events, community picnics and festivals.

Disc Golf

The master plan accommodates the installation of an 18-hole disc golf course on site. The location of the course will be determined through future design development and/or in partnership with the local disc golf club. One potential location for the course is toward the center of the park, northwest of the equestrian area and south of the park roadway. The course layout will carefully consider the adjacent equestrian facility and trails to avoid any incompatibility of recreational uses. The installation of the course will include the construction of tee areas and the placement of pole-holes for the disc baskets.

Disc golf provides low-impact, social recreation

Picnic Shelters

The master plan proposes ten new picnic shelters at the unified Daybreak Regional Park. A large shelter with restroom is planned at the main parking lot near the boat launch. A second large shelter with restroom is planned for the special use area in the south-central area of the site; this shelter will support that programmable and reservable space. At each of the two smaller parking lots along the interior park roadway, a grouping of three small shelters (30' x 40') is planned. These shelters will include picnic tables, but not restrooms. Also, two new small shelters are planned within Daybreak Park, one of which is a replacement to the existing caretaker facility that is planned for demolition and relocation to the westside of NE Daybreak Road. In the first phase of development, the large shelter near the boat launch and the first grouping of three small shelters are proposed.

Picnic shelters with easy access to parking accommodate family and group gatherings

Overlook

An overlook and resting area is planned at the midpoint of the park along the East Fork. This element will include a seat wall, some benches and interpretive signage. The overlook is situated along the river bend and allows unhindered views upstream and downstream. A soft-surfaced trail spur will extend from the overlook to the restored, stabilized river bank and provide an opportunity for water contact.

Play Area

A children's play area is planned along the main trail and in the area between the large shelter with restroom and the first grouping of smaller shelters. The playground will accommodate children ranging in age from 2 to 12 years and may be developed with special or unique play elements, such as climbing boulders or spacenet climbers. Opportunities for nature play may be incorporated into the main playground or among the groupings of smaller shelters to provide informal play options.

The play area is located within a clear line of sight from the shelters to the east and west

Park Furniture & Fixtures

In addition to the picnic tables associated with the planned shelters, other park furniture and fixtures include benches, bike racks and trash receptacles. Bike racks and trash bins will be located at the main picnic areas, and benches will be located near the play area and along the trail network throughout the site to provide opportunities for rest, respite and viewing the natural surroundings.

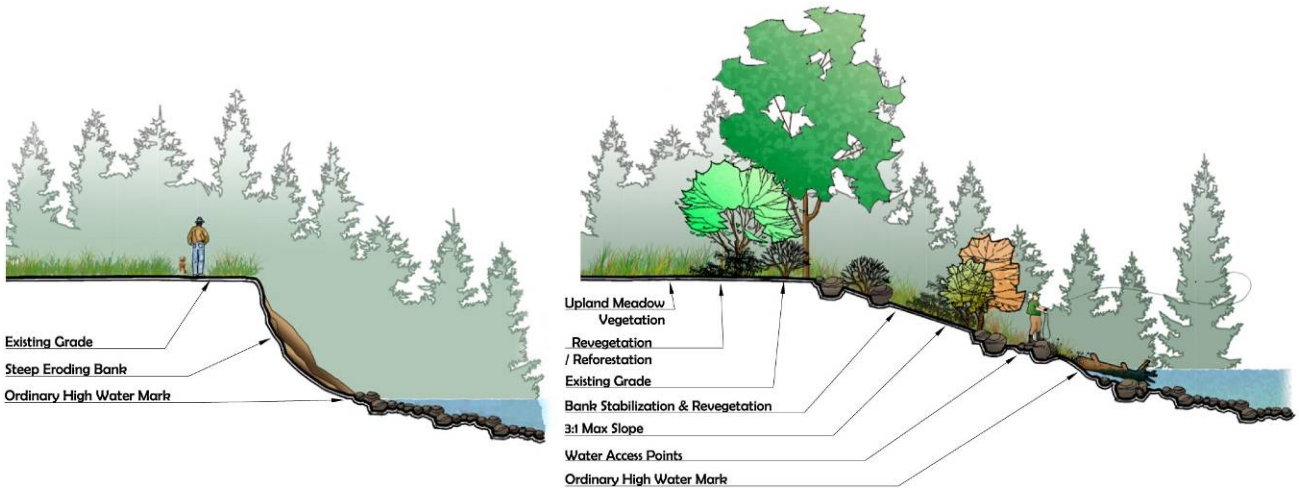
Informational signage includes wayfinding and rule signs and trail maps; these signs will be located throughout the park as appropriate. An entrance monument will be placed near the main access drive off of NE Daybreak Road to assist people in locating the entrance to the park. This sign should be aesthetically pleasing and contain visual elements that tie it to other Clark County parks signage as well as reflect the design theme for the expanded park.

Park furniture will provide accessible recreation and fit with the surroundings

Wetland & Habitat Restoration

Bank Stabilization

Within the Lower Daybreak properties, a significant section of the southern bank of the East Fork Lewis River has been eroded and undercut by past seasonal and high water events. The master plan for Lower Daybreak proposes the stabilization of approximately ¼-mile of the shoreline in an effort to minimize future erosion and bank movement. The master plan proposes specific restoration techniques which may involve terracing and re-contouring the bank, along with the installation of large rocks and new vegetation, and will be determined more precisely through future design development and construction documentation.



Streambank Sections: Existing Condition (left) and Proposed Stabilization (right)

Natural Area Restoration & Enhancements

During park development, a limited amount of wetland and buffer area impacts will occur. The site layout minimizes these impacts, but could not avoid every encroachment into these areas. As per the master plan, the proposed development will not impact any of the site's wetlands and will only encroach into 1.6 acres of wetland and riparian buffers.

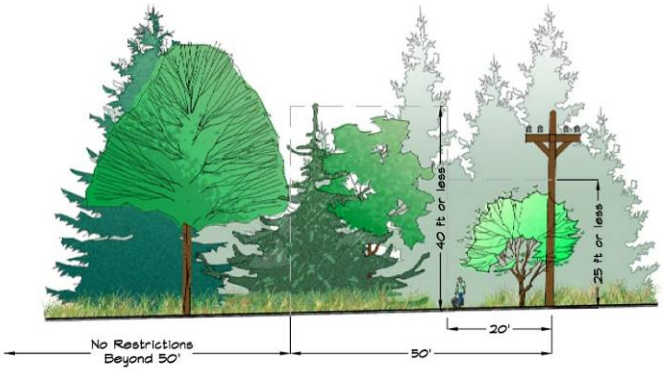
Buffer area enhancements will include a modest amount of site grading, along with replanting and monitoring. Plant selection will be proposed and approved through the permitting process, which may result in additional performance requirements. A more detailed assessment of permitting requirements follows in the next chapter of this report.

The master plan for Lower Daybreak exceeds what is required in regard to landscape restoration. Throughout the site, a significant number of new trees and shrubs will be planted in an effort to re-forest approximately 20.2 acres of the site. Upon maturity, tree canopy coverage is estimated at approximately 68 acres (40% of the unified

Extensive re-vegetation is proposed to enhance riparian areas and partially re-forest the site

Daybreak Regional Park). This effort will occur in phases and likely rely, in part, on partnership efforts for planting events.

Replanting will be appropriate to the specific locale within the park through the plant selection. Additionally, specific attention will need to be paid to the areas under the Clark Public Utilities (CPU) power lines that span the site. In these areas, CPU will require plant selection from a narrower listing of species that have growth habits conducive to being within utility corridors (i.e., smaller form, lower height). CPU is a willing partner in assisting with appropriate plant species selection and provision of plant materials for areas beneath the power lines.



Power Corridor Planting Section (typ.)

Environmental Education

Interpretive signage will be an integral component of the development of Lower Daybreak. The site's natural history, existing wetlands and enhanced riparian areas make for compelling interpretation and environmental education opportunities. Educational signs may be stand alone, angled panels or grouped within a larger interpretive display. Panels may include information about topics that pertain to specific areas of the park, such as the flora, fauna and geology, as well as the history of human interaction on the site.

Interpretive signage tells the story of the site

In addition to the passive educational opportunity provided by signage, the development of the park and the extensive, planned restoration of the site's natural landscape will create a unique outdoor classroom for students, scout groups, volunteers and other outdoor enthusiasts. Environmental education programs can be hosted at the park and can include activities such as water sampling, restoration monitoring, bird watching and other naturalist studies. Also, the design of the parking areas at the boat launch and equestrian area are intended to accommodate school buses in addition to boat and horse trailers. The larger shelters will provide sufficient covered space for school groups and others to gather.

Students exploring the natural surroundings

Access and Circulation

Park Entrance & Relation to Daybreak Park

The existing Daybreak Park is divided by NE 82nd Avenue, which separates park areas and creates a significant barrier for park users. One goal of this master plan is to integrate the public parkland located on either side of NE 82nd Avenue / NE Daybreak Road. The unification of Daybreak Park with Lower Daybreak is proposed through three significant improvements. A new main park entrance is proposed along the west side of NE 82nd Avenue to connect with the boat launch parking. An underpass near the base of the Daybreak Road bridge will connect the boat launch parking lot to the existing Daybreak Park parking lot to the east. This connection is planned as a two-way vehicular underpass, with an adjacent shared-use trail to separate non-motorized traffic. The third component is to remove the existing entrance into Daybreak Park, which currently exists in an undesirable location due to the curve in NE 82nd Avenue. This approach will establish a single, primary entry to the park to improve traffic safety, access management and fee collection for operations. A detailed park entrance plan follows on the next page and depicts the intended placement of the entry drive, access management and interior circulation to the boat launch parking area.


Large Shelter
Existing Parking
New Parking
Maintenance Area
Caretakers Residence
Vehicle Access
Control Gate
Park Road
Main Trail
Reforestation
NE 82nd Ave
Fee Booth and Gate
Ornamental fence
Realigned Entrance
Entrance Plan
Lower Daybreak Master Plan
March 2010
SCALE: NTS
VANCOUVER-CLARK
PARKS & Recreation

Parking

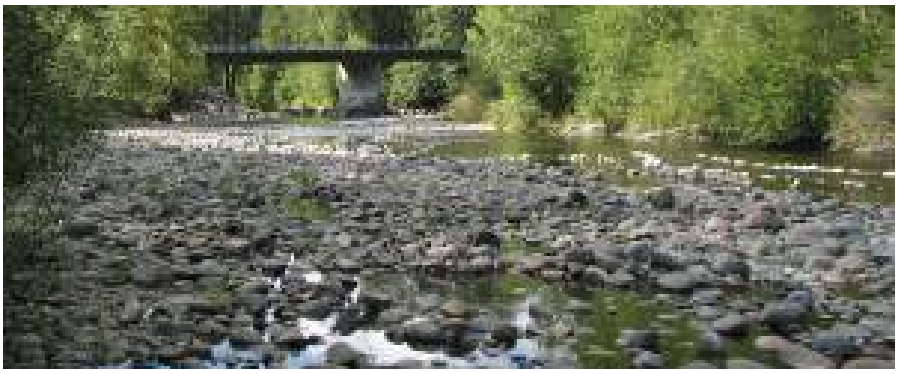
The full build out of the master plan includes the installation of 5 new parking areas, accommodating approximately 270 vehicles. The final design of the parking area layout and total number of stalls should comply with development code requirements. Stormwater runoff from the parking lots should be treating with a series of bioswales or other appropriate, low impact design approaches.

County Roadway Improvements

With the development of the Lower Daybreak properties and the associated installation of new recreation elements, traffic volume is expected to increase along NE 82nd Avenue / NE Daybreak Road. Additionally, the demand for park ingress and egress necessitates a re-design and widening of NE 82nd Avenue to accommodate a center turn lane in the north bound direction. The specific requirements for the turn lane will be identified during the permitting of phase 1 development.

Design Themes

The East Fork Lewis River is the primary attraction of the Lower Daybreak properties, and its rustic and wild character was used as a reference for an overall design theme and should be reflected in the design of park amenities.



Cobblestone can be a unifying theme that is reflected in the façade of various park elements and amenities.

Large, loose cobble frame the shoreline of the river, and gable end barns and residences are common in the immediate area near the park. These elements formed the backbone of a local vernacular that can be represented in the park through the selection of materials, roof lines and color. To further reinforce this vernacular, the design of future park amenities should also consider the sustainable design principles, along with the use of local building and recycled materials, permeable paving (as appropriate) and integrated signage.

VI. Phasing & Implementation

Project Phasing

Given the projected development costs, it is not likely that the County can develop all of the identified park features at one time. Park development will be phased over a number of years as funding becomes available or partnership efforts are formalized. Proposed phase 1 improvements to Lower Daybreak focus on several core amenities, while providing the requisite infrastructure for any initial development and subsequent phases. The major elements of phase 1 include the re-design of the park entry at Daybreak Road, initial development of the park roadway and limited parking, installation of a play area, picnic shelters and the riverside trail, along with a loop trail in the eastern portion of the site. The following list of proposed phase 1 improvements reflects a strategic, logical development of the park.

It is understood that many amenities are grant-dependent and actual construction may be sooner or later than is planned. All phases of work would be subject to the availability of volunteer work, grants or other funding. Initial development of the park will make it possible for VCPRD and Clark County to secure for additional funding or partner support to complete some of the specialized improvements and additional amenities.

The master plan for Lower Daybreak presents an ambitious, but achievable, schedule of physical and programmatic improvements designed to make the unified Daybreak Park a premiere park in the County's system.

Phase 1 improvements include:

- A new re-aligned park entry with sign and fee booth
- Approximately 2.25-mile paved, primary loop trail
- One large group shelter
- Three small picnic shelters
- Playground
- Approximately 2 acres of open play area
- Expanded parking near the existing boat ramp
- Additional parking near the small picnic shelters
- Sustainable stormwater collection facilities
- Upland reforestation
- Wetland, habitat and buffer restoration

Future improvements include:

- Over 4 miles of soft surface hiking trails
- Extension of the paved, primary loop trail with a gravel shoulder for use by equestrians

- Equestrian facilities with car and trailer parking, warm up arena, covered arena, outdoor arena and wash rack
- Programmable area south of Manley Creek with a large shelter with restroom, parking and 2 acres of open play area
- 18-hole disc golf course
- Three additional small shelters
- River overlook
- East Fork Lewis River bank stabilization improvements and sustainable water access points
- Reforestation and habitat improvements
- Vehicular and pedestrian undercrossing of NE Daybreak Road
- Caretaker's residence near new main entry
- Two picnic shelters in existing Daybreak Park
- Additional parking for 54 vehicles and extension of the park road
- Trailhead amenities for future EFLR Greenway regional trail

Illustrative Plan Phase I

Lower Daybreak Master Plan
March 2010

0' 50' 100' 200'
SCALE : NTS

VANCOUVER-CLARK PARKS & Recreation

CLARK COUNTY, WASHINGTON
Legacy Lands Program

Implementation & Partnership Opportunities

The master plan will guide future expansion of Daybreak Park. Improvements identified in the master plan will occur over several years and be achieved in several phases. These improvements are contingent upon available project capital funding and on-going operations and maintenance funding and capacity. The development of Lower Daybreak will require a variety of funding sources, along with strengthening relationships with local non-profits, philanthropic organizations and other potential partners.

Local Funding

While grant funding and partner support are desirable and expected for the development of some improvements to Daybreak Park, it should be recognized that numerous improvements will be funded from either the County general fund or dedicated park development funds, such as the Real Estate Excise Tax. Examples include necessary elements such as vehicular infrastructure, utilities, support amenities, permitting and design development. In addition, there will be operational and maintenance costs associated with the development of the park. It will be important to secure sufficient levels of funding that will allow for the continued operation of the existing parks and additional maintenance of this new park. Alternative financing options may include a levy, bond, lid lift or inclusion into a countywide park district.

Grant funding

It is anticipated that grant money will be used for the construction of many of the park amenities, with the intent to significantly leverage local funding for the project. Several grant types and grant sources may be pursued for improvements including riparian restoration, habitat enhancements, reforestation, trails and general park development. Within Washington, the Recreation and Conservation Office (RCO) operates a robust, consolidated grant program that encompasses state and federal funds for use in acquiring and developing parks and natural areas, along with protecting the state's diverse biological heritage. The RCO has awarded more than $1.4 billion in grants to more than 6,400 projects since the agency began in 1964.

- **Aquatic Lands Enhancement Account (ALEA):** This program, managed through the RCO, provides matching grants to state and local agencies to protect and enhance salmon habitat and to provide public access and recreation opportunities on aquatic lands. In 1998, WA DNR refocused the ALEA program to emphasize salmon habitat preservation and enhancement; however, the program is still open to traditional water access proposals. Viable park elements for an ALEA grant may include fishing platforms, viewpoints, non-motorized paths, interpretive signs, site restoration and others. Additionally, grant funding can be pursued in the restoration and development categories.

- **Land and Water Conservation Fund (LWCF):** This program provides grants to buy land and develop public outdoor facilities, including parks, trails and wildlife lands. Grant recipients must provide at least 50% matching funds in either cash or in-kind contributions. The LWCF program focuses toward projects that support individual active participation and provide active connections between communities and recreation sites and facilities. Viable park elements for an LWCF grant may include playgrounds, picnic shelters, viewpoints, trails, interpretive signs and support facilities such as parking, restrooms and utilities.

- **Washington Wildlife and Recreation Program (WWRP):** The RCO allocates funds to local and state agencies for the acquisition and development of wildlife habitat and outdoor recreation

properties. The WWRP is divided into Habitat Conservation and Outdoor Recreation Accounts; these are further divided into several project categories. Cities, counties and other local sponsors may apply for funding in urban wildlife habitat, local parks, trails and water access categories. Funds for local agencies are awarded on a matching basis, and the State Legislature must authorize funding to approve WWRP project lists. Given the scale and scope of the proposed master plan, a variety of planned park improvements might be viable for grant support in the WWRP subcategories of natural areas, riparian protection, trails, urban wildlife habitat and water access.

In addition to RCO-based grant programs, other opportunities exist to secure funding for project elements and components. Other grant programs include the National Parks Service's Rivers, Trails and Conservation Assistance Program, the National Tree Trust's Tree Seedling Grant Program or the American Forests' Global ReLeaf Grant.

Partnership Opportunities

Partnership opportunities are not seen as a primary implementation mechanism, but they are useful as matching value to grants and local funding and in expanding the potential to install and maintain specific amenities. It is anticipated that several organizations will want to adopt features within the park design and work toward their development. Potential partners can include business groups, corporate sponsors, other governmental agencies and non-profit organizations. Fish First and others have played a crucial role in the restoration activities that have occurred on site to date. Additional opportunities could be with various organizations such as Rotary, scout troops or church groups to provide labor to construct trails, provide picnic tables, invasive species clearing or other light tasks.

The Lower Daybreak master plan identifies specific activity areas suitable for partner-based development. Specifically, fundraising for the development and operation of equestrian facilities can be led by the Clark County Executive Horse Council. Several local disc golf advocates can be called upon to help support the installation of a disc golf course. Additionally, partnering opportunities exist within the Clark County organization through coordination with Public Works and Environmental Services for restoration planting and possibly wetland banking.

Cost Estimate

The cost estimate was prepared in March 2010 and provides a guideline for funding design and development of the park in the future. This preliminary cost estimate is based on the current understanding of the park program and known information about the site and its constraints. The estimate should be revised prior to funding or construction. Costs are based on 2010 dollars using contractor prices. Costs may be lower depending on the amount of volunteer effort and contributions or higher depending on when improvements are made.

Table 5. Cost Estimate Summary

	Complete Master Plan	Phase 1
	Estimate	***Estimate***
Park Structures	$1,174,300	$486,800
Park Amenities	$383,850	$229,000
Landscaping	$578,525	$278,928
Trails & Paths	$1,008,336	$339,900
Special Use Elements (equestrian, disc golf)	$713,476	$0
Habitat & Riparian Enhancement	$1,408,820	$184,820
Infrastructure (roadway, parking, utilities)	$2,270,193	$901,598
Site Preparation	$102,000	$70,000
Permitting	$40,000	$35,000
SUBTOTAL	**$7,679,500**	**$2,526,045**
Design A & E (20%)	$1,535,900	$505,209
Contingency (30%)	$2,303,850	$757,814
Sales Tax 7.7% (excl paving)	$450,846	$109,878
TOTAL	**$11,970,096**	**$3,898,945**

Table 6. Cost Estimate Detail: Complete Master Plan

Element	Item	Unit	Unit Cost	Quantity	Estimated Cost
Building & Structures					
	Registration booth	Lump sum	$6,800.00	1	$6,800
	Residence	Each	$140,000.00	1	$140,000
	Temporary Maintenance Facility*	Lump sum	$45,000.00	1	$45,000
Fencing & Gates					
	Bollards	Each	$850.00	6	$5,100
	Fencing & gates - other	Lump sum	$12,000.00	1	$12,000
	Fencing - vinyl	Linear Ft	$12.50	575	$7,188
	Gates	Each	$10,000.00	4	$40,000
In-Stream Habitat					
	Bank stabilization	Linear ft	$900.00	1,360	$1,224,000
Landscaping					
	Grass - seed	Acres	$11,000.00	2	$22,000
	Irrigation	Sq Ft	$2.50	95,310	$238,275
	Landscaping - other	Lump sum	$39,000.00	1	$39,000
	Mitigation - Buffer & RHA	Acres	$35,000.00	3	$121,450
	Mitigation - Site maintenance (2yrs)	Acres	$3,500.00	4	$13,370
	Mitigation - Monitoring (5yrs)	Each	$10,000.00	5	$50,000
	Top soil/mulch	CuYds	$45.00	35	$1,575
	Trees/shrubs	Lump sum	$25,000.00	1	$25,000
Outdoor Courts & Athletic Areas					
	Disc golf - basic course	Holes	$332.00	18	$5,976
	Disc golf - upgrades	Holes	$250.00	18	$4,500
Park Amenities					
	Fish Cleaning Station	Lump sum	$3,800.00	1	$3,800
	River Access	Lump sum	$12,400.00	1	$12,400
Park Furniture					
	Benches	Each	$2,500.00	10	$25,000
	Bike racks	Each	$600.00	4	$2,400
	Tables	Each	$3,000.00	28	$84,000
	Trash receptacles	Each	$650.00	4	$2,600
Parking					
	Parking - asphaltic concrete	Spaces	$300.00	161	$48,300
	Wheel stops	Each	$175.00	11	$1,925
Permits					
	Permits	Lump sum	$40,000.00	1	$40,000
Playground					
	Play equipment	Lump sum	$120,000.00	1	$120,000
	Playground surfacing	Sq Ft	$2.50	16,060	$40,150
	Play equipment upgrade	Lump sum	$45,000.00	1	$45,000
Roads					
	Bridges	Linear Ft	$1,000.00	720	$720,000
	Roads - asphaltic concrete	Linear Ft	$180.00	4,539	$817,020
	Roads - other	Lump sum	$400,000.00	1	$400,000
	Striping	Lump sum	$10,000.00	1	$10,000
	Undercrossing	Linear Ft	180	447	$80,460

Shelters					
	Group Picnic	Each	$300,000.00	1	$300,000
	Picnic	Each	$45,000.00	9	$382,500
Signing					
	Interpretive signs	Each	$6,000.00	4	$24,000
	Permanent entrance sign	Each	$4,000.00	1	$4,000
	Traffic/directional signs	Lump sum	$2,200.00	1	$2,200
	Trailhead/bulletin board signs	Lump sum	$1,800.00	1	$1,800
Site Preparation					
	Demolition	Lump sum	$32,000.00	1	$32,000
	Erosion control	Lump sum	$10,000.00	1	$10,000
	Mobilization	Lump sum	$40,000.00	1	$40,000
	Site preparation - other	Lump sum	$20,000.00	1	$20,000
Trails					
	Bridges	Lump sum	$40,000.00	1	$40,000
	Trails - asphaltic concrete (LF)	Linear Ft	$44.00	11,321	$498,124
	Trails - gravel	Linear Ft	$16.00	23,069	$369,104
	Undercrossing	Linear Ft	$150.00	518	$77,700
Utilities					
	Bio filtration - drainage swell	Lump sum	$45,000.00	1	$45,000
	Utilities - other	Lump sum	$45,000.00	1	$45,000
Viewpoints					
	Viewpoints	Lump sum	$16,500.00	1	$16,500
Special Use Area - Equestrian					
	Covered Arena	Each	$540,000.00	1	$540,000
	Horse facilities - other	Lump sum	$115,000.00	1	$115,000
	Wash Area	Each	$48,000.00	1	$48,000
	Parking - asphaltic concrete	Spaces	$300.00	39	$11,700
	Parking - asphaltic concrete	Spaces	$600.00	20	$12,000
Special Use Area - South Side of Manley Creek					
	Group Picnic	Each	$300,000.00	1	$300,000
	Parking - asphaltic concrete	Spaces	$300.00	46	$13,800
	Trails - asphaltic concrete (LF)	Linear Ft	$44.00	532	$23,408
	Wheel stops	Each	$175.00	4	$700
	Grass - seed	Acres	$11,000.00	2	$22,000
	Irrigation	Sq Ft	$2.50	92,000	$230,000
	Top soil/mulch	CuYds	$45.00	15	$675
				SUBTOTAL	**$7,679,500**
				Design A & E (20%)	**$1,535,900**
				Contingency (30%)	**$2,303,850**
				Sales Tax 7.7% (excl paving)	**$450,846**
				TOTAL	**$11,970,096**

*Temporary Maintenance Facility to be removed once the Caretaker's residence is relocated to Lower Daybreak Park.

[2] Based on conceptual sizes and quantities, such as 12,000 s.f. play area, 27,000 s.f. covered arena & 1,200 s.f shelter (small)

Table 7. Cost Estimate Detail: Phase 1

Element	Item	Unit	Unit Cost	Quantity	Estimated Cost
Building & Structures					
	Registration booth	Lump sum	$6,800.00	1	$6,800
	Temporary Maintenance Facility	Lump sum	45000	1	$45,000
Fencing & Gates					
	Bollards	Each	$850.00	6	$5,100
	Fencing & gates - other	Lump sum	$12,000.00	1	$12,000
	Fencing - vinyl	Linear Ft	$12.50	575	$7,188
	Gates	Each	$10,000.00	4	$40,000
Landscaping					
	Grass - seed	Acres	$11,000.00	2	$22,000
	Irrigation	Sq Ft	$2.50	86,321	$215,803
	Landscaping - other	Lump sum	$25,000.00	1	$25,000
	Mitigation - Buffer & RHA	Acres	$35,000.00	3	$121,450
	Mitigation - Site maintenance (2yrs)	Acres	$3,500.00	4	$13,370
	Mitigation - Monitoring (5yrs)	Each	$10,000.00	5	$50,000
	Top soil/mulch	CuYds	$45.00	25	$1,125
	Trees/shrubs	Lump sum	$15,000.00	1	$15,000
Park Furniture					
	Benches	Each	$2,500.00	6	$15,000
	Bike racks	Each	$600.00	2	$1,200
	Tables	Each	$3,000.00	14	$42,000
	Trash receptacles	Each	$650.00	2	$1,300
Parking					
	Parking - asphaltic concrete	Spaces	$300.00	89	$26,700
	Wheel stops	Each	$175.00	18	$3,150
Permits					
	Permits	Lump sum	$35,000.00	1	$35,000
Playground					
	Play equipment	Lump sum	$120,000.00	1	$120,000
	Playground surfacing	Sq Ft	$2.50	11,800	$29,500
Roads					
	Roads - asphaltic concrete	Linear Ft	$180.00	1,847	$332,460
	Roads - other	Lump sum	$400,000.00	1	$400,000
	Striping	Lump sum	$5,000.00	1	$5,000
Shelters					
	Group Picnic	Each	$300,000.00	1	$300,000
	Picnic	Each	$45,000.00	3	$135,000

Signing					
	Interpretive signs	Each	$6,000.00	2	$12,000
	Permanent entrance sign	Each	$4,000.00	1	$4,000
	Traffic/directional signs	Lump sum	$2,200.00	1	$2,200
	Trailhead/bulletin board signs	Lump sum	$1,800.00	1	$1,800
Site Preparation					
	Demolition	Lump sum	$32,000.00	1	$32,000
	Erosion control	Lump sum	$8,000.00	1	$8,000
	Mobilization	Lump sum	$20,000.00	1	$20,000
	Site preparation - other	Lump sum	$10,000.00	1	$10,000
Trails					
	Trails - asphaltic concrete (LF)	Linear Ft	$44.00	7,725	$339,900
Utilities					
	Bio filtration - drainage swell	Lump sum	$45,000.00	1	$45,000
	Utilities - other	Lump sum	$25,000.00	1	$25,000
				SUBTOTAL	**$2,526,045**
				Design A & E (20%)	**$505,209**
				Contingency (30%)	**$757,814**
				Sales Tax 7.7% (excl paving)	**$109,878**
				TOTAL	**$3,898,945**

Permitting Requirements

Development of the site will require permits from a number of local, state and federal agencies. Most of these permits are related to potential impacts to habitat and species. Although the constraints of the primary regulations are addressed above, the permitting process itself is expensive, time-consuming and difficult to predict. This constraint reduces the level of confidence for any given design and encourages a cautious approach.

Construction of park facilities will require several local, state, and federal permits. The following jurisdictions and agencies have permitting authority depending on the type and location of the action: Clark County, Washington State Department of Fish and Wildlife; Washington State Department of Ecology; U.S. Army Corps of Engineers; National Marine Fisheries Service; and the U.S. Fish and Wildlife Service.

Activities associated with development of the park that may trigger a permit include, but are not limited to, filling, grading, work below the ordinary high water mark of any water body, work within wetlands or their buffers, and construction of park amenities (e.g., shelters, parking areas and restrooms).

Local Permitting

Site Plan Review

Construction of trail segments and support facilities will require development permits from Clark County. Supporting documentation and additional permits are dependent on the type and location of the proposed activity, including, but not limited to, environmental, land use, transportation, water, and sewer review may be required.

It is likely a Clark County Type II Site Plan Review process will be required for each new segment of trail or new support facilities within the county. The proposed improvement plans necessary for application include environmental, land use and transportation, landscaping, sign and outdoor lighting plan. In addition to the required plans, supporting documents will be necessary for the Clark County submittal and may include the following: soil analysis report, preliminary stormwater design report, proposed storm plan, traffic study, SEPA, sewer district utility review letter, water utility review letter, health department project evaluation letter, covenants or restrictions, and other associated environmental applications as detailed below. For support facilities, the necessary permits may include commercial building, mechanical/plumbing, signs, retaining walls, trash enclosures, and outbuildings.

Critical Areas

The Washington State Growth Management Act (GMA) identifies the protection of five critical areas as necessary for protection of the natural environment and the public's health and safety. Each city and county in Washington State has the responsibility to identify, designate, and protect those critical areas found in their local environment. The identified critical areas include fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, critical aquifer recharge areas, and geologic hazard areas.

Supporting documentation is required for many of the Clark County critical areas permits. Necessary information could include any of the following: no rise certification; wetland delineation; habitat impact assessment and mitigation; wetland mitigation plan (see discussion below); rare plant survey; geologic hazard area study; buffer impact mitigation; historical and cultural resources survey; or a biological assessment.

Within the Lower Daybreak properties, riparian habitat conservation areas exist along the East Fork Lewis River and Manley Creek. These habitat conservation areas extend 250 feet from the East Fork Lewis River and 200 feet from Manley Creek or to the edge of the mapped 100-year floodplain, whichever is greater. In the case of Lower Daybreak, the 100-year floodplain for the East Fork Lewis River extends well beyond 250 feet. Construction of the park would require impacting the habitat conservation areas. Some impact might be avoided through a technique called buffer averaging, whereby the width of the habitat conservation area is reduced in one place and expanded in another. Where buffer averaging cannot be used, mitigation would be required to offset impacts. Mitigation would entail designating a specific area with mechanisms for long-term protection (e.g., conservation covenant), removing invasive species, and planting native species, particularly shrubs and trees.

A programmatic permit from Clark County may be the best option for permitting actions within the riparian habitat conservation areas. The park is likely to be developed in phases, and some planting may occur within the riparian areas before park construction begins. The phased construction, early planting, and location of the habitat conservation areas across the park complicates the normal permitting process. The programmatic permit would allow the entire park master plan to be permitted and any early planting activities to be counted toward the mitigation requirements. The programmatic permit requires a mitigation plan, which includes documentation of existing site conditions, specific areas designated for mitigation, actions to replace lost functions (e.g., planting trees), performance standards used to define success, maintenance actions, and a monitoring plan to verify success. The permit is good for five years with the ability to reauthorize annually assuming performance standards are being met. If the project changes substantially from the park plan submitted in the permit application, then the programmatic permit could be invalidated. Future work would then be required to be permitted under a normal habitat permit. Buffer averaging, if proposed, needs to be included in the permit application. The ratio of mitigation to impacts may be higher than one-to-one depending on the ability to replace lost functions.

Shorelines

Under the Washington State Shoreline Management Act (SMA), cities and counties with "shorelines of the state" administer a Shoreline Master Program (SMP). A shoreline of the state is defined as all of the water areas of the state and their associated shorelands, together with the lands underlying them, not including lakes less than 20 acres in size and wetlands associated with those small lakes or stream segments where the mean annual flow is 20 cubic feet per second or less and their associated wetlands. The SMP is essentially a shoreline comprehensive plan and zoning ordinance specific to shoreline areas and customized to local circumstances. Activities within shoreline areas must comply with the applicable SMP.

State Environmental Policy Act Environmental Checklist

The Washington State Environmental Policy Act (SEPA) requires the submittal of an environmental checklist, which provides agencies with a framework to consider the environmental consequences to the natural and built environment of a proposal.

The SEPA checklist evaluates the environmental consequences of a proposal and determines it will have any "significant adverse environmental impact." The agency reviewing the checklist (lead agency) will issue a determination of non-significance (DNS), a mitigated DNS, or a determination of significance (DS). A mitigated DNS will include measures to mitigate all significant impacts to a non-significant level through the requirements of local, state, or federal regulations. If the lead agency issues a DS, an Environmental Impact Statement (EIS) will be required. The National Environmental Policy Act

(NEPA) also provides an environmental review process for project proposals with a federal nexus (e.g., permit, funding).

Archaeological and Cultural Resources Review

Clark County regulates archaeological and cultural resources through the SEPA process. The predictive model is used to determine if an archaeological review is needed to obtain a development permit. Clark County determines the need for an archaeological predetermination based on the probability index (e.g., low, moderate, high) and the potential for impacts by the proposed action. An archaeological predetermination is a method to determine whether cultural resources exist on a particular site without requiring a full archaeological survey. Project actions with moderate to high potential for impacts located within a moderate, moderate-high, or high predictive model map designation will require an archaeological predetermination, as will actions with a high potential for impacts located within a low-moderate area.

Stormwater and Erosion Control

Generally, a stormwater and/or erosion control permit is required for any development activities result in the creation of greater than 5,000 square feet of impervious surface in a rural area or 2,000 square feet in an urban area. The ordinance provides design standards for water quality treatment and water quantity control. The use of best management practices (BMPs) is required during site development.

State Regulatory Authorities

Washington State Department of Fish & Wildlife

Any activity that will use, divert, obstruct, or change the bed or flow of state waters requires a Hydraulic Project Approval (HPA) from the Washington State Department of Fish and Wildlife (WDFW). Essentially, this covers any work near or over streams, or below the ordinary high water mark.

In addition, WDFW provides management recommendations, which are guidelines not regulations, for identified priority species and habitats. Typically, local jurisdictions implement these guidelines through a habitat or wetland permit.

Washington State Department of Ecology
Section 401 Water Quality Certification

The federal Clean Water Act (CWA) allows states to approve, condition, or deny projects proposed to be built in wetlands or other waters of the U.S. Projects requiring a Section 404 permit from the U.S. Army Corps of Engineers (Corps) also require a Section 401 water quality certification from the Washington Department of Ecology (DOE). Section 401 of the CWA requires applicants to receive a certification from the state that the proposed project will meet state water quality standards and other aquatic protection regulations. The conditions of the state certification will become conditions of the federal permit.

NPDES Construction Stormwater General Permit

The CWA identifies the discharge of stormwater as a point source of pollution. As such, certain stormwater discharges require a National Pollution Discharge Elimination System (NPDES) permit. The goal of the construction general stormwater permit is to reduce or eliminate stormwater pollution and other impacts to surface waters from construction sites.

An applicant is required to apply for coverage under the state's construction stormwater general permit if the proposed project involves soil disturbing activities where one or more acres will be disturbed, and if stormwater will be discharged to receiving waters directly or to storm drains discharging to receiving waters.

Washington State Department of Natural Resources

The Washington State Department of Natural Resources (DNR) houses the Washington Natural Heritage Program (NHP), which provides information related to the presence of rare plant species and natural ecosystems. There is no state law protecting rare plant species/communities in Washington. However, local jurisdictions may provide protection through their ordinances, regulations and permitting requirements (e.g., Habitat Permit).

Washington State Department of Archaeology and Historic Preservation

The Washington State Department of Archaeology and Historic Preservation (DAHP), under the purview the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and the State Environmental Policy Act (SEPA), works with agencies, tribes, private citizens, and developers to assure the protection of Washington's cultural heritage. These environmental laws require impacts to cultural resources be considered during the public environmental review process.

Federal Regulatory Authorities

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) issues permits for certain activities in, over, under or near waters of the U.S. or special aquatic sites, including wetlands. A Section 10 permit is required for any work in, over, or under navigable waters. A Section 404 permit is required for the discharge of dredged or fill material into waters of the U.S., including special aquatic sites such as wetlands.

The Section 404/10 permit application, Joint Aquatic Resources Permit Application (JARPA), also requires the applicant provide an alternatives analysis discussing how alternative sites and designs were evaluated in an effort to avoid or minimize anticipated project impacts. Any impacts to wetlands will require the submittal of a wetland delineation report and a compensatory mitigation plan for any unavoidable impacts to wetlands or waterways.

The Corps issues different types of permits under Section 404/10. Nationwide permits (NWP) are general permits authorizing a category of activities throughout the nation. These permits have specific conditions that must be met for the permit to be valid and are issued for projects with small impacts. Regional permits are issued if the proposed activity falls within a general category of activities that are similar in nature and cause minimal environmental impact (individually and cumulatively). Individual permits are for projects with larger impacts or that cannot meet the specific conditions required of a NWP. Individual permits go through a full public interest review.

National Marine Fisheries Service & U.S Fish and Wildlife Service

Section 7 of the federal Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or the U.S. Fish and Wildlife Service on any activities that may affect a listed species. The consultation requirement assists federal agencies in fulfilling their duty to ensure their actions do not jeopardize the continued existence of a species or destroy or adversely modify critical habitat. A Biological Opinion documents NMFS/USFWS opinion and recommends reasonable and prudent measures that will minimize any impacts from the federal action

(e.g., typically issuance of a Section 404 permit) and the terms and conditions that apply to the proposed project.

The applicant is often requested to submit a Biological Assessment (BA) with their permit application. The BA documents the proposed action, existing environmental conditions at the project site, any listed species and critical habitat present, potential impacts to the species and critical habitat, and an effects determination.

Mitigation

The Corps and local jurisdictions both regulate impacts to wetlands; whereas, only the local jurisdiction regulates impacts to wetland buffers. Both the Corps and local jurisdictions require mitigation to compensate for impacts to the functions and values of the impacted wetland(s) and buffer(s) so that no overall net loss in wetland acreage and functions occur. Clark County requires mitigation to occur on-site or within the same local watershed as the impacted wetland. Both the Corps and Clark County have an established hierarchy of preferred mitigation methods (Table 8).

Table 8. Mitigation Type and Location

Jurisdiction	Mitigation - Order of Preference			
	1	2	3	4
Corps of Engineers	Mitigation Bank	In-lieu payment	Mitigation Watershed On-site, in-kind Off-site, out-of-kind	
Clark County	On-site	Off-site, same watershed Mitigation Bank	In-kind, off-site	Out-of-kind, off-site

1: On-site: within the project boundaries and/or areas adjacent or contiguous to the impact area

2: In-kind: the same physical and functional type as the impact area

3: Off-site: areas not meeting the definition of on-site

4: A different physical and functional type than the impact area

Lower Daybreak is within the East Fork Lewis River subwatershed. There is potential, depending on park design, for on-site mitigation to occur. If on-site mitigation is not feasible, an off-site mitigation site will need to be located. It may prove difficult to locate mitigation within the same watershed as the impact. Locating an appropriate mitigation site may require the acquisition of property or conservation easements. The use of off-site mitigation will increase project costs.

Impacts to riparian areas, fish and wildlife habitat areas, and all associated buffers also require mitigation. Buffer averaging is permitted.

VII. Management & Operations Considerations

Security & Access Management

The perception and public expectation for park safety is crucial for a positive park experience. Clark County Operations staff is responsible for the enforcement of park rules and regulations, and their efforts will be supplemented with the duties of the planned park caretaker. These staff will conduct daily patrols, manage site access and respond to the unique demands of the site. At 112 total acres and 20 planned developed acres, the development of the Lower Daybreak properties will expand the acreage of developed regional parks within the park system by 7% and will likely necessitate additional staff resources for site management and maintenance.

Also, the master plan anticipates a significant reconfiguration of the main entrance to the site and includes fee collection and controlled access. These improvements will improve the County's ability to manage access to specific parking areas and help reduce maintenance impacts. The management and operation of the park's access gates will likely require additional contract services or the installation of the park caretaker.

New Park Infrastructure

The development of Lower Daybreak will not only increase the number of users and the range of recreational activities, but it will also create additional demands on staff, equipment and resources. New park amenities, such as restrooms, play areas, reservable shelters, trails and signage, will undoubtedly necessitate additional staff, maintenance resources or service contracts and updated cyclical maintenance schedules. These future demands must be considered in light of recent budget cycles, inasmuch as countywide operations budgets have been reduced despite the demands of an expanding, well-utilized park system, unwavering public expectations for maintenance and increasing costs of operations and materials.

Fees & Other Revenues

The Master Plan includes several opportunities to generate revenues in support of on-site maintenance, along with a potential to offset operating expenses. Specifically, the installation of a fee collection booth at the main entrance will enable the capture of parking fees from the site. This is recommended as an element for Phase 1 park development and will be consistent with the operations of other regional parks. The operation of a fee collection booth will also require staffing during the peak season periods. During non-peak periods, iron ranger fee collection boxes will be utilized.

Additionally, the public use of picnic shelters can, in part, be managed through the existing shelter reservation system and provide operating revenue back to the County. The large special use area designed in the south-central area of the park can be reserved en masse for special gatherings and functions, such as weddings, retreats and other events. This special use area can be operated as a standalone element of the park, since it will be served by a separate, gated drive entrance. The development of the equestrian facility and a disc golf course may also provide revenue generating

potential, which will likely be dependent upon the partnership arrangements and conditions facilitating their construction.

Restoration & Habitat Improvements

One major element of the master plan is the restoration of riparian and other habitat areas, along with limited wetland impacts and the reforestation of large tracts within the park. These enhancements will, in part, be an outgrowth of the regulatory permitting process, and they will require a minimum period of monitoring for plant establishment and success toward specific performance measure. As was noted in the cost estimates, these expenses are significant and long-lasting (up to five years). This monitoring and documentation will require additional staff resources or contract labor for the duration of the performance period. Additionally, maintenance staff will not only need to be watchful of human impacts into restoration areas (rogue trails, habitat disturbances), but also focused toward the continued management of invasive species.

Coordination with Agencies, Non-Profits & Volunteers

The proposed improvements to Lower Daybreak also will require on-going, continued coordination with other governmental agencies, non-profit organizations and volunteer groups in an effort to primarily manage on-site restoration activities. Clark County Public Works & Environmental Services, Washington Department of Fish & Wildlife, Clark Public Utilities, Fish First, Friends of the East Fork Lewis River and others have interest in various elements of natural area enhancements, including streambank restoration, fish habitat enhancement and riparian area planting projects. Staff resources will be required to coordinate these efforts and work to ensure that improvement projects are consistent with the intent of the master plan, while also meeting (or not conflicting with) the requirements of permit approvals.

Also as habitat enhancements proceed, opportunities for on-site environmental education will expand. Staff may need to coordinate with local schools for outings and special interest groups (e.g., Audubon) for the use and promotion of the site. As the revegetated areas mature and increase in biologic complexity, opportunities will exist for the establishment of environmental education programs, events, festivals and activities – all requiring additional coordination with operations staff.

Operations, Maintenance & Facility Costs

The proposed development of Lower Daybreak will expand the responsibilities of the Clark County Public Works Operations staff, which will be charged with the on-going care, maintenance and management of the park and its facilities. Operations staff was involved in the master plan design process and discussion of the Phase 1 improvements, and their feedback was critical to the placement, renovation and relocation of certain park elements proposed in the master plan. While new development on site will require additional, annual maintenance expenditures, the phased development of the park will moderate the potential impact to the County budget. Alternative maintenance options will be considered including use of volunteers and user groups. The following table illustrates the estimated maintenance costs for phase 1, as well as the complete master plan.

Table 9. Maintenance Cost Estimate Summary (Phase 1)

Maintenance Type	Cost per Acre	Acres	Annual Expense (Est.)
Regional Park: Undeveloped Open Space	$50	58	$2,900
Regional Park: Level III	$3,900	17	$66,300
Mitigation - Site maintenance (2yrs)	$3,500	3.8	$13,300
Mitigation - Monitoring (5yrs)	$10,000	5	$50,000
Facilities			$35,000
	TOTAL ANNUAL EXPENDITURES		***$167,500***

Table 10. Maintenance Cost Estimate Summary (Master Plan Build-Out)

Maintenance Type	Cost per Acre	Acres	Annual Expense (Est.)
Regional Park: Undeveloped Open Space	$50	34	$1,700
Regional Park: Level III	$3,900	27	$105,300
Mitigation - Site maintenance (2yrs)	$3,500	3.8	$13,300
Mitigation - Monitoring (5yrs)	$10,000	5	$50,000
Facilities			$60,000
Equestrian Special Use Area*			NA
	TOTAL ANNUAL EXPENDITURES		***$230,300***

*** NOTE:** Pending use agreement and memorandum of understanding with Clark County Executive Horse Council

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Appendix A. Adopted Staff Report

BOCC: 6/8/2010
Routed: 6/1/2010
cc:

CLARK COUNTY
STAFF REPORT

DEPARTMENT/DIVISION: Environmental Services / Legacy Lands Program

DATE: May 28, 2010

REQUEST: Approve the Lower Daybreak Property Master Plan, an expansion of Daybreak Regional Park.

CHECK ONE: __X__ Hearing _____ Consent _____ Chief Administrative Officer

BACKGROUND: In 2008 the Board of County Commissioners directed staff to initiate a master plan for the property that will be a significant addition to Daybreak Regional Park. The master plan provides a clear vision of future park uses and activities, trail improvements and linkages, habitat and riparian restoration. The master plan seeks a balance between active and passive recreational use with the restoration and enhancement of the riparian and lowland habitats. The design creates a strong connection to Daybreak Park and integrates access and amenities to establish a future unified regional park. The combined site will consist of 167 acres. Overall, the footprint of developed areas would cover approximately 20 acres or 11% of the parkland.

A copy of the Illustrative Plan is attached. The master plan includes the following elements:

- Re-aligned park entry with fee booth, caretaker residence, and access management gate.
- Three special use areas.
- Two large group shelters and 8 small shelters.
- Playground and four acres of mown turf.
- Over four miles of trails.
- Significant habitat and riparian restoration, along with reforestation.

Preliminary cost estimates below are based on current understanding of the park program and known information about the site and its constraints. Estimates should be revised prior to funding or construction. Costs are based on 2010 dollars using contractor prices.

	Complete Master Plan Estimate	Phase 1 Estimate
Park Structures	$1,174,300	$486,800
Park Amenities	$383,850	$229,000
Landscaping	$578,525	$278,928
Trails & Paths	$1,008,336	$339,900
Special Use Elements	$713,476	$0
Habitat & Riparian Enhancement	$1,408,820	$184,820
Infrastructure	$2,270,193	$901,598
Site Preparation	$102,000	$70,000
Permitting	$40,000	$35,000
SUBTOTAL	**$7,679,500**	**$2,526,046**
Design A & E (20%)	$1,535,900	$505,209
Contingency (30%)	$2,303,850	$757,814
Sales Tax 7.7% (excl. paving)	$450,846	$109,878
SUBTOTAL	**$4,290,596**	**$1,372,901**
TOTAL	**$11,970,096**	**$3,898,945**

COMMUNITY OUTREACH: Community outreach methods were varied and extensive, including:

- Two community meetings.
- Stakeholder discussions.
- Parks & Recreation Advisory Commission meetings.
- Web site content.

Participants of the master planning process were prompted to address the following key issues:

- Recreational needs of the immediate community and of the broader county.

ES10-018

- River access and water contact opportunities.
- Habitat and riparian enhancements.
- Special use opportunities, such as for events, banquets, equestrian activities.
- Internal circulation, including roadway, trails and paths.
- Re-use of existing buildings.

BUDGET AND POLICY IMPLICATIONS: Approval of the master plan creates no budget commitments. Future park development will occur as funding becomes available and expenditures are approved by the Board.

FISCAL IMPACTS: ☐ Yes (see Fiscal Impacts Attachment) ☒ No

The master plan will guide future expansion of Daybreak Park. Improvements identified in the master plan will occur over several years and be achieved in several phases. These improvements are contingent upon available project capital funding and on-going operations and maintenance funding and capacity. The development of the expanded Daybreak Regional Park will require a variety of funding sources, along with strengthening relationships with local non-profits, philanthropic organizations and other potential partners. Budget decision packages will be prepared as resources are identified to commence improvements.

ACTION REQUESTED: Approve the Lower Daybreak Property Master Plan, an expansion of Daybreak Regional Park.

DISTRIBUTION: Please forward a copy of the approved staff report to Environmental Services Administration.

Patrick T. Lee
Lands Manager

APPROVED:
CLARK COUNTY, WASHINGTON
BOARD OF COMMISSIONERS

Kevin J. Gray, P.E.
Environmental Services Director

June 8, 2010

PTL/KJG/bt

c: Jean Akers, Vancouver-Clark Parks
Ryan Weston, Vancouver-Clark Parks
Jilayne Jordan, Public Information Office
Steve Duh, Alta Planning + Design

Attachments: Illustrative Plan - Entire Site
Illustrative Plan - Phase I

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Appendix B. References

References

Clark County. Clark County Agriculture Preservation Strategies Report.2009

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Appendix C. Public Meeting Summaries




October 2009

Planning Begins on Lower Daybreak Regional Park

Clark County and Vancouver-Clark Parks and Recreation would like to invite you help prepare a master plan for Lower Daybreak Regional Park.

This undeveloped park property is an extension of Daybreak Regional Park, at 26401 NE Daybreak Road between La Center and Battle Ground. The 112-acre site is located on the south bank of the East Fork Lewis River next to the boat launch on the west side of Daybreak Road (see map on reverse).

The property is relatively flat and open with some wooded side slopes. It borders the East Fork Lewis River to the north and Manley Creek runs through the south side of the property. Most of the site is currently open to the public and accessible from the boat launch parking lot.

What is a master plan?

The county must complete a master plan before development can begin. A master plan identifies a preferred mix of recreation uses and facilities that may be included on a specific park property. The county will install the features included in a master plan over time when funding and partnership opportunities are available.

Planning goals

- Take advantage of the river setting and provide visual and physical access to the water.
- Provide a range of recreational opportunities based on public demand, lack of similar opportunities elsewhere, cost to develop and available partnerships.
- Reduce mitigation and permitting costs by locating park amenities in areas with the lowest environmental impact.
- Cluster general-use facilities, such as picnic shelters, playgrounds, open lawn play fields, restrooms and parking lots, to reduce the potential for conflicts with other uses.
- Link the various use areas and facilities with different types of trail connections (paved, soft surface, rustic, etc.).
- Provide a strong connection to Daybreak Regional Park with compatible uses and shared infrastructure.
- Continue habitat restoration activities and consider providing environmental learning opportunities related to them.
- Allow for potential revenue generation from user and/or lease fees.

How can I get involved?

Interested members of the public are invited to review and provide input on the recreational amentities being considered for this site at an upcoming public meeting. The input received will be used to develop a proposed master plan for the park, which will be presented for review and additional input at a second public meeting in December 2009.

Come to the public meeting
Wednesday, Oct. 14, 2009
7 p.m.
Daybreak Primary and Middle School Commons
1900 NW 20th Ave.
Battle Ground, WA

Go online
People who are unable to attend the public meeting can review documents and provide input electronically through the project Web page starting on Oct. 15. Comments are due by Oct. 29.

You can also sign up to receive project updates and input invitations by e-mail on the project Web page.

www.co.clark.wa.us/legacylands/LowerDaybreak.html

CLARK COUNTY, WASHINGTON

VANCOUVER-CLARK PARKS & Recreation

proud past, promising future
CLARK COUNTY
WASHINGTON

Legacy Lands Program
PO Box 5000
Vancouver, WA 98666

Presorted Standard
US Postage
PAID
Vancouver, WA
Permit No. 130

Planning Begins on Lower Daybreak Regional Park

Site history

Clark County purchased the Lower Daybreak property in partnership with the Columbia Land Trust in 2002.

Vancouver-Clark Parks and Recreation's Americorps Team has partnered with Fish First on several water quality improvement and fish habitat restoration projects along Manley Creek. In addition, a grant agreement has been executed between the Lower Columbia Fish Recovery Board and Fish First to design a bank stabilization and fish habitat restoration project along this portion of the East Fork Lewis River.

Funding

This planning effort will be funded by regional real estate excise taxes, which are paid when properties are sold. These funds are dedicated to planning and developing parks in the unincorporated areas of Clark County.

For more information, please contact:

Pat Lee, Program Manager
Clark County Legacy Lands Program
Phone: (360) 397-2375 ext. 4070
E-mail: Patrick.Lee@clark.wa.gov

Jean Akers, Park Planner
Vancouver-Clark Parks and Recreation
Phone: (360) 619-1120
E-mail: Jean.Akers@ci.vancouver.wa.us

Or visit us online:
www.co.clark.wa.us/legacylands/LowerDaybreak.html

Lower Daybreak Regional Park Master Plan
Public Comment Summary

Comment Period: October 14-29, 2009

This is a summary of the verbal and written comments from the October 14, 2009 public meeting, and the written comments submitted through the project Web page October 14-29, 2009. This summary reflects a range of opinions, and is not intended to present a word-for-word transcript. Comments about issues outside the scope of the park development project have been brought to the attention of the appropriate departments or agencies.

A draft conceptual development plan for the park will be developed based on public input, recreational needs within the park system, opportunities for funding partnerships and environmental considerations.

Main Attraction Ranking

The comment form provided at the public meeting and online asked people to rank the following main attractions in order of preference from one to six, with number one being the most important.

	1 – Most Important	2	3	4	5 *see note*	6 *see note*
Special events	7 (6%)	31 (24%)	**52 (41%)**	22 (17%)	14 (11%)	1 (1%)
BMX bicycle race course	1 (1%)	9 (7%)	18 (15%)	**33 (28%)**	30 (25%)	29 (24%)
Equestrian facility	21 (16%)	15 (12%)	19 (15%)	20 (15.5%)	**34 (26%)**	20 (15.5%)
Disc golf course	**66 (49%)**	7 (5%)	10 (7%)	20 (15%)	19 (14%)	14 (10%)
Natural open space	38 (26%)	**61 (43%)**	19 (13%)	13 (9%)	11 (8%)	1 (1%)
Other ideas *(see note)*	**14 (26%)**	13 (24%)	7 (13%)	7 (13%)	5 (9%)	8 (15%)

Total number of comment forms returned: 154

NOTE: *The "Other ideas" section was optional. If the respondent did not fill this in, the ranking was from 1 to 5, with five being the least important instead of six.*

Average ranking received:

1. Natural open space: 2.31
2. Disc golf course: 2.71
3. Special events: 3.06
4. Equestrian facility: 3.71
5. BMX bicycle race course: 4.41

Other ideas suggested:

- Off-leash dog park
- Overnight camping
- Equestrian trails
- Skateboard park
- Anything else
- Lewisville Park-type amenities, like picnic shelters and ball fields
- Trails
- River rafting and kayaking
- Fitness trails
- A building with heat, kitchen and bathrooms that can be used for meetings, classes and events
- Swimming and water access
- Leave as is
- Covered picnic shelters
- Fishing focus, including fish habitat restoration
- Wildlife expo and outdoor classroom
- Reforestation
- Paintball facility
- Level open fields for football, soccer and/or ultimate Frisbee

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Additional Park Features Ranking

The comment form provided at the public meeting and online asked people to select six additional park features from a list of 16 and rank them in order of preference from one to six, with number one being the most important.

	Number of people who selected it	Highest ranking received
1. Picnic areas & covered shelters	93	21 selected "1" (24%)
2. Fishing	80	16 selected "3" (20%)
3. Wildlife viewing	79	20 selected "2" (25%)
4. Environmental restoration	75	15 selected "1" (20%)
5. Personal water access	69	14 selected "4" (20%)
6. Challenge course	55	12 selected "2" (22%)
7. BBQ grills	50	14 selected "3" (28%)
8. Natural playscapes	50	12 selected "6" (24%)
9. Outdoor classroom	49	16 selected "5" (33%)
10. Playground equipment	47	12 selected "3" (26%)
11. Horseback riding trails	43	22 selected "1" (51%)
12. Mountain bike trails	46	10 selected "5" (22%)
13. Dog agility course	29	7 selected "3" (24%)
14. Other ideas (see below)	24	16 selected "1" (67%)
15. Open play field w/ backstops	21	8 selected "4" (38%)
16. Sports court	9	5 selected "4" (56%)

Total number of comment forms returned: 154

Other ideas suggested that were not already listed as a "main attraction":

- Equestrian challenge course
- Skateboard park
- Revenue generating retreat at Ibrahim House
- Dirt running trails
- A building with heat, kitchen and bathrooms that can be used for meetings, classes and events
- Walking, hiking, biking trail
- Leave as is
- Blended area for environmental restoration, wildlife viewing and off-leash dog park
- Off-leash dog park
- Keep it as open space for dog training, dog walking and fishing
- Shared trails for horses, bikes and walking
- Paintball facility

Other Comments

Safety/Access:

- Move the existing access road further south on 82nd Avenue to improve safety.
- Provide more than one entrance/exit to improve traffic flow and safety.
- Include a footbridge over the East Fork Lewis River from the northwest corner of the property to the county-owned property on the other side of the river.
- Provide a safe way for pedestrians, bicyclists and horses to cross Daybreak Road, which is has poor sight distance and speeding problems.
- Keep visibility open at the corner of 82nd Avenue and 259th Street. Do not put any structures, fences or trees on this corner. Use this space for an off-leash dog park, disc golf or leased hay fields for revenue generation.
- Do not allow cars to park along Daybreak Road and 82nd Avenue.
- Concerned about existing traffic problems on 259th Street and 82nd Avenue/Daybreak Road being made worse by an increased number of park visitors.
- Access to the property from 259th Street would be safer than from the existing boat launch access road on 82nd Avenue.
- Having an on-site caretaker is important.
- Need to enforce burning bans.
- Need to enforce public-private property lines in the river.
- Provide security in parking areas. There have been break-ins and other problems at the boat launch and existing park over the last few years. Enforce hours of operation and gate all entrances after hours.
- Daybreak Road has existing safety problems, including illegal on-street parking and speeding. Needs better signage.
- Fence the property to prevent trespassing and other problems for adjacent property owners, and post maps designating the boundary of the park and stipulating that adjacent properties are not public land.
- Provide additional access points.
- Connect the two parks with a trail under the Daybreak Road bridge. That way you don't have to build a tunnel or another bridge.
- There is currently no safe access for bikes on adjacent roads. Please widen shoulders or add a bike lane to 82nd Avenue or provide a bike trail through the park property down to 259th Street.

Ibrahim/Saudi House:

- Don't like the county's decision to lease the house to a church for transitional housing/recovery purposes. Don't believe this type of use is compatible with an adjacent regional park development.
- Convert house into a community meeting facility for park users with kitchen, bathrooms, and a variety of meeting/gathering spaces.
- Reuse house as a fee-based wedding and conference facility.
- Convert house into a revenue-generating retreat center or lease it to a bed and breakfast operator.
- Sell the house and use funding for park development.
- Consider relocating the house.
- Use driveway/road to house to serve the park.
- Demolish the house.

Cost Recovery and Fees:

- Do not charge a gate/parking fee at this park.
- There are a variety of horse clubs and organizations in Clark County that would be able to provide funding and volunteer labor to pay for planned equestrian facilities.
- Charge rental/use fees for community meeting facility at Ibrahim House.
- Charge for overnight camping.
- A disc golf course is self-sustaining with much of the installation and maintenance done by volunteers.
- Charge parking fees.
- Could be used for sports/equestrian tournaments and other events that could raise funds for the park.
- Charge fees for overnight equestrian use of the site.
- Adult and youth 4-H groups would be willing to partner with county to develop amenities they need.
- Don't want to duplicate the parking problem experienced at Lewisville Park where people just park along the road to avoid paying the seasonal fees.
- Charge fees for river rafting and kayaking activities in the river.
- Charge fees for use of a paintball facility.

Existing Daybreak Park:

- Make improvements to the existing Daybreak Park as well and create a more seamless connection between the two properties.
- Build a tunnel or bridge across Daybreak Road to connect the two parks.
- Make improvements to the island on the east side of Daybreak Park and build a bridge across the creek that separates the island from the main shoreline.
- Improve the existing trails at Daybreak Park.
- Build more walking trails at Daybreak Park.
- Need better security at Daybreak Park.
- Locate new park amenities at the existing park and keep the Lower Daybreak property natural.
- Existing parking lot is inadequate in the summer and people start parking along the road. Access to additional off-street parking is needed.

Environmental Considerations:

- Restoring the habitat and riparian areas on this property is very important.
- Do not remove any trees or other vegetation from river bank.
- Keep development away from the river.
- Continue fish recovery efforts at Manley Creek and "unnamed" creek.
- Protect existing wildlife habitat on the property.

4

- Work with Naturally Beautiful Backyards program and the WSU Extension to solicit volunteers for stream restoration projects.
- Add a wetland pond to the property to attract more wildlife.
- Concerned about too much development chasing away wildlife.
- Do not repeat the shoreline design seen at the existing Daybreak Park (i.e. vegetation removed and lawns extending to the water's edge). This would damage the long-term health of this section of the river.
- No dog agility course, sports courts or mountain bikes. Intensive development of any sort will diminish the natural feeling and wildlife viewing opportunities at this park.
- Concerned about any heavy uses around the river damaging the riparian area.
- A BMX race course should not be located next to a river.
- Complete environmental restoration work along the river and creek, but leave the rest of the property open.
- Don't restrict public access in any area of the park with "back to nature" areas.
- Control river erosion and stabilize the riverbank.
- Plant more trees.
- Don't include large paved areas (sports courts, parking lots, etc.).
- The 1996 flood almost took out the Daybreak Bridge. Keep this in mind when locating activities around the river.
- Provide wildlife viewing areas.
- Use this site for more passive uses and focus on restoration efforts.
- Reforestation of Manley Creek and East Fork Lewis River corridors is important.
- Concerned about litter from additional park visitors getting into the river. Enforce anti-littering laws.
- Protect fish habitat.
- A youth science camp area would help teach children to appreciate nature.
- Include an education center, kiosk and/or interpretive center about protecting fish habitat and wildlife.
- Keep the existing fruit trees.
- Identify tree islands early.
- Don't spend money on landscaping or restoration.
- Concerned about seasonal flooding in some areas. Keep these areas undeveloped.
- Allow only minimally disruptive activities, like fishing, swimming, walking, picnicking, etc.
- Beavers dammed Manley Creek last year, causing flooding. Be cautious about locating trails or other amenities along the creek.
- Concentrate on environmental education.

Equestrian Uses:

- There aren't any other public equestrian facilities in this area. It is needed.
- A quality equestrian facility would be self-supporting and generate revenue for the park.
- Local 4-H groups would like have access to a covered practice arena and horseback riding trails.
- Include a regional trailhead for an East Fork Lewis River equestrian trail system.
- The county is already filled with equestrian opportunities, including at Fairgrounds. It's not needed here.
- Equestrian trails throughout the property would be very popular.
- Ensure there is ample parking for large horse trailers.
- Provide a covered arena without sides for winter use.
- Locate equestrian trails on the west side of the property.
- Include lights in the arena.

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- Locating a large equestrian facility here would destroy the natural environment and cause traffic problems on local roads.
- Provide an outdoor arena with year-round footing in addition to a covered arena.
- Provide trail obstacles or a challenge course.
- Locate a challenge course along the river connected to a horse trailer parking area.
- Locate an open horse arena next to the boat launch with adjacent horse trailer parking.
- Provide access to water for rinsing off horses and filling up water buckets.
- Locate a covered horse arena on the corner of 82nd Avenue and 259th Street with adjacent horse trailer parking.
- A large equine event center could help the local economy (hotels, restaurants, businesses, etc.).
- Just provide equestrian trails, not an arena or other facilities. They are not needed.
- This site provides a good place for beginning riders because it is so flat.
- Facilitate competitions for revenue generation by providing overnight parking next to the small rental property with water, power and stalls.
- Provide a cross country equestrian course with jumps.
- Locate equestrian center and parking next to the small rental house on the south side of the property.
- Provide future utilities hook ups for layovers, shows and trail rides.
- Include portable pens that can be set up for horse and livestock events.
- Locate a permeable surface equestrian parking lot next to the existing parking lot at the boat launch.
- Provide a pole barn type covered structure for year-round events with seating.
- Allow multiple uses of covered arena (i.e. other livestock).
- Include a perimeter riding trail that can also be used by pedestrians that avoids the river.
- No paved trails.
- Do not allow people to use the arena for other livestock, like cattle.
- Use the Sunset Horse Park in Whatcom County as an example for what to build here.
- Provide a manure composting system like at Battle Ground Lake State Park.
- Provide a separate trail for horses that won't create conflicts between people or dogs.
- Link equestrian trail to other trails.
- Provide separate horse trailer parking so they don't have to compete with boat trailers and other cars.

Disc Golf Course:

- Locate an 18-hole course on the east side of the property or a 56-hole course throughout the entire property.
- Provide benches every few holes for resting.
- Use concrete tee pads and multiple pin locations.
- A disc golf course would be self-sustaining with most of the maintenance done by volunteers.
- There are no large disc golf courses in Clark County and hundreds of local players have to go to Portland to play.
- Disc golf is a sport that anyone can play, no matter their age or income.
- Disc golf is very compatible with other park uses.
- Include kiosks with "you are here" course maps and other information.
- Include artificial "hazards" along the course.
- The course installed recently at Leverich Park in Vancouver is a proven success.
- Provide revenue-generating golf cart rentals.
- Disc golf provides a great way to get exercise and enjoy nature.
- Disc golf courses are meant to be incorporated within the natural environment.

- Concerned that disc golf will draw a large number of people to this park, which will increase the need for infrastructure like parking lots and restrooms.
- Disc golf courses have a very small carbon footprint.
- Keep animal use areas separate from the course.
- Disc golf is an inexpensive and environmentally friendly/low impact use of this space.
- Provide putting practice baskets near the boat launch.
- Disc golf puts more eyes on the park, which helps improve safety.
- Include lighting along the course for nighttime games (along with overnight camping opportunities).
- Allow a club or vendor to set up a retail store on site.
- Prefer that the course be located within the trees, not just in the open areas.
- Disc golf players are great stewards of the natural environment.
- Include a disc golf course like the one in Troutdale, OR. Use natural features and landscaping.
- A good course could draw users from the entire Portland metro area.

Dog Use/Dog Park:

- Allow people to walk their dogs on the property.
- Use the property for hunting dog and show dog training.
- Include an off-leash dog park.
- Allow dogs.
- Locate an off-leash dog park on the southeast corner of the property.
- Provide an off-leash dog park area with river access.
- Locate off-leash dog park in flood plain area and keep it separate from roads and horses.
- Provide a dog agility course.
- There are no other parks in the county open space and water access that we can enjoy as we wish with our dogs. Leave it alone.
- Don't replace dog use with equestrian use. Dog walkers have used this site for years.

Trails:

- Connect trails together.
- Include permeable surface trails.
- Include interpretive trails along Manley Creek.
- Provide multi-use trails that are wide enough and surfaced in a way that they can be used by walkers, bikers and horses.
- Include a trail along the river.
- Include a mountain bike trail along the southern property border (use existing terrain).
- Provide a perimeter trail with cut across loops.
- Wind trails through the trees.
- Provide only soft-surface trails.

Other Park Features and Uses:

- Additional parking for horse trailers and boat trailers is a must. Suggest access to an additional parking enter from of 259th Street and exit from 82nd Avenue.
- This is a great fishing spot. Please preserve this.
- Leave it alone. Many people enjoy this park already and there is a developed park located right across the street.
- There are no outdoor paintball facilities in the county. Please include one at this park.
- Use pervious or honeycombed surfacing in the parking lots.

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- Provide a small outdoor community center/covered shelter.
- Provide restroom facilities.
- Don't include any facilities for motorized vehicles.
- No sports fields.
- Local 4-H groups need indoor space for small animal activities and shows.
- Provide reservable/revenue-generating pavilions or shelters.
- Locate covered picnic areas near the existing boat launch.
- Provide a fish cleaning station along the river near the existing boat launch.
- Provide a heated building for meetings and workshops with a kitchen and bathroom.
- Provide an overnight camping area.
- Include a covered, outdoor paintball facility.
- Include a baseball complex like the one at Harmony. This area does not have enough youth sports fields for non-school team/league use.
- Locate additional equestrian and school bus parking next to the open area on the corner of 82nd Avenue and 259th Street.
- Don't change it radically.
- Buy the property on the east side of 82nd Avenue and expand the park.
- Convert the existing small rental property into an environmental interpretive center.
- Expand existing parking lot next to the boat launch rather than build a new parking lot.
- Concentrate heavy use areas near the river and boat launch.
- Provide more than one restroom location.
- Provide drinking fountains.
- Allow blackberry picking.
- There are many existing users of this park property (mainly fishing and dog walkers). Don't exclude them from future plans.
- Keep major user groups separated from each other (i.e. swimming vs. fishing).
- Relocate the existing picnic tables somewhere else.
- Manage trash.
- Covered picnic shelters and grills are already available at Lewisville Park. They are not needed at this park.
- This would not be a good place for a large event center, like at Esther Short Park. The roads are narrow and curvy and the entire area is very rural. Keep those types of activities closer to I-5 and urban areas.
- Provide covered picnic shelters with cooking areas.
- Provide informal mowed fields that can be used for pick up games, soccer, etc.
- Provide grassy overflow parking areas.
- Include a tennis court.
- Allow overnight camping for youth groups.
- Consider fostering a "bring it in/pack it out" philosophy in the park to reduce trash.
- Keep the uses compatible with this park's rural location.
- Include an outdoor classroom.
- Provide a swimming hole with easy access and a rope swing next to the boat launch.
- Sports courts and baseball fields are provided at local schools. We don't need them at this park.
- Don't include a large amphitheater.
- Include a challenge course (for people) along the southern property border.
- Maintain buffer zones between fishing areas and other river uses to minimize conflicts.
- Provide rafting and kayaking access and help create a water trail from Lewisville Park to La Center.
- Provide a bird release area for rescue groups.

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- Provide handicapped access to river for fishing and wildlife viewing.
- Educate fishermen/women about proper disposal of fish carcasses, lures and lines.
- Provide picnicking facilities along with other passive uses.
- Include living history educational exhibits (i.e. horse-drawn farming).
- Don't overdevelop this site. Leave it "country."
- No ball fields or BMX/extreme sports. These uses are better suited to an urban environment.
- Do not install after-hours lighting.
- Do not allow overnight camping or any after-hours use.

END

9

proud past, promising future
CLARK COUNTY
WASHINGTON

VANCOUVER-CLARK
PARKS & Recreation

Lower Daybreak Regional Park Master Plan
Draft Illustrative Plan Public Comment Summary

Comment Period: December 8-23, 2009

This is a summary of the oral and written comments from a public meeting on Dec. 8, 2009, and the written comments submitted electronically Dec. 9-23, 2009. This summary reflects a range of opinions, and is not intended to present a word-for-word transcript. Comments about issues outside the scope of the park planning project have been brought to the attention of the appropriate departments or agencies.

A preferred illustrative plan for the park will be developed based on public input, recreational needs within the park system, opportunities for funding partnerships and environmental considerations.

Question 1: Does the draft plan provide enough recreation activities (i.e. fishing, walking/jogging, horseback riding, disc golf, swimming, wildlife viewing, etc.)?

	Responses	Percentage
Not enough	7	15.2%
Just right	**22**	**47.8%**
Too much	17	37%
Total responses	46	

Please explain:

- Great job.
- Don't think paintball and remote controlled car racing are a good fit for this park.
- Too much emphasis on equestrian use.
- No need to compartmentalize everything. Prefer the open, multi-use spaces.
- Like the equestrian area. It is needed in this community.
- There are already four disc golf courses within 25 miles. We don't need more.
- Need an identified space for off-leash dog use.
- Needs more open space.
- The plan is too crowded with activities. Leave it open.
- Please include disc golf in the final plan. It has small footprint/impact and is environmentally friendly.
- Like the areas identified for multiple activities.
- Would like more than one disc golf course (an 18 hole course for experienced players plus a 9 hole course for families and beginners).
- The proposed disc golf course is too large.

- Too many conflicting uses: Horses will conflict with dogs, paintball or remote controlled car racing; Swimming will conflict with fishing; and disc golf will conflict with walking/jogging/bike riding on trails.
- Concerned about horse waste getting into Manley Creek and affecting the fish habitat.
- Don't need a swimming area at this park. There are already swimming holes at Lewisville and Daybreak.
- Need more space for equestrian uses.
- Not natural enough. Too many activities.
- Please include space for remote controlled car racing.

Question 2: Does the draft plan provide a good balance between natural areas and recreation activities?

	Responses	Percentage
Yes	**27**	**58.7%**
No	19	41.3%
Total responses	46	

Please explain:

- Make sure the restoration activities are given priority over development of active use spaces.
- Leave the beaver in Manley Creek alone. Seasonal flooding is fine.
- I like it.
- Not enough room for dog walkers. Too much room for horses.
- Leave it alone.
- Picnic areas and groomed trails are not needed.
- Would prefer that the park stay as informal and natural as possible. Lewisville Park already provides formal park experiences.
- The proposed natural areas are too small.
- Looks good.
- Too much paved area.
- Too much focus on attracting more people to the park. We like it the way it is now.
- The equestrian parking lot is not big enough.
- Disc golf makes it unsafe to walk the trails and a large equestrian facility will pollute Manley Creek. This is not a good balance.
- Encourage the community to help with environmental restoration activities.
- Permanent organized activities for a select group of special interest groups have no place in "public" parks. Parks should be for everyone.
- Include the east side trails/trailhead in the plan.

Question 3: Should the special use area on the southeast corner of the property be dedicated for equestrian uses only or should it accommodate all domesticated animals (i.e. horses, livestock, llamas, small animals, etc.)?

	Responses	Percentage
Equestrian only	15	34.9%
All domesticated animals	**28**	**65.1%**
Total responses	43	

Please explain:

- Other livestock can use the Fairgrounds.
- It should be available to all groups, including dogs.
- It's unsafe to allow horses to use this area along with lots of other types of animals.
- Don't like how the equestrians seem to be given preferential treatment in this plan.
- Include space for off-leash dog use, trials, shows and agility training.
- It's too small to share with other users.
- Local 4-H groups need to be able to use this space also (livestock and small animals).
- A large equestrian facility is in such high demand that it would be in use almost constantly, leaving little to no space for other users.
- Dog trainers currently use this site and shouldn't be pushed out entirely.
- Mixing different types of animals in one space could create problems.
- Would like space to exercise and show llamas and alpacas.
- More space would be required to accommodate all types of animals.
- Would prefer horse trails throughout the park to this large facility because of the environmental impacts it would have on Manley Creek.
- There can be health risks associated with shared space between horses and other livestock.
- Horses and llamas don't get along very well.

Question 4: Does the proposed plan include enough picnicking areas and shelters?

	Responses	Percentage
Not enough	1	2.2%
Just right	**31**	**68.9%**
Too much	13	28.9%
Total responses	45	

Please explain:

- Would prefer more open space to more picnic shelters.
- Like the shelter next to the boat ramp, the first three shelters near the access road and the large shelter south of Manley Creek, but don't think the others are needed.
- Too many picnic shelters.
- The planned shelters will serve a lot of people.

- Shelters are in the wrong places. Put them on the east side of the road where families currently go to swim.
- Looks good.
- Very few people use the picnic shelters at parks we have now.
- Too many structures breaks up the natural areas.
- Include one or two picnic areas in the equestrian special use area.
- Seems to be low impact on the natural areas.
- Good balance.
- Will need more shelters during warm weather.
- Please keep the existing picnic tables next to the boat launch.

Question 5: Do the trails in the draft plan provide enough variety of experience and access to different areas of the park?

	Responses	Percentage
Not enough	7	15.2%
Just right	**29**	**63%**
Too much	10	21.7%
Total responses	46	

Please explain:

- The trail along the river should be set further back with short spurs to the water's edge for fishing.
- Move trails further away from reforestation areas.
- Elevate the secondary trail where it will pass through the seasonal wetland on Manley Creek.
- Too much encroachment on the natural areas.
- A few more loops or connections would be nice.
- Prefer soft-surface trails to paved.
- Leave it the way it is now.
- Add trails to the open field areas for off-leash dog use.
- Too developed.
- Need off-leash dog trails.
- Make sure trails are wide enough to avoid user conflicts.
- Include an equestrian obstacle/challenge course on one of the trails.
- Need secondary trails for equestrian activites.
- Breaks the natural areas up too much.
- Trails are important.

Question 6: Does the draft plan include enough natural spaces, wildlife viewing areas, environmental restoration and environmental learning opportunities?

	Responses	Percentage
Not enough	11	23.9%
Just right	**31**	**67.4%**
Too much	4	8.7%
Total responses	46	

Please explain:

- Do restoration work before any development occurs, not the other way around.
- Too much development in this plan to enjoy nature fully.
- Less development, more natural areas needed.
- Good job.
- Like the amount of consideration given for keeping and restoring natural areas.
- Too much pavement.
- More than half of the property set aside for natural areas is perfect.
- Leave the wildlife alone.

Question 7: Does the draft plan provide a good balance between river access (fishing, boating, swimming) and streambank restoration?

	Responses	Percentage
Yes	**34**	**81%**
No	8	19%
Total responses	42	

Please explain:

- Want even greater focus on habitat.
- Concerned that continued use of the property will degrade restoration efforts. Need to continually work to improve it.
- Consult with Fish First on all restoration activities.
- Don't provide swimming access.
- Provide a handicapped accessible fishing area.
- Needs more river access.
- Yes, but only if the plans are followed through with.
- Provide less access, not more.
- Provide more detailed information about this issue.
- Believe fishing and streambank restoration should take precedence.
- Happy that riverbank restoration seems to be a priority in this plan.
- Swimming is not compatible with fishing.

- Use large "river barbs" to shift the river north in the large curve where it erodes the bank every winter. Flattening the slopes and planting vegetation would be a waste of money after the first high water incident washes it all away. Put rip-rap along the eroded area instead.

Question 8: Does the draft plan adequately address concerns about access and safety?

	Responses	Percentage
Yes	**33**	**78.6%**
No	9	21.4%
Total responses	42	

Please explain:

- Moving the access road will greatly reduce the risk of collisions.
- Don't allow small animals in the park. They create safety problems for horseback riders.
- Allowing lots of different types of animals in the equestrians special use area could create safety problems.
- The new entrance further south will improve sight distance.
- Disc golf can be dangerous for other park users.
- Think the pedestrian access between the two properties under the bridge is a good idea.
- Provide adequate turn radius on access road for trucks with horse trailers.
- Need a bigger area for horse trailer parking and more space between each horse trailer parking spot for loading/unloading of gear, etc.
- Locate disc golf, paintball and remote controlled car racing away from trails and animals.
- Make sure paths are wide enough for shared use, including horses.
- Looks good.
- Restrict parking along east and west side of Daybreak Road.

Question 9: The theme used for the site furnishings and design details can help create individual character within a park. What should the theme be at this park?

	Responses	Percentage
River	**24**	**61.5%**
Park	4	10.3%
Agricultural/Pastoral	5	12.8%
No theme	6	15.4%
Total responses	39	

Question 10: Do you have any other comments about the draft plan for this park?

- Include enhancements for wildlife also, not just fish (i.e. remove invasive species, get rid of barbed wire fence, create snags and brush piles, minimize use of chemicals, etc.).

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- Don't like the idea of a theme for the park.
- Include horseback riding trails that connect to other existing trails and facilities in the region.
- Include a horse-friends campground.
- Many people enjoy this park just the way it is. Please leave it alone.
- Move the existing Daybreak Park caretaker house to the west side of the road since that's where more activities will be located.
- Improve/update existing park features (picnic tables, swings and bathrooms).
- This is a very balanced plan.
- Don't think so much public land should be dedicated for any group's exclusive use.
- Installing a remote controlled car race track would be simple and inexpensive with volunteer labor, and you could charge fees for users.
- There is plenty of space here to accommodate these uses.
- Restore this property environmentally and return it to a completely natural state instead of developing it.
- Minimize access roads to encourage users to walk more.
- Need space for dogs.
- Stop trying to develop every last inch of natural space we have available. We don't need another Lewisville Park.
- Include a natural obstacle challenge course for horses.
- The reforestation plan is great.
- Provide an indoor meeting facility of some sort and charge fees. There is a lack of public meeting spaces in this area.
- Include manure bins for horse arena.
- Don't allow overnight camping.
- Don't think a large equestrian facility is necessary or a good fit for this site.
- Concerned about people abandoning horses at the equestrian facility.
- This park and parking lots are not big enough to accommodate a large outdoor horse arena.
- Move the smaller, covered horse arena closer to 259th Street.
- Equestrian trails must be wide enough to accommodate two horses walking side by side.
- Equestrian trails should extend beyond the southeast corner of the park to provide access to more of the property.
- Use as much natural building materials as possible (stone, wood, etc.).
- The streambank restoration needs to be a high priority.
- Use native trees and plants only.
- Avoid using chemical fertilizers, pesticides or herbicides in this park.
- Very concerned that urine and dung from such a large horse facility will leach into the groundwater and creek and damage the fish habitat.
- The environmental restoration efforts must take precedence over recreational activites.
- Plant trees along the streambank to provide shade for fish.
- Do not allow swimming on this side of the bridge.
- Do not use any taxpayer money for the development or maintenance of the equestrian facility. We don't need it.
- Keep the west side of the property natural.
- Provide space in the park for off-leash obedience, herding and agility training for dogs.
- Start charging a user fee in the summer at Daybreak Park to help thin the crowds that currently come to swim.
- Like the balance between recreation opportunities and restoration of the East Fork Lewis River.

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- Most families will continue to use the park on the east side of the road because of the swimming holes and playground equipment. Consider expanding swimming and picnicking opportunities there instead.
- Move the trail along the river farther away from the eroding bluff and include smaller spur trails leading to the water.
- Consider using this site as an environmental mitigation bank.
- Like the re-vegetation plans.

Summary of comments from public meeting flipcharts (if different from comments already summarized):

- Do not reforest the southeast corner of the property. For traffic safety, drivers going southbound on Daybreak Road/82nd Avenue need a clear view of traffic moving eastbound on 259th Street.
- Locate a remote control car race track inside the southern special use area. It is separated from the rest of the park and would have it's own parking area for possible fee collection purposes. It could be used by remote control plane and helicopter operators as well. Only need 200' x 90' area for track.
- Consider locating a temporary remote control car race track on the southeast corner of the property as a phase 1 improvement until this area is developed.
- Concerned about horse trailers navigating the sharp curve where 259th Street meets 72nd Avenue. There is a lot of speeding on this hill currently and there is a dangerous dip in the road on 259th Street at this curve.
- Include a fenced off-leash area located away from horse area. Perhaps in one of the upland meadow areas.
- Designate space for a temporary dog agility course for events.
- Clarify who can use the trails on the plan (walkers, joggers, bikers, horses, etc.).
- Concerned about bicyclists and horses being on the same trail together.
- Don't allow lights at night.
- Don't open the entire park up to horses.
- Make sure all entrances are locked and secured after hours.
- Include restrooms inside the equestrian use area.
- Charge fees for use of picnic shelters to help with maintenance.
- Don't allow ATVs or motorcycles in the park.
- Less roadway inside the park would be safer.
- Good job balancing uses and listening to the public.
- Don't allow paintball.
- Concerned about current problems with people and garbage on Setan Drive leading up to the Ibraham House.
- Limit the amount of mown turf.
- Include a 4-H building with the equestrian facility or separately.
- Would prefer the horse arenas be located at Fairgrounds.
- Include a walking trail along the east side of the property.
- Include more picnic shelters away from roads.
- Don't like the layout of the horse arena.
- Keep the fishermen happy.
- Design arena with paneling fencing ¾ the way around so no one can leave a horse inside unattended.
- Install a three-way stop at the intersection of 82nd Avenue and 259th Street and install turn lanes.

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- Include Web cameras for security.
- Use site for public education about horses and horse care.
- Main trail needs a parallel equestrian trail added to it.
- Disc golf holes 10-12 and 14-16 are too close to the equestrian area and could spook horses.
- Put multi-purpose area, horse stalls and covered arena all under one roof.
- Include a storage facility for jumps, trail equipment, etc. in the equestrian facility.

END

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Appendix D. Natural Resources Assessment

Prepared by PBS Environmental

1.0 NATURAL RESOURCES

Lower Daybreak Park is located northwest of the City of Battle Ground in Clark County, Washington. The intersection of NE 82nd Avenue and NE 259th Street form the southeast corner of the site. Currently the park is informally used for recreational fishing, hiking, and walking along the River. In the northeast corner of the proposed park site, there is a parking lot with an attached boat ramp providing boat access to the East Fork Lewis River. Two unoccupied houses owned by Vancouver-Clark Parks and Recreation are also present on the site.

Development of the site as a park has the potential to impact a variety of environmentally sensitive areas present at the site, including wetlands, priority habitats and species, floodplain, and streams. The discussion below provides an overview of the resources found at the site.

1.1 Aquatic Resources

Both streams and wetlands are found within or adjacent to Lower Daybreak Park.

1.1.1 Wetlands

The National Wetland Inventory (NWI) and the Clark County Wetland Inventory both identify potential wetland areas within the boundary of the park. Presence of these wetlands was field-verified in the late fall of 2008. These wetlands are associated with the Manley Creek stream channel, with the East Fork of the Lewis River, and with a swale located in the woods to the west of the parking lot. The majority of wetlands are located along Manley Creek. In addition to the inventory-mapped wetlands, PBS identified potential wetland areas during field reconnaissance not shown on the NWI or Clark County maps. These areas are located in the pasture areas to the north and south of Manley Creek, and additional wetlands bordering the Manley Creek stream channel. The Clark County Geographic Information System (GIS) data identifies the locations of the high quality wetlands north of the East Fork Lewis River and east of the site at Daybreak Park.

1.1.2 Streams

Manley Creek crosses the park, and the East Fork Lewis River borders the park. Floodplain areas have been mapped in the park along both the creek and river. Characteristics of the creek and river are outlined in Table 1.

Table 1: Stream Characteristics

Stream	Designated Shoreline of the State	Shoreline Buffer	Fish	303(d) List
Manley Creek	—	—	√	—
East Fork Lewis River	√	√	√	√

(Source: Washington State Department of Ecology, GIS Data, 303d_polys.shp; Clark County GIS Data, Washington State Department of Natural Resources Stream Classification Information, dnrwc.shp; Clark County GIS Data, shorebuf.shp)

The East Fork Lewis River forms the northern boundary of the park site. Manley Creek flows from east to west across the site, roughly following the southern boundary of the park. Manley Creek discharges to a backwater slough of the East Fork Lewis River at the northwest end of the park.

The East Fork Lewis River is a perennial river, typically with a meandering or braided morphology. According to historical U.S. Geological Survey (USGS) data, the average monthly flow peaks at 1,460 cubic feet per second (cfs) in December and drops to an average monthly flow of 83 cfs in August (USGS Online Data for Station 14222500). The historical peak flow was recorded at 28,600 cfs in 1996.

Daybreak Bridge confines the river to its present location. In addition, the southern approach to the bridge is built on fill, which further restricts movement of the channel within the southern portion of the valley.

The southern bank of the East Fork Lewis River, forming the northern boundary of the park is actively eroding. The park lies on the outside of a bend in the river. In some places, the erosion has created vertical banks that drop abruptly 5 to 8 feet from the flat terrace forming the floodplain. In a habitat assessment of the watershed conducted in 2004 for the Lower Columbia Fish Recovery Board (Cramer 2004), the low terrace downstream of Daybreak Bridge was found to be eroding at an unnatural rate owing to the lack of trees and other woody vegetation. Cramer (2004) concluded that the accelerated erosion reduces bank complexity and cover, and that stabilization of the bank should be a high priority.

Manley Creek is a perennial stream, which also is meandering and braided in some sections. The presence of beaver dams has significantly changed the morphology of the channel, causing ponding and a more braided system. The creek has a large floodplain towards the northwestern corner of the site, which appears to flood frequently due to dams downstream. Lower portions of the creek, near the confluence with East Fork Lewis River, may actually become seasonally dry due to the ponding. The lowest section of the creek has been recently reconstructed. The streamflow appears to infiltrate into the streambed just before the reconstructed channel, leaving the lower portions puddled or dry.

1.2 Terrestrial Resources

The historical vegetation within the park would have been a gallery forest with patches of even aged hardwoods and conifers reflecting flood disturbance and shifting channel locations. The higher terraces would have been dominated by mature conifers. Rural development and agriculture have significantly altered the floodplain terraces, principally by clearing vegetation. This clearing is likely to continue with additional development in the future.

The vegetation observed at the site varied from a grass-dominated field to well-forested areas. There is a forested area within the northeast corner of the study area, and another in the southwestern portion along Manley Creek. The open field has been regularly mowed. Non-native herbaceous species were dominant within the field and surrounding Manley Creek. Species commonly observed in these areas included *Agrostis* sp., *Phalaris arundinacea, Vicia* sp., *Cirsium arvense, Dactylis glomerata, Festuca arundinacea, Festuca rubra,* and *Rubus procerus.* Typical vegetation in the forested areas included *Cornus sericea, Rubus procerus, Sambucus racemosa, Symphoricarpos albus,* and *Populus balsamifera*. A complete list of species observed at the park is presented in Table 2.

Table 2: Plant Species Identified within Study Area

Botanical Name	Common Name
Ground Cover	
Agrostis exarata	Spike bentgrass
Carex deweyana	Dewey's sedge
Cirsium arvense	Canada thistle
Cirsium vulgare	Bull thistle
Dactylis glomerata	Orchardgrass
Festuca arundinacea	Tall fescue
Festuca rubra	Red fescue
Galium aparine	Cleaver's bedstraw
Geum macrophyllum	Largeleaf avens
Heracleum lanatum	Cow-parsnip
Lemna minor	Duckweed
Lolium perenne	Perennial ryegrass
Phalaris arundinacea	Reed canarygrass
Plantago lanceolata	Rib plantain
Nasturtium officinale	Water-cress
Scirpus microcarpus	Small-fruited bulrush
Tolmiea menziesii	Piggy-back plant
Urtica dioica	Stinging nettle
Shrubs	
Cornus sericea	Red-osier dogwood
Rubus procerus	Himalayan blackberry
Rubus ursinus	Trailing blackberry
Sambucus racemosa	Red elderberry
Spiraea douglasii	Douglas spirea
Symphoricarpos albus	Common snowberry
Trees	
Physocarpus capitatus	Pacific ninebark
Populus balsamifera	Black cottonwood
Salix sp.	Willow sp.

1.3 Soils and Geology

Lower Daybreak Park is located in the northeast part of the Portland basin where a series of Neogene to Quaternary age river and glacial deposits were deposited on the eroded surface of bedrock comprised of Paleogene age lava flows. The park is situated on the lowest river terrace surface and flood plain adjacent to the East Fork of the Lewis River. Published geologic mapping shows these sediments that are mapped as young alluvium of Holocene age (Howard, 2002).

The Paleogene lava flows formed in the ancestral Cascade volcanic arc during Eocene and Oligocene periods of the Paleogene. The Portland Basin formed beginning in late Miocene time and continuing to present where a great thickness of chiefly fluvial deposits accumulated. The older alluvium is mapped as the Troutdale Formation was derived partly from distant eastern sources via the paleo-Columbia River drainage and proximal sources from the Cascade Range. The higher terrace surfaces adjacent to the park is underlain by Missoula Flood deposits and older alluvium sediments. The

Missoula Floods sediments were derived from a series of catastrophic flood events that occurred at the end of the last ice age between approximately 12,000 and 14,000 year ago. Since that time, the lower East Fork of the Lewis River has eroded, re-worked, and deposited recent sediments in the current flood plain environment at the park. The young alluvium mapped by Howard is dominantly composed of sand, gravel, and cobbles. Glacial deposits of Late-Quaternary age are also present in the site vicinity to the northwest where glacial drift is present. Groundwater occurs in the alluvium beneath the park at a relatively shallow depth. Hydraulic continuity exists between the groundwater system and the river.

Five soils mapped at the park (Table 3). Two these soils are listed as hydric, which suggests the presence of wetlands. Nonetheless, wetlands were delineated in areas outside those suggested by soils alone.

Table 3. Soils found at Lower Daybreak Park.

Soil	Listed Hydric?	Description
Puyallup Fine Sandy Loam, 0-3% slopes (PuA)	No	Found on low terraces along the Lewis River and the East Fork Lewis River
Semiahmoo Muck, shallow variant (Su)	Yes	Found in depressions and basins.
Riverwash, cobbly (Rc)	Yes	Consists of nearly level, recently deposited, unconsolidated alluvium that is stratified and variable in texture. Areas are gravelly, cobbly, and stony and are subject to frequent changes through periodic stream overflow.
Washougal Gravelly Loam, 0-8% slopes (WgB)	No	Found along gravelly stream terraces along the East Fork Lewis River. Nearly level except for old, narrow stream channels that formed meandering, depressional troughs.
Washougal Loam, 0-3% slopes (WaA)	No	Found along gravelly stream terraces along the East Fork Lewis River. Surface layer is free of gravel.

1.4 Fish

The WDFW PHS report identified fish presence in the East Fork Lewis River and Manley Creek. The East Fork Lewis River supports several populations of salmonid species listed as threatened on the federal Endangered Species Act (Table 4). Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), chum salmon (*Oncoryhynchus keta*), and steelhead (*Oncorhynchus mykiss*) are all listed and potentially present in the vicinity of the park.

Table 4: Listed Fish Species in the Vicinity of Lower Daybreak Park

Fish Species[1]	Stream	Status		Critical Habitat
		State ESA	Federal ESA	
Lower Columbia River ESU Chinook Salmon	East Fork Lewis River	Candidate	Threatened	Yes
Lower Columbia River ESU Coho Salmon	East Fork Lewis River Manley Creek	—	Threatened	Under Development
Lower Columbia River ESU Steelhead	East Fork Lewis River Manley Creek	Candidate	Threatened	Yes
Columbia River ESU Chum Salmon	East Fork Lewis River	Candidate	Threatened	Yes

[1] ESU = Evolutionarily Significant Unit.

During the site visit to the park, 15 to 20 dead juvenile salmonids, possibly coho salmon, were observed in Manley Creek. Why the fish had died is not known; however, their presence indicates that juvenile salmonids make their way into Manley Creek from the East Fork Lewis River.

Other fish species, including cutthroat trout (*Oncorhynchus clarki*), are likely present in Manley Creek and the East Fork Lewis River.

1.5 Wildlife

Wildlife observed within the study area consisted of beavers, voles, red-tailed hawks, kestrals, blue heron, geese, stellar jays, and juncos. Other species that may be found at the park include deer, elk, raccoon, coyote, rabbits, other small mammals, bald eagles, osprey, various waterfowl species, and songbirds. The East Fork Lewis River and Manley Creek provide adequate habitat and foraging habitat for these species; however, sections of each waterway are lacking in riparian canopy cover. The forested riparian areas provide areas for refuge and foraging. Portions of the park are already visited frequently by the general public, which likely limits some wildlife activity during the day. There are many trails leading through forested riparian areas, especially in the northeast and northwest sections of the park. Amphibians and reptiles were not observed at the time of the assessment; however, it is likely that they utilize the waterway and riparian zone for burrowing, nesting, and feeding. Amphibians and reptiles are likely to be found near Manley Creek, inhabiting damp meadows, dammed ponds, streamsides, and wetland areas. There are also to be found in similar habitats along the East Fork Lewis River. Species that have been seen within the area include rough-skin newts, red-legged frogs, and northwestern salamanders. Other species that have not been observed, but may be present, include the Pacific tree frog, western pond turtle, northwestern garter snake, Dunn's salamander, and western red-backed salamander.

1.6 Priority Habitats and Species

The Washington State Department of Fish & Wildlife (WDFW) provides information on important fish, wildlife and habitat resources. WDFW publishes a list of priority habitats and species considered to be priorities for conservation and management. In addition, WDFW maintains GIS databases containing information concerning the presence of the identified fish, wildlife, and habitat areas. The priority habitats and species (PHS) identified by the WDFW PHS data are discussed below. Wetlands were identified as a priority habitat on the PHS report and are discussed above.

1.6.1 Riparian Zones (RIPAR)

Riparian Habitat Conservation Areas are those areas adjacent to aquatic systems with flowing water containing elements of both aquatic and terrestrial ecosystems that mutually influence each other. Riparian habitat begins at the ordinary high water mark and extends to that portion of the terrestrial landscape influenced by, or directly influences, the aquatic ecosystem. Riparian habitat includes the entire extent of the floodplain and riparian areas of wetlands directly connected to stream courses.

The East Fork Lewis River and Manley Creek riparian habitat corridor extends over a majority of the site. The East Fork Lewis River riparian area is described as providing high quality habitat with a multiple layered canopy.

1.6.2 Waterfowl Concentrations (WAFO)

Waterfowl habitat is primarily associated with wetlands and wetland fringe areas. Areas commonly or traditionally used on a seasonal or year-round basis are defined as "Regular Concentrations" (RC). Areas commonly or traditionally used by significantly large aggregations of animals, relative to what is expected for a particular species or geographic area are referred to as "Regular Large Concentrations" (RLC).

The PHS report identifies wetlands and agricultural lands associated with the East Fork Lewis River as supporting regular large concentrations of breeding and wintering concentrations of waterfowl.

1.6.3 Bald Eagle

The Bald Eagle is a state sensitive species and a federal species of concern. The PHS report identifies the presence of two bald eagle nests 1 to1.5 miles west of the project site. The project site is outside of the identified 800-foot buffer around each nest.

1.6.4 Osprey

Osprey are listed on the Washington State Monitor List. State Monitor species are not considered Species of Concern, but are monitored for status and distribution. They are managed by the WDFW, as needed, to prevent them from becoming endangered, threatened, or sensitive. The PHS Report identified the presence of osprey nests located on power poles at the Storedahl mine, located just over quarter mile from the southeast corner of the park.

1.7 Rare Plants

The Washington Natural Heritage Program (WNHP) collects and distributes information on rare plants and ecological communities. A list of known occurrences of rare plants in Clark County is available on the WNHP website. There are 25 identified rare plant species within Clark County. However, the WNHP GIS data does not identify any WHNP plant species or high-quality or rare plant communities as existing within the park.

1.8 Designated Areas

Portions of Lower Daybreak Park fall within special regulatory areas. These areas include Areas of Special Flood Hazards, Geologic Hazard Areas, and Critical Aquifer Recharge Areas.

1.8.1 Areas of Special Flood Hazards

Areas of special flood hazards are those areas identified by the Federal Emergency Management Agency (FEMA) in the Flood Insurance Rate Maps for Clark County. These areas include the floodway, floodplain, and flood fringe. Areas of special flood hazards along East Fork Lewis River and Manley Creek have the potential to be impacted by the project.

1.8.2 Geologic Hazard Areas

Geologic hazards include areas with steep slopes, historic or active landslides, areas of potential instability, and areas with a severe erosion potential. In addition, geologic hazards can also include seismic and volcanic hazards.

Clark County GIS data identifies geologic hazard areas at Lower Daybreak Park. An area of potential instability is mapped along the southern side of Manley Creek in the western half of the park.

1.8.3 Critical Aquifer Recharge Areas

The entire project site is located within a Category II Critical Aquifer Recharge Area (CARA). Activities and uses commonly associated with park development, including stormwater collection systems, are exempt from requiring a CARA permit from Clark County (Clark County Code 40.410.010(B)(3)). A CARA is an area that has a critical recharging effect on aquifers used for potable (drinking) water. A Category I CARA is defined as the highest priority critical aquifer recharge area; whereas, a Category II CARA is a primary critical aquifer recharge area. A Category I CARA is located less than 500 feet southwest of the west end of the park property.

2.0 ARCHAEOLOGICAL AND CULTURAL RESOURCES

Clark County was historically a gathering place for Native American tribes and the site of the first non-native settlement in the Pacific Northwest, Fort Vancouver. The Hudson's Bay Company established Fort Vancouver in 1825. American immigration to Clark County began in the 1840s. However, archaeologists estimate that early Indian settlements were established along the Columbia River as early as 10,000 to 15,000 years ago. Chinook, Klickitat, and Cowlitz peoples historically used areas along waterways within Clark County.

Archaeological resources include physical evidence and/or material remains of human life or activities capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics. Examples of archaeological resources include the remains of houses, villages, camp and fishing sites; cave shelters; artifacts such as arrowheads, utensils, tools; and graves or human remains. Cultural resources include historic, prehistoric, or archeological sites and standing structures, cemeteries, burial grounds and other distributions of cultural remains and artifacts.

The Clark County GIS data portrays identified historic sites and the Predictive Model Probability Levels for the presence of archaeological resources throughout the county. No historic sites have been identified adjacent to or within one-half mile of the park.

Clark County identifies areas as having a high (80-100 percent), moderate-high (60-80 percent), moderate (40-60 percent), low-moderate (20-40 percent), or low level (0-20 percent) probability of resource presence. The majority of the site is within an area of high probability; small sections of the site are within an area of moderate-high probability of resource presence.

3.0 PERMITTING

Construction of park facilities will require several local, state, and federal permits. The following jurisdictions and agencies have permitting authority depending on the type and location of the action: Clark County, Washington State Department of Fish and Wildlife; Washington State Department of Ecology; U.S. Army Corps of Engineers; National Marine Fisheries Service; and the U.S. Fish and Wildlife Service.

Activities associated with development of the park that may trigger a permit include, but are not limited to, filling, grading, work below the ordinary high water mark of any waterbody, work

within wetlands or their buffers, and construction of park amenities (e.g., shelters, parking areas, restrooms).

Environmental permits will be required if project actions impact any of the resources discussed in Section 1.0.

3.1 Local Permitting

Site Plan Review

Construction of trail segments and support facilities will require development permits from Clark County. Supporting documentation and additional permits are dependent on the type and location of the proposed activity, including, but not limited to, environmental, land use, transportation, water, and sewer review may be required.

It is likely a Clark County Type II Site Plan Review process will be required for each new segment of trail or new support facilities within the county. The proposed improvement plans necessary for application include environmental, land use and transportation, landscaping, sign and outdoor lighting plan. In addition to the required plans, supporting documents will be necessary for the Clark County submittal and may include the following: soil analysis report, preliminary stormwater design report, proposed storm plan, traffic study, SEPA, sewer district utility review letter, water utility review letter, health department project evaluation letter, covenants or restrictions, and other associated environmental applications as detailed below. For support facilities, the necessary permits may include commercial building, mechanical/plumbing, signs, retaining walls, trash enclosures, and outbuildings.

Critical Areas

The Washington State Growth Management Act (GMA) identifies the protection of five critical areas as necessary for protection of the natural environment and the public's health and safety. Each city and county in Washington State has the responsibility to identify, designate, and protect those critical areas found in their local environment. The identified critical areas include fish and wildlife habitat conservation areas, wetlands, frequently flooded areas, critical aquifer recharge areas, and geologic hazard areas.

Supporting documentation is required for many of the Clark County critical areas permits. Necessary information could include any of the following: no rise certification; wetland delineation; habitat impact assessment and mitigation; wetland mitigation plan (see discussion below); rare plant survey; geologic hazard area study; buffer impact mitigation; historical and cultural resources survey; or a biological assessment.

Shorelines

Under the Washington State Shoreline Management Act (SMA), cities and counties with "shorelines of the state" administer a Shoreline Master Program (SMP). A shoreline of the state is defined as all of the water areas of the state and their associated shorelands, together with the lands underlying them, not including lakes less than 20 acres in size and wetlands associated with those small lakes or stream segments where the mean annual flow is 20 cubic feet per second or less and their associated wetlands. The SMP is essentially a shoreline comprehensive plan and zoning ordinance specific to shoreline areas and customized to local circumstances. Activities within shoreline areas must comply with the applicable SMP.

State Environmental Policy Act Environmental Checklist

The Washington State Environmental Policy Act (SEPA) requires the submittal of an environmental checklist, which provides agencies with a framework to consider the environmental consequences to the natural and built environment of a proposal.

The SEPA checklist evaluates the environmental consequences of a proposal and determines if it will have any "significant adverse environmental impact." The agency reviewing the checklist (lead agency) will issue a determination of nonsignificance (DNS), a mitigated DNS, or a determination of significance (DS). A mitigated DNS will include measures to mitigate all significant impacts to a nonsignificant level through the requirements of local, state, or federal regulations. If the lead agency issues a DS, an Environmental Impact Statement (EIS) will be required. The National Environmental Policy Act (NEPA) also provides an environmental review process for project proposals with a federal nexus (e.g., permit, funding).

Archaeological and Cultural Resources Review
Clark County regulates archaeological and cultural resources through the SEPA process. The predictive model is used to determine if an archaeological review is needed to obtain a development permit. Clark County determines the need for an archaeological predetermination based on the probability index (e.g., low, moderate, high) and the potential for impacts by the proposed action. An archaeological predetermination is a method to determine whether cultural resources exist on a particular site without requiring a full archaeological survey. Project actions with moderate to high potential for impacts located within a moderate, moderate-high, or high predictive model map designation will require an archaeological predetermination, as will actions with a high potential for impacts located within a low-moderate area.

Stormwater and Erosion Control
Generally, a stormwater and/or erosion control permit is required for any development activities result in the creation of greater than 5,000 square feet of impervious surface in a rural area or 2,000 square feet in an urban area. The ordinance provides design standards for water quality treatment and water quantity control. The use of best management practices (BMPs) is required during site development.

3.2 State Regulatory Authorities

3.2.1 Washington State Department of Fish & Wildlife

Any activity that will use, divert, obstruct, or change the bed or flow of state waters requires a Hydraulic Project Approval (HPA) from the Washington State Department of Fish and Wildlife (WDFW). Essentially, this covers any work near or over streams, or below the ordinary high water mark.

In addition, WDFW provides management recommendations, which are guidelines not regulations, for identified priority species and habitats. Typically, local jurisdictions implement these guidelines through a habitat or wetland permit.

3.2.2 Washington State Department of Ecology

Section 401 Water Quality Certification
The federal Clean Water Act (CWA) allows states to approve, condition, or deny projects proposed to be built in wetlands or other waters of the U.S. Projects requiring a Section 404 permit from the U.S. Army Corps of Engineers (Corps) also require a Section 401 water quality certification from the Washington Department of Ecology (DOE). Section 401 of the CWA requires applicants to

receive a certification from the state that the proposed project will meet state water quality standards and other aquatic protection regulations. The conditions of the state certification will become conditions of the federal permit.

NPDES Construction Stormwater General Permit
The CWA identifies the discharge of stormwater as a point source of pollution. As such, certain stormwater discharges require a National Pollution Discharge Elimination System (NPDES) permit. The goal of the construction general stormwater permit is to reduce or eliminate stormwater pollution and other impacts to surface waters from construction sites.

An applicant is required to apply for coverage under the state's construction stormwater general permit if the proposed project involves soil disturbing activities where one or more acres will be disturbed, and if stormwater will be discharged to receiving waters directly or to storm drains discharging to receiving waters.

3.2.3 Washington State Department of Natural Resources

The Washington State Department of Natural Resources (DNR) houses the Washington Natural Heritage Program (NHP), which provides information related to the presence of rare plant species and natural ecosystems. There is no state law protecting rare plant species/communities in Washington. However, local jurisdictions may provide protection through their ordinances, regulations and permitting requirements (e.g., Habitat Permit).

3.2.4 Washington State Department of Archaeology and Historic Preservation

The Washington State Department of Archaeology and Historic Preservation (DAHP), under the purview of the National Environmental Policy Act (NEPA), the National Historic Preservation Act, and the State Environmental Policy Act (SEPA), works with agencies, tribes, private citizens, and developers to assure the protection of Washington's cultural heritage. These environmental laws require impacts to cultural resources be considered during the public environmental review process.

3.3 Federal Regulatory Authorities

3.3.1 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) issues permits for certain activities in, over, under or near waters of the U.S. or special aquatic sites, including wetlands. A Section 10 permit is required for any work in, over, or under navigable waters. A Section 404 permit is required for the discharge of dredged or fill material into waters of the U.S., including special aquatic sites such as wetlands.

The Section 404/10 permit application, Joint Aquatic Resources Permit Application (JARPA), also requires the applicant provide an alternatives analysis discussing how alternative sites and designs were evaluated in an effort to avoid or minimize anticipated project impacts. Any impacts to wetlands will require the submittal of a wetland delineation report and a compensatory mitigation plan for any unavoidable impacts to wetlands or waterways.

The Corps issues different types of permits under Section 404/10. Nationwide permits (NWP) are general permits authorizing a category of activities throughout the nation. These permits have specific conditions that must be met for the permit to be valid and are issued for projects with small impacts. Regional permits are issued if the proposed activity falls within a general category of activities that are similar in nature and cause minimal environmental impact (individually and cumulatively). Individual permits are for projects with larger impacts or that cannot meet the specific conditions required of a NWP. Individual permits go through a full public interest review.

3.3.2 National Marine Fisheries Service & U.S Fish and Wildlife Service

Section 7 of the federal Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or the U.S. Fish and Wildlife Service on any activities that may affect a listed species. The consultation requirement assists federal agencies in fulfilling their duty to ensure their actions do not jeopardize the continued existence of a species or destroy or adversely modify critical habitat. A Biological Opinion documents NMFS/USFWS opinion and recommends reasonable and prudent measures that will minimize any impacts from the federal action (e.g., typically issuance of a Section 404 permit) and the terms and conditions that apply to the proposed project.

The applicant is often requested to submit a Biological Assessment (BA) with their permit application. The BA documents the proposed action, existing environmental conditions at the project site, any listed species and critical habitat present, potential impacts to the species and critical habitat, and an effects determination.

3.4 Mitigation

The Corps and local jurisdictions both regulate impacts to wetlands; whereas, only the local jurisdiction regulates impacts to wetland buffers. Both the Corps and local jurisdictions require mitigation to compensate for impacts to the functions and values of the impacted wetland(s) and buffer(s) so that no overall net loss in wetland acreage and functions occur. Clark County requires mitigation to occur on-site or within the same local watershed as the impacted wetland.

Both the Corps and Clark County have an established hierarchy of preferred mitigation methods (Table 5).

Table 5: Mitigation Type and Location

Jurisdiction	Mitigation – Order of Preference			
	1	2	3	4
Corps of Engineers	Mitigation Bank	In-lieu payment	Mitigation – Watershed – On-site, in-kind – Off-site, out-of-kind	
Clark County	On-site	– Off-site, same watershed – Mitigation Bank	In-kind, off-site	Out-of-kind, off-site

1. On-site: within the project boundaries and/or areas adjacent or contiguous to the impact area
2. In-kind: the same physical and functional type as the impact area

3. Off-site: areas not meeting the definition of on-site
4. a different physical and functional type than the impact area

Lower Daybreak Park is within the East Fork Lewis River subwatershed. There is potential, depending on park design, for on-site mitigation to occur. If on-site mitigation is not feasible, an off-site mitigation site will need to be located. It may prove difficult to locate mitigation within the same watershed as the impact. Locating an appropriate mitigation site may require the acquisition of property or conservation easements. The use of off-site mitigation will increase project costs.

Impacts to riparian areas, fish and wildlife habitat areas, and all associated buffers also require mitigation. Buffer averaging is permitted.

4.0 BUFFERS

4.1 Stream/Riparian Areas

The East Fork Lewis River and Manley Creek are present within Lower Daybreak Park. Both of these water bodies have identified Riparian Habitat Conservation areas associated with them. The East Fork Lewis River is a designated shoreline of the state and is classified as a Type S water. Type S waters include shorelines of the state and have flows averaging 20 cubic feet per second (cfs) or more. The Clark County Habitat Conservation Ordinance designates riparian priority habitat as extending outward a specified distance from the ordinary high water mark (OHW) of the stream or to the edge of the 100-year floodplain, whichever is greater. For Type S streams the specified distance is 250 feet. Manley Creek is classified as Type F water. Type F streams are defined as those waters that are not Type S but still provide fish habitat. Riparian priority habitat for Type F streams extends 200 feet from OHW. In some areas at Lower Daybreak Park, the 100-year floodplain marks the boundary of the riparian habitat area. Overall, a large portion of the site falls within the riparian priority habitat area.

Streamnet data indicates the presence of coho salmon within Manley Creek. The East Fork Lewis River, in addition to coho, supports steelhead and fall chinook. Furthermore, both the East Fork Lewis River and Manley Creek are considered critical habitat for chum salmon.

Activities within riparian habitat areas must not substantially diminish the habitat values and functions present. Activities that degrade habitat should be avoided when feasible, minimized to the extent possible, or mitigated.

Activities associated with park development that could potentially be completed within the riparian habitat conservation area include the construction of trails, shelters, scenic overlook(s), playgrounds, parking area(s) and restroom facility(s), and the placement of picnic tables, benches, and bicycle racks. These types of activities within habitat areas (buffer) will likely be permitted, after County review, provided they minimize the impact to the functions and values of the habitat area. The County Habitat Conservation Ordinance is intended to be administered with attention to site-specific characteristics, as such, permitted activities and any required mitigation will be determined through the County Habitat Pre-Determination process. The anticipated impact of the use and its proposed location within the buffer will influence the County's review. For instance, a trail located within the vegetated buffer along the stream will have less impact than construction of a restroom facility. A restroom facility constructed within a currently

degraded area of the buffer far from the stream would be preferable to constructing it along the stream in a high quality buffer area.

The Habitat Conservation Ordinance also identifies certain activities that are exempt from review. Exempt activities within riparian habitat conservation areas applicable to park development include clearing of defined nuisance vegetation and replanting with native vegetation; clearing as minimally necessary for streambank restoration; and, clearing as minimally necessary for creating a 4-foot or narrower path using natural, wood-based, or vegetated pervious surfacing.

Mitigation for habitat impacts should occur on-site if at all possible. If off-site mitigation is required it may be in the form of: purchasing credits from a permitted habitat bank; voluntarily contributing to the established Cumulative Effects Fund for the watershed the impact occurs in; or by carrying out a specific mitigation project.

4.2 Wetlands

A wetland delineation completed at Lower Daybreak Park identified wetlands with the following wetland rating categories: Category II, Category III, and Category IV. Wetland buffer widths are determined by comparing the wetland rating category and the intensity of the proposed land use. The buffer width is also based on the protection of habitat and water quality functions.

Parks and recreation uses that include structures, parking, lighting, impervious trails, and so on are considered a high intensity use. If there are no structures, parking or lighting, parks may be considered to have moderate land use intensity. Table 1 identifies the potential wetland buffer widths for the delineated wetlands.

Table 1: Potential Wetland Buffers Widths

Wetland Rating	Land Use Intensity	Buffer Range*	
		Min	Max
Category II	Low	50’	150’
	Moderate	75’	225’
	High	100’	300’
Category III	Low	40’	75’
	Moderate	60’	110’
	High	80’	150’
Category IV	Low	25’	
	Moderate	40’	
	High	50’	

* Exact buffer is also determined by the Habitat Score in the rating form

The County Wetland Protection Ordinance allows for the modification of the buffer zone through buffer averaging and buffer reduction. Buffer reduction can occur through the use of design techniques to reduce the land use intensity category including buffer enhancement, shielding of high intensity uses, surface water management, low impact development design, enhanced stormwater management, and/or habitat corridors. In any case, the wetland buffer cannot exceed two times the total wetland area.

Road and utility crossings are allowed if impacts to the buffer are minimized and buffer functions are replaced. Construction of stormwater facilities are permitted in buffers of

wetlands with low habitat function. Other activities are allowed in wetland buffers provided the following criteria are met:

- The activity is temporary and will cease or be completed within 3 months.
- The activity will not result in a permanent structure in or under the buffer.
- The activity will not result in a reduction of buffer acreage/function.
- The activity will not result in a reduction of wetland acreage/function.

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Appendix E. Wetland Delineation Report (Summary)

Prepared by PBS Environmental

PBS | Engineering + Environmental

July 27, 2009

Mr. Brent Davis
Clark County Community Development Department
P.O. Box 9810
1300 Franklin Street, 3rd Floor
Vancouver, Washington 98666-9810

Re: Wetland Delineation Addendum
Lower Daybreak Park, 26401 NE Daybreak Road, Battle Ground, Washington
PBS Project No. 75096.000

Dear Mr. Davis:

This letter is an addendum to the Wetland Delineation Report dated May 2009 by PBS Engineering + Environmental (PBS) for Lower Daybreak Park (26401 NE Daybreak Road, Battle Ground, Washington). On June 10, 2009, PBS met with you and George Fornes at Daybreak Park to inspect the delineation. This letter presents the conditions observed at that time and provides revised figures for the report (Figures 5, 12, 13, 14, 16, 17, 21, 22, and 24) plus two additional figures centered on the general areas described below (Figures 25 and 26).

The changes to the report fall in two general areas: one area is around Wetlands B and C (Figure 26), and the other is around an excavated pit near the single-family home along Septan Drive (Figure 25). During the June 10 site visit, inundation was present in these areas. The attached figures show the approximate extent of the inundation as observed.

Wetlands B and C

Surface water was observed connecting Wetlands B and C to Wetland A and Manley Creek. The water backs up from a beaver dam in Manley Creek and spreads as sheet flow north toward Wetlands B and C. The inundated area falls within the 100-year floodplain and is located in a broad topographic swale. The soil in the inundated area was examined during the site visit, and was found to be non-hydric. The lack of hydric soil is also described in Sampling Point 7 of the original report, and those findings were supported by the field observations in June. Upon following the inundation toward the creek, it was observed that water in the field was connected to Manley Creek, and the elevation is controlled by a beaver dam. No wetlands were added to the map because of the lack of hydric soil.

The wetland ratings of Wetland B and C were reexamined to reflect the surface water connection. The *Washington State Wetland Rating System for Western Washington – Revised* (Department of Ecology Publication 04-06-025) was used to determine the ratings. Clark County Code was then consulted to determine any changes to the buffers. The original wetland delineation report listed Wetlands B and C as Category IV wetlands, scoring 2 points for water quality, 8 points for hydrologic functions, and 8 points for habitat, for a total score of 18. Wetlands B and C were reported as Category IV wetlands because they score less than 30.

The new revised wetland ratings (attached) show that Wetlands B and C will remain the same category despite the surface connection. The new values are shown in bold italic on the spreadsheet. The revised water quality score is 10, hydrologic is 8, and habitat is 9, for a total of 27 points. Although some scores increased, the total is below 30; therefore, Wetlands B and C remain Category IV.

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Excavated Pit

Surface water was also observed in an excavated sandy pit to the southeast of the single-family home at Septan Drive. This area was inspected for hydric soils during the meeting, and none were found; so the area was not mapped as a wetland. The excavated pit is also exempt from regulation by Clark County because it would qualify as an "Artificial Wetland" (40.450.010.C.2). The topographic map shows a channel connecting the excavated pit with Manley Creek. No inundation was observed in this channel, and the topographic map shows the channel starting at the pit at an elevation of 64 feet, then rising to 65 feet, and falling back to 64 feet at Manley Creek. The change in elevation restricts flow to the creek through that channel. Beaver dams are present in Manley Creek and cause flooding into Wetland A near the excavated pit. The excavated area may receive this flood water from the southeast as it backs up from the northwest-extending part of Wetland A (Figure 25, lower right corner).

Please attach this letter to the previously submitted report and replace the original figures dated May 2009 with these revised figures dated July 2009. Please call if there are any questions.

Sincerely,

PBS Engineering + Environmental

Joseph D. Leyda, MA, PWS, CE
Senior Wetland Scientist

Attachments: Figure 5 – Legend and Sheet Locator
Figures 12, 13, 14, 16, 17, 22, 24, 25, & 26 – Wetland Delineation Maps
Wetland Rating Spreadsheets

75096.000

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Wetland Delineation Report

Lower Daybreak Park
26401 NE Daybreak Road
Battle Ground, Washington

Prepared for:
Vancouver-Clark Parks and Recreation
Vancouver, Washington

May 2009
Project No. 75096.001

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1.0 INTRODUCTION

PBS Engineering + Environmental (PBS) prepared this wetland and stream delineation report at the request of Vancouver-Clark Parks and Recreation. PBS performed this investigation in association with the proposed Lower Daybreak Park Master Plan. Lower Daybreak Park is located at NE 82nd Street and NE 265th Street (all of Parcel Nos. 225451000 and 225383000; portions of 225396001, 225219000, 225189000, 225220000, 225190000, 225204000, T4N/R2E/S19&20) within Clark County, Washington. NE 82nd Street turns into NE Daybreak Road as it bends to the northwest. A Vicinity Map is provided as Figure 1 of this report.

2.0 STUDY AREA

The study area is the above mentioned parcels, approximately 105 acres in size, roughly the portions of the above parcels from the toe of the slope or roadway north to the East Fork Lewis River. Figures 22-25 show the areas where the study area differs from the park boundary. The majority of the study area was a grassy field that is mowed regularly and is vegetated mainly with ryegrass, sweetvernal grass, fescue species, and bentgrass species. A forested area in the northeastern portion of the study area is adjacent to the East Fork Lewis River, and consists mainly of black cottonwood (*Populus balsamifera*), red-osier dogwood (*Cornus sericea*), and piggy-back plant (*Tolmiea menziesii*). The forested area is mainly an upland area, adjacent to a small side channel of the East Fork Lewis River. The study area also included Manley Creek, where the vegetation is mainly reed canarygrass (*Phalaris arundinacea*). Manley Creek meanders through low terraces within a wide and active floodplain. The topography is relatively flat, with some rolling hills throughout the field. The study area is bounded by the East Fork Lewis River to the north, by woods and pasture to the west, by NE 82nd Street and NE Daybreak Road to the east, and by NE 259th Street to the south. The western side of the study area is mainly bounded by the hill slope to the west of Manley Creek. The current use of the study area is for recreational fishing, hiking, dog exercise, and leisurely walking along the East Fork Lewis River. In the northeast corner of the study area, there is a parking lot with an attached boat ramp for access to the East Fork Lewis River. There are also two unoccupied houses on the property. One is south of Manley Creek, and is a rental house, and the other is a vacant house near the mouth of Manley Creek. They are both owned by Vancouver-Clark Parks and Recreation.

3.0 METHODS

3.1 Delineation, Functional Assessment, Wetland Ratings, & HGM Classifications

The wetland delineation procedures used in this report follow the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (Environmental Laboratory, 1987), *Interim Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Corps, 2008), and the *Washington State Wetlands Identification and Delineation Manual* (WA DOE, 1997).

PBS traversed the study area and recorded data plots at select locations on November 20-21, 24-26, and December 1-3, 10, and 12, 2008. The wetland boundaries were identified along with estimated ordinary high water marks (OHWM) for waterways and ditches. These features were marked with sequentially numbered pink wire flags in the ground or with pink ribbon flags. For each wetland flag placement, an average of 2 to 3 soil holes were excavated and the hydrology was allowed to equilibrate. After waiting 20 minutes or longer, the free water in the pit was measured. The wetland determination was made based on the combination of the presence of any free water or saturation in the upper 12 inches of the soil, the presence of hydric soils, and the presence of hydrophytic vegetation. Wetland determinations in atypical or naturally problematic areas were completed according to the

Problem Area Procedures in Section 3.3 below. The wetland flags were placed on the sampling dates above.

The OHWM was marked according to the definition of a "stream" in Clark County Code 40.100.070 which states, "stream means those areas where surface waters flow sufficiently to produce a defined channel or bed. A defined channel or bed is indicated by hydraulically sorted sediments or the removal of vegetative litter or loosely rooted vegetation by the action of moving water. The channel or bed need not contain water year-round."

The Wetland Delineation Maps (attached) are based on a survey by OTAK (17355 SW Boones Ferry Road, Lake Oswego, Oregon 97035) including topography, some wetland and stream flags, and other features. PBS and alta planning and design also located some flags using GPS equipment (see Figure 5 for the GPS accuracy report). The 100-year flood plain, and parcel lines were added from Clark County GIS data. PBS added the buffers for the wetlands and waters and other features.

3.2 Local Precipitation Data

The local rainfall for November 2007 through December 2008 is below normal limits based on the average rainfall at the Portland, Oregon, airport gauge. The average and actual rainfall levels PBS used to assess the potential for wetland hydrology are shown below:

Actual Monthly Rain Summary
Portland, Oregon (356751)
Period of Record : January 2008 – March 2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2007 Precipitation (in.)	-	-	-	-	-	-	-	-	-	-	4.25	7.57	-
2008 Precipitation (in.)	4.71	2.19	3.71	2.08	2.02	1.00	0.29	1.23	0.48	1.74	4.15	2.70	26.30

Western Regional Climate Center, wrcc@dri.edu

Average Monthly Rain Summary (WETS data)
Portland, Oregon (356751)
Period of Record : 1971-2000

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Total Precipitation (in.)	5.02	4.31	3.68	2.64	2.33	1.61	0.77	0.94	1.64	2.88	5.66	5.66	37.15

Western Regional Climate Center, wrcc@dri.edu

The precipitation total from October through December 2008 was 8.59 inches. The historical average amount is 14.20 inches during the same October through December range, which means precipitation from the beginning of the water year through field work was 40 percent below normal. According to the *Interim Regional Supplement* (Corps, 2008), rainfall is considered within "normal" limits if the amount is within 30 percent of the average (either above or below). Because the rainfall for the study area is 40 percent below average, it qualifies as "low" rainfall. The wetland hydrology parameter is therefore considered naturally problematic for this investigation.

3.3 Problem Area Procedures

Several factors about the study area require use of Problem Area procedures. The disturbed vegetation from regular mowing, the low precipitation, and some areas of earthwork obscure the typical wetland indicators because they are not normal circumstances. The *Interim Supplement* discusses in Chapter 5, Difficult Situations in the Western Mountains, Valleys, and Coast Region, how to address naturally problematic (hydrology) and disturbed (vegetation and some soils) areas for all three wetland parameters. These procedures were used to interpret the data and make the wetland determinations. The methods used for determining hydrophytic vegetation, hydric soils, and wetland hydrology in disturbed or naturally problematic areas are discussed below.

The below average precipitation means that wetlands may not be exhibiting the full extent of saturation and may contain dry areas. For this reason, wetland hydrology will be treated as a naturally problematic indicator. Procedure 1 on page 117 of the *Interim Supplement* says to first verify that indicators of hydrophytic vegetation and hydric soil are present, or absent due to disturbance or other problem situations. If hydric soil and hydrophytic vegetation were present (or problematic), then the landscape position was assessed. If the area was in one of the landforms listed on page 117, then Procedure 3b, Periods with Below Normal Rainfall was used. That procedure says to make the determination based on hydrophytic vegetation and hydric soils, if no significant hydrologic manipulations (human-caused) are present. In areas where the vegetation is atypical, the vegetation criterion was not used in Procedure 3b, and the wetland hydrology determination was based on the presence of hydric soil.

In the mowed areas of the field where vegetation was disturbed, we used the procedures beginning on page 99. The guidance says that if hydric soil and wetland hydrology are not present (or problematic), then the area is likely non-wetland. During the study, the presence of hydric soil and wetland hydrology were verified or identified as problematic. If hydric soil and wetland hydrology were present (or problematic), then the landscape position was assessed. If the area was in one of the landforms listed on pp. 99-100, then Procedure 4e, under Specific Problematic Vegetation Situations, Managed Plant Communities, was used. No reference sites were available for the wetlands in the areas with disturbed vegetation, so instruction (4) was followed, and the determination was based on hydric soils and wetland hydrology. Wetland hydrology was problematic, and it was assessed as described above.

Problem soils include areas where earthwork has occurred, and the soil layers have been removed and the subsoil exposed. For areas with atypical soils, Chapter 5 was consulted. The sampling point in question was then evaluated for either examples of soils with faint or no indicators (page 110) or for soils with relict hydric soil indicators (page 112).

Some of the sampling points in wetlands do not exhibit the published hydric soil indicators. These indicators from the *Interim Regional Supplement* are designed for the edges of wetlands, not the interior wettest parts. Many sampling locations were chosen in the interior low portions of the wetlands to reveal any hydrology that may not be present on the outer edges. In these cases, the definition of a hydric soil was used instead of the published indicators. The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA SCS, 1994). PBS' determination of hydric soils was based on this definition, and not solely on the presence of the color indicators listed in the *Interim Regional Supplement*. This decision is supported by the *Interim Regional Supplement* which states that "…indicators…are

designed to help identify hydric soils in the Western Mountains, Valleys, and Coast Region. Indicators are not intended to replace or relieve the requirements contained in the definition of a hydric soil. Therefore, a soil that meets the definition of a hydric soil is hydric whether or not it exhibits indicators" (Corps, 2008).

3.4 Soil Survey Information

The study area includes five soil series. Excerpts from the *Soil Survey of Clark County, Washington* (for the USDA SCS; McGee, 1972) describes the soil in the study area as follows:

(PuA) Puyallup Fine Sandy Loam, 0-3% slopes (not listed hydric): This soil is on low terraces along the Lewis River and the East Fork of the Lewis River. In a typical profile, the surface layer is about 18 inches thick. In sequence from the top, the upper 4 inches is very dark brown fine sandy loam; the next 4 inches is very dark grayish-brown loam; and the lower part is dark-brown, fine sandy loam. Below the surface layer is loose, dark-brown, loamy sand about 9 inches thick. The underlying material, to a depth of 60 inches, is very dark grayish-brown, gravelly sand. This soil is somewhat excessively drained. Permeability is moderately rapid in the uppermost part of the profile and rapid in the lower part. The available water capacity is moderate. Surface runoff is very slow, and there is no erosion hazard. Undiked low areas next to the rivers are subject to flooding in winter. Included in mapping were a few small areas of Newberg and Cloquato soils.

(Su) Semiahmoo Muck, shallow variant (listed hydric): This soil is in depressions and basins. In a typical profile, the surface layer is dark reddish-brown muck about 13 inches thick. Below the surface layer is very friable, pale-brown, fine sand (pumice) about 2 inches thick. The next layer, to a depth of 30 inches, is dark reddish-brown muck. The underlying material, to a depth of 60 inches, is mineral soil composed of stratified sand, silt, and clay. This soil is very poorly drained and has moderate permeability. The available water capacity is very high, and fertility is low. Surface runoff is ponded to very slow, and there is no erosion hazard.

(Rc) Riverwash, cobbly (listed hydric): This soil consists of nearly level, recently deposited, unconsolidated alluvium that is stratified and variable in texture. Many areas are gravelly, cobbly, and stony and are subject to frequent changes through periodic stream overflow. This miscellaneous land type supports little or no vegetation. Some areas are a source of gravel; others are used for recreational purposes.

(WaA) Washougal Loam, 0-3% slopes (not listed hydric): This soil is in the same areas as Washougal gravelly loam, 0 to 8 percent slopes, and is similar to that soil—except that the surface layer is free of gravel, and gravelly sand is at a depth of 20 to 36 inches. Surface runoff is very slow, and there is no hazard of erosion. This soil has a higher available water capacity than Washougal gravelly loam, 0 to 8 percent slopes. Included in mapping were a few areas that are deeper.

(WgB) Washougal Gravelly Loam, 0-8% slopes (not listed hydric): This soil is on gravelly stream terraces along the East Fork of the Lewis, Little Washougal, and Washougal Rivers. It is nearly level except for old, narrow, stream channels that formed meandering, depressional troughs. In a typical profile, the surface layer is gravelly loam about 22 inches thick. It is black in the upper part and very dark brown in the lower part. Below the surface layer is friable, dark-brown, very gravelly loam about 8 inches thick. The next layer is dark-brown, very gravelly coarse sandy loam about 6 inches thick. The underlying material, to a

depth of 60 inches, is brown and gray sand, pebbles, and cobblestones. This soil is somewhat excessively drained. It is generally moderately permeable; but it is very rapidly permeable in the substratum. The available water capacity is moderate. Roots penetrate to the gravelly sand layer. Surface runoff is slow, and the hazard of erosion is slight. The soil occurs at an elevation high enough in most places to be above the normal high water stages of adjacent rivers. Included in mapping were a number of sandy areas that are less than 1 acre in size and are generally along terrace breaks. Also included were small areas that are non-gravelly.

4.0 RESULTS

Twenty-nine wetlands were identified as well as one river and one stream in the study area. The East Fork Lewis River and Manley Creek are located in the northern and southern parts of the study area. The wetlands are located in the woods to the north, along the Manley Creek edge, and in the fields in various locations.

The East Fork Lewis River is located in the northern portion of the study area. It is classified by the Washington Department of Natural Resources (DNR) as a Type 1 water. The river changed course in the mid-1990s. The previous channel (now an older side channel) is located at the mouth of Manley Creek, to the north of the house in the northwest portion of the study area. The eastern part of this side channel was dry at the time of the study, and the western part had surface water. The dry part was east of Sampling Point 33 to the main channel of the river. This area lacked saturation or inundation, was vegetated with trees and shrubs, and had sandy soils. Although currently dry, this area serves as a water storage area during floods, when the water in the main channel is high enough to spill over. Leaf litter was sparse in the dry portion, indicating the passage of water since the last leaf-fall. Debris was observed suspended in shrub and tree branches, indicating several feet of inundation in the past. The inundated western part of the side channel is lower in elevation than the dry part, and slowly flows to the west. At least one beaver dam was observed along the inundated part (Figure 17). The inundated part extends west past the mouth of Manley Creek. The OHWM of this older channel was flagged, and continued along the rocky shore of the main channel (see Figures 16, 17, 24, and 25). Flags were also placed in areas where plant roots are exposed and in the direction of flow. Another side channel was observed, extending west from the boat ramp area through the woods in the northeast portion of the study area. PBS flagged that channel as well.

The East Fork Lewis River is included on the Washington Department of Ecology's 303(d) 2008 list as a Category 5 impaired water for temperature and fecal coliform (http://apps.ecy.wa.gov/wqawa2008/viewer.htm?lstid=6588&category=5).

Manley Creek is located in the southern and western portions of the study area. It flows from under 259th Street across the southern boundary of the study area, and then meanders to the northwest, around the existing single-family home and pasture. The creek continues to the west near the southern property boundaries, and then turns northward and empties into the East Fork Lewis River near the single-family home in the northwest corner of the study area. The creek is listed by the DNR as a Type 3 water. The eastern portion is vegetated with reed canarygrass, and is flanked by berms vegetated with Himalayan blackberry on each side. The western portion flows through a lightly forested area before emptying into the river. A Fish First enhancement project is located in the western portion. Numerous beaver slides and dams along the stream were observed. Fifty-one beaver slides were observed, and not all were recorded, so the actual number is higher. Fourteen beaver dams were observed along Manley Creek. The beaver dams were made of mud and reed canarygrass, with little or no woody material in some cases. The water flowed over or around most

of the beaver dams, but still created some form of upstream impoundment in most cases. The impoundment of the beaver dams intensifies the natural action of the stream overflowing and inundating the associated wetlands.

PBS observed several alterations within the stream channel of Manley Creek. A culvert and stream crossing was removed from the creek in the recent past, and is shown on Figure 20. A large drain pipe was observed sunken to the bottom of the stream channel near Sampling Point 28, between Wetland R and Wetland A (Figure 22). Near the western ends of Wetland A and S, to the east of the bridge at NE Septan Drive, another pipe is installed in the stream bed, near a beaver dam. West of the beaver dam in the stream is the remains of a wooden flume (Figures 17, 25). The western portion of Manley Creek was dry approximately from the bridge at NE Septan Drive to the mouth. An existing stream restoration project was observed in the western part of the channel (Figure 17, 25).

The channel of Manley Creek was flagged and distinguished from the wetlands according to change in depth, which was 4 feet in places, and presence of a rocky or sandy substrate devoid of vegetation. Manley Creek is not listed on the Washington Department of Ecology's 303(d) list of impaired waters. During the wetland delineation, 15 to 20 dead juvenile salmonids, possibly coho salmon, were observed in Manley Creek near the bridge across NE Septan Drive, to the west of the western ends of Wetlands A and S (Figure 25). Why the fish died is not known, but may be related to low flows in the creek. Manley Creek provides little or no spawning habitat for salmonids, so the presence of juvenile salmonids suggests the fish made their way into the creek from the East Fork Lewis River.

The WDFW PHS report identified fish presence in the East Fork Lewis River and Manley Creek. The East Fork Lewis River supports several populations of salmonid species listed as threatened on the federal Endangered Species Act (Table 1). Chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*Oncorhynchus kisutch*), chum salmon (*Oncoryhynchus keta*), and steelhead (*Oncorhynchus mykiss*) are all listed and potentially present in the vicinity of the park. Other fish species, including cutthroat trout (*Oncorhynchus clarki*), are likely present in the East Fork Lewis River and in Manley Creek.

Table 1: Listed Fish Species in the Vicinity of Lower Daybreak Park

Fish Species[1]	Stream	Status		Critical Habitat
		State ESA	Federal ESA	
Lower Columbia River ESU Chinook Salmon	East Fork Lewis River	Candidate	Threatened	Yes
Lower Columbia River ESU Coho Salmon	East Fork Lewis River Manley Creek	—	Threatened	Under Development
Lower Columbia River ESU Steelhead	East Fork Lewis River Manley Creek	Candidate	Threatened	Yes
Columbia River ESU Chum Salmon	East Fork Lewis River	Candidate	Threatened	Yes

[1] ESU = Evolutionarily Significant Unit

Table 2: Wetland Summary

Wetland on Map	Sampling Point	Flags in field say	Size Sq. ft.	Size Acres	Cowardin Class	WA HGM Class	WA DOE Category	Habitat Score	Land Use Intensity	Buffer Width (ft)
A	3, 4, 32	A / Z	78,340	1.7984	R2EME	Riverine	II	18	Low	50
B	12	B	1,600	0.0367	PEME	Depressional	IV	8	Low	25
C	5, 6	C	44,581	1.0234	PEME	Depressional	IV	8	Low	25
D	13	D / M	6,748	0.1549	R2EME	Riverine	III	9	Low	40
E	14	E	1,820	0.0418	PEME	Slope	IV	8	Low	25
F	16	F	7,398	0.1698	PEME	Slope	IV	8	Low	25
G	19	G	884	0.0203	PEMEx	Depressional	III	10	Low	EXEMPT
H	23	H / L	7,211	0.1655	R2EME	Riverine	III	10	Low	40
I	25	I	4,010	0.0921	R2EME	Riverine	III	9	Low	40
J	24	J	3,896	0.0894	R2EME	Riverine	III	9	Low	40
K	31	K	3,640	0.0836	R2EME	Riverine	III	9	Low	40
L	13	N	479	0.0110	R2EME	Riverine	III	9	Low	40
M	26, 27	O	15,301	0.3513	R2EME	Riverine	III	10	Low	40
N	27	P	2,923	0.0671	R2EME	Riverine	III	10	Low	40
O	45	Q	973	0.0223	R2EME	Riverine	III	10	Low	EXEMPT
P	45	R	193	0.0044	R2EME	Riverine	III	10	Low	40
Q	45	T	575	0.0132	R2EME	Riverine	III	10	Low	40
R	28	U	2,756	0.0633	R2EME	Riverine	III	11	Low	40
S	29, 30	V	32,635	0.7492	R2EME	Riverine	III	13	Low	40
T	34	W	261	0.0060	R2EME	Riverine	III	13	Low	40
U	35	X	195	0.0045	R2EME	Riverine	IV	14	Low	25
V	37	Y	305	0.0070	PFOE	Depressional	IV	15	Low	25
W	38	AA	859	0.0197	PEME	Depressional	IV	14	Low	25
X	39	BB	243	0.0056	PSSE	Depressional	IV	14	Low	25
Y	40	CC	65	0.0015	PSSE	Depressional	IV	14	Low	25
Z	41	DD	696	0.0160	PSSE	Depressional	IV	14	Low	25
AA	42	EE	298	0.0068	PFOE	Depressional	IV	15	Low	25
BB	43	FF	804	0.0185	PFOE	Depressional	IV	15	Low	25
CC	44	GG	196	0.0045	PSSE	Depressional	IV	14	Low	25

Wetland A
Wetland A is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the middle portion of the study area and is flagged with ribbons and wire flags labeled "A" or "Z." The total size is estimated to be approximately 78,340 square feet. Wetland A is bounded on the southwest side by the ordinary high water mark of Manley Creek and is on a low terrace/floodplain that drains into the creek. Wetland A is also regularly flooded by Manley Creek. On November 20 and December 3, 2008, wetland hydrology was observed in Wetland A in the form of surface water, free water in the soil pit, and soil saturation. Free water in one pit was observed at a depth of 4 inches; in other soil pits, soil saturation was observed at a depth of 12 inches and free water at 20 inches. Wetland hydrology indicators that qualified included C3 (Oxidized Rhizospheres along Living Roots); D2 (Geomorphic Position), because of the wetland's position in the flood plain; C2 (Dry Season Water Table); and D5 (FAC-Neutral Test). Wetland A is vegetated with reed canarygrass (*Phalaris arundinacea*), stinging nettle (*Urtica dioica*), black cottonwood (*Populus balsamifera*), and Pacific ninebark (*Physocarpus capitatus),* which qualifies as hydrophytic vegetation. The soils in Wetland A have chromas of 1 and 2, with redox concentrations throughout the upper 20 inches, indicating hydric soils. For more information on Wetland A, see the attached Wetland Delineation Maps, Figures 13-16 and 21-25.

Wetland B
Wetland B is a palustrine emergent seasonally flooded/saturated wetland (PEME) and is in the Washington HGM depressional class. This wetland is located in the middle portion of the study area, northeast of Wetland A, and is approximately 150 feet north of Manley Creek (see Figure 13). The total size is estimated to be approximately 1,600 square feet. Wetland B is located within a relatively flat area of a field, which is mowed regularly and most likely drains into Manley Creek during flood events. Wetland B had no surface water or saturated soils. Wetland hydrology indicators observed were C3 (Oxidized Rhizospheres along Living Roots). Wetland B is vegetated with reed canarygrass and spike bentgrass (*Agrostis exarata*), which qualifies as hydrophytic vegetation. However, because this wetland is mowed regularly, the vegetation criterion was not used for the wetland determination. The soils in Wetland B have a chroma of 2, with redox concentrations throughout the upper 20 inches, indicating hydric soils.

Wetland C
Wetland C is a palustrine emergent seasonally flooded/saturated wetland (PEME) and is in the Washington HGM depressional class. This wetland is located in the middle portion of the study area, approximately 200 feet northwest of Wetland B (see Figure 13). The total size is estimated to be approximately 44,581 square feet. Wetland C is located on a relatively flat field, which is mowed regularly. Wetland C did not have surface water present but showed saturation of the soil. Wetland hydrology was observed in Wetland C in the form of free water and saturation, on November 21, 2008. Soils were saturated at a depth of 2 inches, and free water was present at 3 inches. Wetland C is vegetated with reed canarygrass, spike bentgrass, red fescue (*Festuca rubra*), and tall fescue (*Festuca arundinacea*), which qualifies as hydrophytic vegetation. However, because this wetland is mowed regularly, vegetation criterion was not used for the wetland determination. The soils in Wetland C have a chroma of 2 and mottles and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland D
Wetland D is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the middle portion of the study area and is flagged with ribbons and wire flags labeled "D" and "M." The total size is

estimated to be approximately 6,748 square feet. Wetland D is bounded on the southwest side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 20). Wetland D is also regularly flooded by Manley Creek. Wetland D had no surface water or soil saturation present. Wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland D is vegetated with reed canarygrass which qualifies as hydrophytic vegetation. The soils in Wetland D have a chroma of 2, with redox concentrations throughout the upper 20 inches, and satisfies the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland E

Wetland E is a palustrine emergent seasonally flooded/saturated wetland (PEME) and is in the Washington HGM slope class. The percent slope of the wetland in the direction it drains is approximately 1.8 percent, based on the surveyed topography. This wetland is located in the middle portion of the study area, southwest of Wetland D (see Figure 20). The total size is estimated to be approximately 1,820 square feet. Wetland E is located within a relatively flat area of a field, which is mowed regularly. Wetland E is vegetated with spike bentgrass, tall fescue, and orchard grass (*Dactylis glomerata*). However, because this wetland is mowed regularly, the vegetation criterion was not used for the wetland determination. The soils in Wetland E have chromas of 1 and 2, with redox concentrations throughout the upper 20 inches, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface). Wetland E is separated from Wetland F by gravelly fill.

Wetland E had no surface water or saturated soil. The secondary wetland hydrology indicator D2 (Geomorphic Position) was also observed. The vegetation is atypical, so it cannot be relied upon for this determination. The soils are hydric, so the determination for wetland hydrology is positive. The wetland flows into Manley Creek during storm events and acts as an ephemeral swale.

Wetland F

Wetland F is a palustrine emergent seasonally flooded/saturated wetland (PEME) and is in the Washington HGM slope class. The percent slope of the wetland in the direction it drains is approximately 1.4 percent, based on the surveyed topography. The wetland is located in the southern portion of the study area, south of Wetland E (see Figure 20). The total size is estimated to be approximately 7,398 square feet. Wetland F is vegetated with spike bentgrass, Canada thistle (*Cirsium arvense*), tall fescue, and perennial ryegrass (*Lolium perenne*). However, because this wetland is mowed regularly, the vegetation criterion was not used for the wetland determination. The soils in Wetland F have a chroma of 2, with redox concentrations throughout the upper 20 inches, and satisfies the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland F is located within a slightly sloped area of a field, which is mowed regularly and drains toward Wetland E and Manley Creek. Wetland F is separated from Wetland E by gravelly fill. Wetland F receives water from a culvert under a gravel drive. Wetland F had no surface water or saturation soil. Wetland hydrology indicator D2 (Geomorphic Position) was observed because of the swale-like topography. The vegetation is atypical, so it cannot be relied upon for this determination. The soils are hydric, so the determination for wetland hydrology is positive.

Wetland G

Wetland G is a ditch that may qualify as a palustrine emergent seasonally flooded/saturated excavated wetland (PEMEx) and as in the Washington HGM depressional/outflow class. Wetland G is located on the eastern edge of the study area, southeast of the parking lot (see Figure 10). The total size is estimated to be approximately 884 square feet. Wetland G is vegetated with reed

canarygrass, which qualifies as hydrophytic vegetation. However, because the vegetation is considered disturbed and therefore atypical, it cannot be relied upon for this determination.

Wetland G is 3 feet or more deep, was created by excavation, and is adjacent to a 6-foot culvert that extends under NE Daybreak Road. The culvert delivers water to Wetland G from the farm field to the east. Based on the topographic survey, the water flows from the field into the ditch on the east side of NE Daybreak Road, where it collects at a low point and then flows through the culvert into Wetland G. Wetland G lies within the river's 100-year flood plain and acts as a route for floodwater to get from the farm field to the east back into the river. Wetland G had no surface water or soil saturation. Based on the difference between the surveyed elevations of the culvert rust line and the lowest point in the wetland, Wetland G likely stores water on a regular basis. During peak storm events, such as a 100-year flood, the entire depression may become inundated and overtop into the 100-year flood plain of the East Fork Lewis River and upland parts of the study area. A defined water mark is present within the culvert, so wetland hydrology indicator B1 was observed.

The soils in Wetland G have a chroma of 2, with redox concentrations between 10 to 12 inches depth. The soil exposed by excavation does not represent the native top soil layer. The excavation is a disturbance and implies an atypical situation.

The soil chroma and general lack of mottling indicate Wetland G was excavated from uplands. The 2-inch-thick, mottled, soil layer does not qualify as a hydric soil indicator but likely formed from being inundated since the excavation. The soil is considered hydric, as per *Interim Supplement* Example 5 – Recently Developed Wetlands (page 111; Corps, 2008) and the definition of a hydric soil which may not show indicators.

Wetland H

Wetland H is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the middle portion of the study area, south of Wetland N, and is flagged with ribbons and wire flags labeled "H" and "L." The total size is estimated to be approximately 7,211 square feet. Wetland H is bounded on the northeast side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 20). Wetland H is also regularly flooded by Manley Creek. Wetland hydrology was observed in Wetland H in the form of free water at 18 inches and saturation at a depth of 16 inches on November 25, 2008, which qualifies as secondary indicator C2 (Dry Season Water Table). Other wetland hydrology indicators observed were C3 (Oxidized Rhizospheres along Living Roots); secondary indicators D2 (Geomorphic Position), because of the wetland's position in the flood plain; and D5 (FAC-Neutral Test). Wetland H is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in Wetland H have a chroma of 1, with redox concentrations throughout the upper 20 inches, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland I

Wetland I is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the southern portion of the study area, just north of NE 259th Street (see Figure 20). It is flagged with ribbons and wire flags labeled "I." The total size is estimated to be approximately 4,010 square feet. Wetland I is bounded on the northeast side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek. Wetland I is also regularly flooded by Manley Creek. Wetland hydrology was observed in Wetland I in the form of saturation at a depth of 10 inches on November 26, 2008, and free water at 14 inches. In addition, wetland hydrology indicators observed were C3 (Oxidized Rhizospheres along Living Roots); C2 (Dry Season Water Table); D2 (Geomorphic Position),

because of the wetland's position in the flood plain; and D5 (FAC-Neutral Test). Wetland I is vegetated with reed canarygrass, watercress (*Rorippa nasturtium-officinale*), and cleavers bedstraw (*Galium aparine*), which qualifies as hydrophytic vegetation. The soils in Wetland I have chroma of 1 and 2, with redox concentrations at 12 inches below the surface. This sample plot was taken in the interior of the wetland; and the soil profile, although hydric, does not match any of the published indicators. Wetland hydrology and hydrophytic vegetation confirm the presence of hydric soils.

Wetland J

Wetland J is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the southern portion of the study area, just north of NE 259th Street, and flagged with ribbons and wire flags labeled "J." The total size is estimated to be approximately 3,896 square feet. Wetland J is bounded on the west side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 20). Wetland J is also regularly flooded by Manley Creek. Wetland J had no surface water or soil saturation at the time of the study. Wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland J is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in Wetland J have a chroma of 2, with redox concentrations 5 inches below the surface, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland K

Wetland K is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the southern portion of the study area, just north of Wetland J, and flagged with ribbons and wire flags labeled "K." The total size is estimated to be approximately 3,640 square feet. Wetland K is bounded on the southwest side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 20). Wetland K is also regularly flooded by Manley Creek. Wetland K had no surface water present. Wetland hydrology was observed in Wetland K in the form of free water at 3 inches and saturation at a depth of 1 inch on December 1, 2008. In addition, wetland hydrology indicators observed were D2 (Geomorphic Position) because of the wetland's position in the flood plain and D5 (FAC-Neutral Test). Wetland K is vegetated with reed canarygrass and small-fruited bulrush (*Scirpus microcarpus*), which qualify as hydrophytic vegetation. The soils in Wetland K have a chroma of 1 and the presence of a high water table, indicating hydric soils.

Wetland L

Wetland L is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the eastern portion of the study area, northwest of Wetland D, and flagged with ribbons and wire flags labeled "N." The total size is estimated to be approximately 479 square feet. Wetland L is bounded on the southwest side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 20). Wetland L is also regularly flooded by Manley Creek. This wetland is very similar to Wetland D and is represented by Sampling Point 13. Wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland L is vegetated with reed canarygrass (*Phalaris arundinacea*), which qualifies as hydrophytic vegetation. The soils in Wetland L are regularly flooded with low chroma, indicating hydric soils.

Wetland M

Wetland M is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the middle portion of the

study area, west of Wetland H, and is flagged with ribbons and wire flags labeled "O." The total size is estimated to be approximately 15,301 square feet. Wetland M is bounded on the northwest side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 21). Wetland M is also regularly flooded by Manley Creek. Wetland M had no surface water present. Wetland hydrology was observed in Wetland M in the form of free water at 12 inches and saturation at a depth of 12 inches on December 1, 2008. Wetland hydrology indicators observed were C3 (Oxidized Rhizospheres along Living Roots); D2 (Geomorphic Position), because of the wetland's position in the flood plain; C2 (Dry Season Water Table); and D5 (FAC-Neutral Test). Wetland M is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in Wetland M have a chromas of 1 and 2, with redox concentrations throughout the upper 20 inches in places, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland N

Wetland N is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the middle portion of the study area, west of Wetland M and is flagged with ribbons and wire flags labeled "P." The total size is estimated to be approximately 2,923 square feet. Wetland N is bounded on the north side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 22). Wetland N is also regularly flooded by Manley Creek. This wetland is very similar to Wetland M and is represented by Sampling Point 27. Wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland N is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in Wetland N have low chroma and are regularly inundated, indicating hydric soils.

Wetland O

Wetland O is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the south-central portion of the study area, west of Wetland N, and is flagged with ribbons and wire flags labeled "Q." The total size is estimated to be approximately 973 square feet. Wetland O is bounded on all sides by the OHWM of Manley Creek and is located on a high spot in the creek channel (see Figure 22). Wetland O is also regularly flooded by Manley Creek. Six inches of surface water was observed in Wetland O on December 2, 2008. In addition, wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland O is vegetated with reed canarygrass (*Phalaris arundinacea*), which qualifies as hydrophytic vegetation. The soils in the interior of Wetland O have a chroma of 1, with a depleted matrix beginning at a depth of 12 inches, indicating hydric soils.

Wetland P

Wetland P is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the south-central portion of the study area, near Wetlands O and Q. It is flagged with ribbons and wire flags labeled "R." The total size is estimated to be approximately 193 square feet. Wetland P is bounded on the north side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 22). Wetland P is also regularly flooded by Manley Creek. This wetland is very similar to Wetland O and is represented by Sampling Point 45. Wetland hydrology indicators D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test) were observed. Wetland P is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in the interior of Wetland P are regularly inundated and have low chroma, indicating hydric soils.

Wetland Q

Wetland Q is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the south-central portion of the study area, near Wetlands O and P. It is flagged with ribbons and wire flags labeled "T." The total size is estimated to be approximately 575 square feet. Wetland Q is bounded on the north side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 22). Wetland Q is also regularly flooded by Manley Creek. This wetland is very similar to Wetland O and is represented by Sampling Point 45. Wetland hydrology indicators D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test) were observed. Wetland Q is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in the interior of Wetland Q are regularly inundated and have low chroma, indicating hydric soils.

Wetland R

Wetland R is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the south-central portion of the study area, west of Wetland Q, and is flagged with ribbons and wire flags labeled "U." The total size is estimated to be approximately 2,756 square feet. Wetland R is bounded on the north side by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek (see Figure 22). Wetland R is also regularly flooded by Manley Creek. Six inches of surface water was observed in Wetland R on December 2, 2008. In addition, other wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland R is vegetated with reed canarygrass, stinging nettle, and common duckweed (*Lemna minor*), which qualify as hydrophytic vegetation. The soils in Wetland R have a chroma of 1 and are regularly flooded, indicating hydric soils.

Wetland S

Wetland S is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. The wetland is located in the western portion of the study area, northwest of Wetland R, and is flagged with ribbons and wire flags labeled "V." The total size is estimated to be approximately 32,635 square feet. The western end of Wetland S is located to the east of the bridge at NE Septan Drive (see Figures 23 and 24). Wetland S is bounded on the northeast and north sides by the OHWM of Manley Creek and is on a low terrace/floodplain that drains into the creek. Wetland S is also regularly flooded by Manley Creek. Wetland hydrology in Wetland S was observed in the form of free water at 13 inches and saturation at a depth of 10 and 18 inches on December 2 and 3, 2008. In addition, wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, C2 (Dry Season Water Table), and D5 (FAC-Neutral Test). Wetland S is vegetated with reed canarygrass, snowberry (*Symphoricarpos albus*), and cow parsnip (*Heracleum lanatum*), which qualifies as hydrophytic vegetation. The soils in Wetland S have a chroma of 2, with redox concentrations beginning at a depth of 8 inches in places, and satisfies the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland T

Wetland T is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the northeast portion of the study area and is flagged with ribbons and wire flags labeled "W." The total size is estimated to be approximately 261 square feet. Wetland T is bounded on the south side by a side channel of the East Fork Lewis River and is on a low terrace/floodplain that drains into the side channel (see Figure 8). Wetland T did not have surface water present. Wetland hydrology in Wetland T was

observed in the form of free water and saturation on December 10, 2008. Soils were saturated at a depth of 10 inches, and free water was present at 12 inches. In addition, wetland hydrology indicators observed were B10 (Drainage Patterns); D2 (Geomorphic Position), because of the wetland's position in the flood plain; and D5 (FAC-Neutral Test). Wetland T is vegetated with reed canarygrass, small-fruited bulrush, Dewey's sedge (*Carex deweyana*) and youth-on-age (*Tolmiea menziesii*), which qualify as hydrophytic vegetation. The soils in Wetland T are very sandy and have a chroma of 2, redox concentrations beginning at a depth of 5 inches, S5 indicator (Sandy Redox), indicating hydric soils.

Wetland U

Wetland U is a riverine lower perennial emergent seasonally flooded/saturated wetland (R2EME) and is in the Washington HGM riverine class. This wetland is located in the northeast portion of the study area and is flagged with ribbons and wire flags labeled "X." The total size is estimated to be approximately 195 square feet. Wetland U is bounded on the north side by a side channel of the East Fork Lewis River and is on a low terrace/floodplain that drains into the side channel (see Figure 8). Wetland U did not have surface water present. Wetland hydrology was observed in Wetland U in the form of free water and saturation, on December 10, 2008. Soils were saturated at a depth of 7 inches, and free water was present at 8 inches. In addition, wetland hydrology indicators observed were D2 (Geomorphic Position), because of the wetland's position in the flood plain, and D5 (FAC-Neutral Test). Wetland U is vegetated with reed canarygrass, small-fruited bulrush, and red fescue, which qualify as hydrophytic vegetation. The sandy soils in Wetland U have a chroma of 2, with mottles in the upper 7 inches, and satisfy S5 hydric soil indicator (Sandy Redox).

Wetland V

Wetland V is a palustrine forested seasonally flooded/saturated wetland (PFOE) and is in the Washington HGM depression class. Wetland V is located in the northeast portion of the study area, approximately 250 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "Y" (see Figure 8). The total size is estimated to be approximately 305 square feet. Wetland V had no surface water or saturated soil. Wetland hydrology indicators present included D5 (FAC-Neutral Test), and D2 (Geomorphic Position) because of its location in a shallow swale that slopes downward to the southwest and likely receiving surface runoff from surrounding uplands during storm events. Wetland V is vegetated with youth-on-age, red-osier dogwood (*Cornus sericea*), and black cottonwood, which qualify as hydrophytic vegetation. The soils in Wetland V have chroma of 2, with redox concentrations 5 inches below the surface, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface) and F8 (Redox Depressions).

Wetland W

Wetland W is a palustrine emergent seasonally flooded/saturated wetland (PEME) and is in the Washington HGM depression class. Wetland W is located in the northeast portion of the study area, approximately 300 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "AA" (see Figure 8). The total size is estimated to be approximately 859 square feet. Wetland W had no surface water present. Wetland hydrology in Wetland W was observed in the form of free water at 12 inches and saturation at 11 inches deep on December 12, 2008. Wetland hydrology indicators observed included C2 (Dry Season Water Table), D5 (FAC-Neutral Test), and D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events. Wetland W is vegetated with reed canarygrass, which qualifies as hydrophytic vegetation. The soils in Wetland W have chroma of 2, with redox concentrations 10 inches below the surface, indicating hydric soils.

Wetland X
Wetland X is a palustrine scrub-shrub seasonally flooded/saturated wetland (PSSE) and is in the Washington HGM depressional class. Wetland X is located in the northeast portion of the study area, approximately 450 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "BB" (see Figure 8). The total size is estimated to be approximately 243 square feet. Wetland X had no surface water present. Wetland hydrology in Wetland X was observed in the form of free water and saturation on December 12, 2008. Soils were saturated at a depth of 9 inches, and free water was present at 10 inches. In addition, other wetland hydrology indicators observed were D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events, and D5 (FAC-Neutral Test). Wetland X is vegetated with red-osier dogwood, which qualifies as hydrophytic vegetation. The soils in Wetland X have chroma of 2, with redox concentrations 10 inches below the surface, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland Y
Wetland Y is a palustrine scrub-shrub seasonally flooded/saturated wetland (PSSE) and is in the Washington HGM depressional class. Wetland Y is located in the northeast portion of the study area, approximately 500 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "CC" (see Figure 8). The total size is estimated to be approximately 65 square feet. Wetland Y did not have surface water present. Wetland hydrology in Wetland Y was observed in the form of free water and saturation on December 12, 2008. Soils were saturated at a depth of 10 inches, and free water was present at 10 inches. Other wetland hydrology indicators observed were D5 (FAC-Neutral Test) and D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events. Wetland Y is vegetated with red-osier dogwood, youth-on-age, and largeleaf avens (*Geum macrophyllum*), which qualify as hydrophytic vegetation. The soils in Wetland Y have chroma of 2, with redox concentrations 10 inches and below the surface, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

Wetland Z
Wetland Z is a palustrine scrub-shrub seasonally flooded/saturated wetland (PSSE) and is in the Washington HGM depressional class. Wetland Z is located in the northeast portion of the study area, approximately 550 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "DD" (see Figure 8). The total size is estimated to be approximately 696 square feet. Wetland Z had no surface water present. Wetland hydrology in Wetland Z was observed in the form of free water and saturation on December 12, 2008. Soils were saturated at a depth of 10 inches, and free water was present at 14 inches. In addition, other wetland hydrology indicators observed were D5 (FAC-Neutral Test); D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events; and C2 (Dry Season Water Table). Wetland Z is vegetated with youth-on-age, red-osier dogwood, and black cottonwood, which qualify as hydrophytic vegetation. The soils in Wetland Z have chromas of 2 and 1, with redox concentrations throughout the upper 20 inches, indicating hydric soils. In addition, the hydric soil indicator F6 (Redox Dark Surface) was observed.

Wetland AA
Wetland AA is a palustrine forested seasonally flooded/saturated wetland (PFOE) and is in the Washington HGM depressional class. Wetland AA is located in the northeast portion of the study area, approximately 650 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "EE" (see Figure 8). The total size is estimated to be approximately 298 square feet.

Wetland AA had no surface water present or saturated soil. Wetland hydrology indicators observed were D5 (FAC-Neutral Test) and D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events. Wetland AA is vegetated with youth-on-age, red-osier dogwood, and black cottonwood, which qualify as hydrophytic vegetation. The soils in Wetland AA have a chroma of 2, with redox concentrations throughout the upper 20 inches, indicating hydric soils. We also observed the hydric soil indicator F6 (Redox Dark Surface).

Wetland BB

Wetland BB is a palustrine forested seasonally flooded/saturated wetland (PFOE) and is in the Washington HGM depressional class. Wetland BB is located in the northeast portion of the study area, approximately 800 feet west from the parking lot, and is flagged with ribbons and wire flags labeled "FF" (see Figure 8). The total size is estimated to be approximately 804 square feet. Wetland BB had no surface water present or saturation of the soil. Wetland hydrology indicators present included D5 (FAC-Neutral Test) and D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events. Wetland BB is vegetated with youth-on-age, red-osier dogwood, English hawthorn (*Crataegus monogyna*), and black cottonwood, which qualify as hydrophytic vegetation. The soils in Wetland BB have chromas of 2 in the upper part, with redox concentrations throughout the upper 20 inches, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface) and F8 (Redox Depressions).

Wetland CC

Wetland CC is a palustrine scrub-shrub seasonally flooded/saturated wetland (PSSE) and is in the Washington HGM depressional class. Wetland CC is located in the northeast portion of the study area, approximately 1,000 feet west from the parking lot and is flagged with ribbons and wire flags labeled "GG" (see Figure 8). The total size is estimated to be approximately 196 square feet. Wetland CC had no surface water present or saturation of the soil. The wetland hydrology indicator present includes D2 (Geomorphic Position), because of its location in a shallow swale that slopes downward to the southwest and likely receives surface runoff from surrounding uplands during storm events. The positive wetland hydrology determination was based on positive determinations for hydric soils and hydrophytic vegetation. Wetland CC is vegetated with youth-on-age and salmonberry (*Rubus spectabilis*), which qualify as hydrophytic vegetation. The soils in Wetland CC have a chroma of 2, with redox concentrations beginning at a depth of 9 inches, and satisfy the criteria of hydric soil indicator F6 (Redox Dark Surface).

5.0 REGULATORY ISSUES

The paragraphs below describe some of the laws regarding waterways, wetlands, and buffers. Other laws or regulations may also apply that are not listed here.

Clark County regulates wetlands through Clark County Code (CCC) Subtitle 40.4, Critical Areas and Shorelines, Section 40.450. Clark County uses the Washington Department of Ecology *Washington State Wetland Rating System for Western Washington* (2004 revision, or as amended) to categorize wetlands and determine buffer widths (Hruby, 2004). Regulated wetlands include Category I, II, III, and IV wetlands, except for exempted wetlands. Exempted wetlands are listed under 40.450.010.C.2 and include certain small, artificial, and riparian wetlands. Small wetlands are exempt if they are isolated Category III wetlands (less than 2,500 square feet) and isolated Category IV wetlands (less than 4,350 square feet). Artificial wetlands are exempt if they are created (including but not limited to) irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, stormwater facilities, farm ponds, landscape

amenities, and unintentionally created wetlands as a result of the construction of a public or private road, street, or highway after July 1, 1990—provided that wetlands created as mitigation shall not be exempted. Riparian wetlands are exempt from this code (but likely regulated under other local codes) if they are fully within five (5) feet, measured horizontally, of bank full width for streams and the ordinary high water mark for lakes which are regulated under the State Shorelines Management Act (Chapter 90.58 RCW) or under Chapter 40.440 – Habitat Conservation (Clark County, 2009).

Alteration of the condition of any land, water, or vegetation or construction/alteration of any structure or improvement in, over, or on a wetland or wetland buffer is prohibited without an approved County permit—except for activities listed under 40.450.010.C.1. Only regulated wetlands carry a buffer. CCC 40.100.070 defines a wetland buffer as "an area that surrounds and protects a wetland from adverse impacts to the functions of a wetland." Buffers are measured horizontally from the wetland edge. Buffers typically range from 300 feet to 25 feet in width, and depend on wetland category, land use intensity, various sub-scores from the rating system, and administrative decision by the county. Reduction in buffers is possible as described in 40.450.040.C (Clark County, 2009).

Wetlands A, B, C, D, E, F, H, I, J, K, L, M, N, P, Q, R, S, T, U, V, W, X, Y, Z, AA, BB, CC are regulated by Clark County under Chapter 40.450. They all carry buffers, and the buffer widths are determined by land use intensity (low), land use category (recreational), wetland category, and the score on the habitat section of the wetland rating form. The buffers are shown in Table 2 – Wetland Summary (Section 4 of this report). Wetland G is a ditch that was excavated from uplands and has positive wetland parameters. It is exempt from regulation under Chapter 40.450, because it is an artificial ditch created from a non-wetland site (40.450.010.c.2.b). Wetland G does not carry a buffer. Wetland O is also exempt from regulation under Chapter 40.450, because it is an exempt riparian wetland, and falls fully within 5 feet of the bank full width for streams. Wetland O does not carry a buffer.

Clark County regulates streams and rivers through Clark County Code (CCC) Subtitle 40.4, Critical Areas and Shorelines, Section 40.440. The code states that a Riparian Priority Habitat is defined as the 100-year floodplain, or the following distances from the high water mark, if greater: DNR Type 1 and 2 waters, 250 feet, Type 3 waters, 200 feet, Type 4 and 5 waters, 150 feet (40.440.010.C.1.a). The East Fork Lewis River is a Type 1 water and carries a 250-foot Riparian Priority Habitat area in addition to the 100-year floodplain protected as Riparian Priority Habitat. Manley Creek is a Type 3 water and carries a 200-foot Riparian Priority Habitat area in addition to the 100-year floodplain protected as Riparian Priority Habitat. The total Riparian Priority Habitat areas are shown as "Buffer" on the Wetland Delineation Maps. It includes all of the 100-year floodplain and any additional areas not in the floodplain that are within the widths from the OHWM stated above. The wetland buffers are eclipsed by the Riparian Priority Habitat areas in all cases except for Wetland F, which extends beyond the buffer of Manley Creek (see Figure 20).

The Washington State Department of Ecology (WA DOE) regulates wetlands through the state Water Pollution Control Act RCW 90.48, the Shoreline Management Act RCW 90.58, and Section 401 of the federal Clean Water Act 33 U.S.C. 1251 et. seq. The WA DOE permits wetland fills in coordination with the U.S. Army Corps of Engineers (Corps of Engineers) through the 401 Water Quality Certification Program, which states that federally permitted discharges to Waters of the United States must be approved by the state in which the discharge occurs. The WA DOE may also issue an administrative order to stop a discharge to waters of the state or prior to the discharge if the discharge has not yet occurred. The WA DOE uses an administrative order to regulate wetlands that the Corps of Engineers does not regulate in some cases.

The United States government regulates wetlands by authority of Section 404 of the federal Clean Water Act 33 U.S.C. 1251 et. seq., 33 CFR 320-331, 36 CFR 800-899, 40 CFR 22, 230, 233, 233G, 1500 et seq., 50 CFR 400-499, 600, by Section 10 of the Rivers & Harbors Act, U.S. Supreme Court rulings, and various other related laws and regulations. Wetlands are considered "Waters of the United States," and the Corps of Engineers is the primary federal regulatory agency for permitting any discharges (including fill material for construction) into those waters. Isolated wetlands are not regulated by the Clean Water Act; however, the Corps of Engineers reserves the right to determine if a particular wetland or Water of the U.S. is isolated or adjacent on a case-by-case basis. The Corps of Engineers regulates most wetland fills through either the nationwide permit system or through the individual permit system. Nationwide permits are general permits with pre-determined conditions for approval depending on the type of discharge and associated project. Individual permits are specific permits that require special consideration and involve a public interest test, inter-agency and public comment, and other factors. Notification to the Corps of Engineers is required for all wetland fills regardless of wetland size, fill amount, or permit type, in order to comply with General Condition 17 (*Final Regional Conditions and Water Quality Certification and Coastal Zone Management Consistency Decisions for the 2007 Nationwide Permits in Washington State*; Corps, 2007). The Joint Aquatic Resource Permit Application (JARPA) is used to notify the Corps of Engineers for all work in Waters of the U.S. including filling wetlands. Failure to notify the Corps of Engineers of discharges to Waters of the U.S., including wetlands, is a federal offense punishable by fines and/or imprisonment.

6.0 DISCLAIMER

This report is based on observations of vegetation, soils, and hydrology at the time of the study. Variable environmental conditions or human activities may alter those parameters, which may change the conclusions presented in this report. The conclusions in this report represent the investigator's interpretation of the specified technical manuals and best available science and may not correspond with observations or conclusions of others, including government agencies.

This report was prepared to meet current local, state, and federal regulations. PBS is not responsible for changes made to regulations and reporting requirements after the report has been received by the Client. In addition, agencies often require wetland boundaries and sampling points to be flagged for their inspection of the delineation. Therefore, PBS recommends submitting the report to the appropriate agencies for concurrence as soon as possible. PBS is not responsible for the removal, destruction, or any other alteration of the wetland flags described in this report once the fieldwork has been completed.

This report is for the exclusive use of the Client for design of the development, as described in our proposal for this particular project, and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced, in total or in part, without the expressed written consent of the Client and PBS.

Respectfully Submitted,
PBS Engineering + Environmental

Joseph D. Leyda, MA, PWS
Senior Wetland Scientist

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Appendix F. Property Inspection Summary: Lakewood Manor Estate ("Ibrahim")

Prepared by LSW Architects, Terence Werdel

Lakewood Manor Estate
Clark County
6702 NE Septan Drive
Battleground, WA
Tax Account No. 225190-000

I toured the site on December 8, 2008 with Laura Pedersen and Dan Spencer to get a sense of the property. My report is base on a general visual inspection of the residence, review of Clark County codes, building codes and public property information. A detailed investigation of the property through invasive or exhaustive study is not within the scope of this report, but instead to generally describe the viability, cost concerns and items needed to revitalize the residence for long-term habitability.

Existing Site Characteristics Impacting Future Development:

Zoned: R-5 (Rural)

An R-5 zone allows many development types to be located on the property. Such uses include facilities for recreational and park use, gathering and meeting spaces, assembly and public services. Residential Care facilities are also allowed, but need to be approved as a conditional use prior to permitted occupation.

Flood Plain: Yes

According to Clark County GIS property information, the property lies within the 100 and 500-year flood plains of the Lewis River. Although the site is impacted by floodwaters, it appears that the house is situated on higher ground, and above the 100-year flood plain.

The wetland impact on this property is beyond the scope of this report. A wetland study should be completed to determine what wetland restrictions and impacts affect reconstruction efforts, additions or new construction.

General Description of Current Condition and Need:

Option A: Recondition as a residence

The house has fallen into disrepair and needs a number of items corrected before it can be habitable for long term use.

Replace the roof: The roof has moss and water damage from recent leaks, incorrect flashing and drainage. Fascia boards, eves and beam-ends need repair or replacement. Gutters and downspouts need repair and replacement. The roof configuration should be altered by creating new ridges and crickets to redirect water away from interior valleys and gutters.

Replace exterior siding and selective sheathing:
Incorrect flashing and siding installation has caused a substantial amount of water damage and dry rot. The water damage has likely affected underlying sheathing. The extent of the sheathing replacement can be determined when the siding is removed.

Replace windows: Nearly all the window seals have failed and created a film between the glazing units.
Replace interior wallboard: Roof leaks have caused wallboard damage and will need to be replaced in a number of rooms.
Miscellaneous replacement of concrete walks and patios: Concrete walks and patios have settled and cracked in a number of places. The french drains in the pool patio have become fouled and some surface areas drain toward the house, increasing the likelihood of ongoing water damage.
Replace plumbing and light fixtures: There are a number of different fixture types, they are of low quality, in disrepair and some are missing. New fixtures should be provided throughout.
Replace new casework: The built-in casework is of pour quality and missing doors and hardware.
Replace new doors: There are a number of different door types and they are of low quality. New doors should be provided throughout the house to create a sense of continuity.
Replace carpeting: Carpet is damaged, stained and worn.
Repaint: Interior and exterior
Electrical replacement and upgrade: Exterior (and some interior spaces) wiring and fixtures have been vandalized and will need to be replaced or repaired. Miscellaneous wiring is not per code and will need to be replaced.
Mechanical replacement and upgrade: The mechanical systems have been vandalized and will need to be repaired and/or replaced.
Sauna and Jacuzzi: These have been vandalized and appear inoperable. Both will need to be serviced and repaired.
Regrade and repave entry drive: The entry drive has settled and needs to be repaved.
Regrade and repave entry court and driveway: The asphalt and concrete has settled and cracked and needs to be repaved.
Miscellaneous structural repair: Roof leaks have caused structural damage in a number of locations within the house and will need to be repaired.
Domestic well: The condition of the well is unknown. The well and pump need to be tested, serviced and any repairs or replacements made.
Sanitary system: The septic tanks and drain field conditions are unknown. They will need to be assessed and possibly reconditioned. It is unknown if a drain field is allowed within a wetland under current regulations. A wetland study will help determine what affect this will have on future development.
Demolish pool: The pool, deck, pumps and systems are beyond repair.
Demolish tennis courts: The court surface is cracked, settled and spalling.

Option B: Convert the house to a commercial use
(These are items that need to be addressed, in addition to Option A, for commercial use)

ADA compliance:
1. Although the stairs meet code for residential use, they are too steep for commercial use. Corrections of the stairs to meet code will lengthen their runs and likely impact associated interior spaces.
2. There are three distinct second floor areas, accessed individually by separate stairs. This may require some second floor areas to be abandoned, or all will need to be combined and reconfigured to allow contiguous access by elevator and hallways.

3. There are a number of sunken rooms and steps within the house that will require ramps to meet accessibility. Ramps will likely take up floor space and impact associated spaces.

Functional layout: The floor plan is compartmentalized and discontinuous. The floor plan should be modified to support commercial uses. The impact on reconfiguring the floor plan will depend on what commercial use is planned.

Parking: Commercial use will require additional parking. The number of stalls is dependant on the commercial use and unknown at this time. Construction on or within a wetland is restricted. It is unknown at this time what effect the wetland will have on parking needs. A wetland study will help determine what affect this will have on future development.

Exiting from the second floor: The second floor plan and stairs will need to be reconfigured to meet current codes for exiting.

Summary and Conclusion:

It is difficult to put a cost on the redevelopment of this property, but based on the items listed about, a conservative estimate of at least $500,000 should be used in determining the future use of this facility.

I hope this report is helpful to you in your determinations. Please contact me if you would like to review this report in more dept, or have additional questions.

Sincerely,

Terence Werdel

8000	Wetland Study
10000	Well and drain field assessment
30000	Roof
25000	Siding
40000	Windows
20000	Wallboard
15000	Concrete walks and patio
15000	Plumbing and Lighting Fixtures
15000	Casework
25000	Doors
25000	Carpeting
30000	Paint
25000	Electrical
25000	Mechanical
20000	Sauna and Jacuzzi
30000	Entry Drive
50000	Entry Court and Driveway
15000	Structural Repair
20000	Demolition

100000	ADA (elevator is 50000)
30000	Design
50000	Parking
15000	Permitting and Review
	Contingency

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