BEFORE THE METRO COUNCIL

| | | |
|---|---|---|
| FOR THE PURPOSE OF APPROVING A REFINEMENT PLAN FOR THE ROCK CREEK GREENWAY AS OUTLINED IN THE OPEN SPACE IMPLEMENTATION WORK PLAN | ) ) ) ) | RESOLUTION NO. 96-2301<br><br>Introduced by Mike Burton Executive Officer |

WHEREAS, In July 1992, Metro completed the Metropolitan Greenspaces Master Plan which identified a desired system of natural areas interconnected with greenways and trails; and

WHEREAS, at the election held on May 16, 1995, the electors of Metro approved Ballot Measure 26-26 which authorizes Metro to issue $135.6 million in general obligation bonds to finance land acquisition and capital improvements pursuant to Metro's Open Spaces Program; and

WHEREAS, the Rock Creek Greenway was designated as a Greenspace of regional significance in the Greenspaces Master Plan and identified as a regional target area in the Open Space, Parks and Streams Bond Measure; and

WHEREAS, in November 1995, the Metro Council adopted the Open Space Implementation Work Plan, which calls for a public "refinement" process whereby Metro adopts a Refinement Plan including objectives and a confidential tax lot specific map identifying priority properties for acquisition; and

WHEREAS, Resolution No. 95- 2228A authorizes the Executive Officer to purchase property with accepted acquisition guidelines as outlined in the Open Space Implementation Work Plan, now therefore,

BE IT RESOLVED,

That the Metro Council adopts the Rock Creek Greenway Refinement Plan, consisting of objectives and a confidential tax lot specific map identifying priority properties for acquisition, authorizing the Executive Officer to begin the acquisition of property and property rights as detailed in the Open Space Implementation Work Plan adopted in November, 1995 and in Resolution No. 95-2228.

ADOPTED by Metro Council this 14th day of March, 1996.

Jon Kvistad, Presiding Officer

Approved as to Form:

Daniel B. Cooper, General Counsel

Staff Report

CONSIDERATION OF RESOLUTION NO. 96-2301 FOR THE PURPOSE OF ADOPTING TARGET AREA BOUNDARIES AND OBJECTIVES FOR THE ROCK CREEK GREENWAY

---

**Date: February 23, 1996** **Presented by: Charles Ciecko**
**Jim Desmond**

## BACKGROUND AND ANALYSIS

**The target area description in the Bond Measure Fact Sheet (authorized by Council Resolutions 95-2113, 94-2050 and 94-2029B) was as follows:**

> "Rock Creek Corridor. Acquire 300 acres along the greenway."

**In the 1992 Green Spaces Master Plan, the target area was described as follows:**

> Rock Creek is a complex system of several tributaries in western Washington County. After originating in the Tualatin Mountains, Rock Creek passes over low-gradient terrain through agricultural lands and rapidly urbanizing areas between Beaverton and Hillsboro.
>
> The branching pattern of the tributaries provides a foundation on which lengthy riparian connections could be reestablished that would improve habitat values and be accessible to a large number of the region's residents. As with other watersheds in the Tualatin basin, water quality is a concern.

**Target Area Description:**

The headwaters of Rock Creek originate on the west side of the Tualatin Mountains in unincorporated Multnomah County, southwest of N.W. Skyline Boulevard. The creek flows through unincorporated Washington County woodlands and agricultural lands before crossing into the urbanized area near West Union and Springville Roads. The watershed for Rock Creek includes in excess of 18,000 acres and numerous tributary streams. Major tributary streams include Abbey, Dawson, Holcomb, Bronson, Willow and Beaverton Creeks.

The City of Hillsboro Parks Department and the Tualatin Hills Parks & Recreation District own and manage some natural areas along Rock Creek. Larger sites owned by the City of Hillsboro along the Rock Creek Corridor include Rood Bridge Park (61 acres) where Rock Creek flows into the Tualatin River and Noble Woods Park (36 acres) where Rock Creek flows southwest of West Baseline Road at 231st Avenue. The City of Hillsboro is also securing dedication of the 100-year floodplain on an incremental basis as a condition of development of adjacent properties.

Tualatin Hills Parks & Recreation District (THPRD) owns Rock Creek Park adjacent to the north side of Highway 26 and the Bethany Pond area south of West Union Road. Similar to the City

of Hillsboro, THPRD has obtained dedication and ownership of portions of the 100-year floodplain along tributary streams (Beaverton, Bronson and Willow Creeks) through the land development permit process.

Extending south from the Holcomb Creek/Rock Creek confluence area near Portland Community College to the mouth at the Tualatin River, the 100-year floodplain of the main stem of Rock Creek encompasses approximately 830 acres. The creek flows through two privately owned golf courses: Rock Creek Country Club and Orenco Woods.

Outside of the publicly owned segments of Rock Creek, there are areas along the creek where the riparian corridor is still intact, particularly in creek confluence areas. However, urbanization pressures are very strong in Hillsboro and the Bethany area. Westside Light Rail Transit (LRT) will cross Rock Creek on a structure and two stations will be located in proximity to the creek corridor (Orenco and 205th/Quatama stations). Intensive urban development is planned within a 1/4 mile radius of the LRT stations.

**Refinement Process:**

In November and December, 1995, sixteen stakeholders were interviewed to identify key issues pertaining to the Rock Creek greenway. These interviews included representatives of the City of Hillsboro, Washington County, THPRD, Multnomah County, Washington County Soil & Water Conservation District, Unified Sewerage Agency, Metro 2040 staff, and a meeting with the Friends of Rock, Bronson and Willow Creeks. A summary of the stakeholder interviews is included in the Appendix (A-1). Key issues and questions raised in the interviews are highlighted below:

- Development within the 100-year floodplain is restricted by a number of existing regulations. Should regional bond funds be spent to acquire floodplain areas?

- Wooded upland sites adjacent to the floodplain and within the UGB are most vulnerable to development pressure.

- A connected greenway in this portion of Washington County can provide needed "access to nature" for a rapidly growing area.
  Metro should coordinate open space acquisition efforts with City of Hillsboro efforts and the USA sub-basin strategy for Rock, Bronson and Willow Creeks to leverage the regional bond dollars.

- Public input to LRT station community planning has repeatedly emphasized the importance of accessible open space and natural areas to balance higher development densities.

A public workshop was held on February 13, 1996 to present Metro's staff's refinement strategy and objectives for the Rock Creek Greenway. Over 5000 notices were mailed to area residents and other interested stakeholders.

Questions and comments from the public workshop are summarized in Appendix A-2: "Rock Creek Greenway Refinement Plan Meeting Notes."

Biologist's evaluation of the Rock Creek Greenway based on the regional target area criteria is included in Appendix A-3 and provides key findings leading to the recommended Refinement Area Boundary.

On February 20, 1996, the Regional Parks and Greenspaces Advisory Committee held a public hearing on the Rock Creek Refinement plan and with minor changes, incorporated in this report, and recommended approval.

**RECOMMENDATION:**

The long-term vision for the Rock Creek Greenway is proposed as follows:

> Protect/enhance continuous floodplain and riparian corridor of Rock Creek from the headwater areas in Forest Park to the mouth at the Tualatin River for multiple values:
>
> - wildlife habitat
> - community identity "access to nature" in rapidly developing area
> - linear connection with larger parks and natural areas such as Forest Park and Jackson bottom
> - water quality/water quantity management
> - education and stewardship opportunities.

**OBJECTIVES:**

The following are prioritized objectives of the Rock Creek Greenway Proposed Refinement Plan.

**Tier 1:**

Acquire a minimum of 300 acres along the Rock Creek Corridor to include:

- key upland sites adjacent to the Rock Creek floodplain within the UGB, with an emphasis on sites at creek confluence areas.
- floodplain/riparian corridor along Bronson and Beaverton Creeks (tributaries of Rock Creek) between Orenco and 205th/Quatama LRT station areas.
- the creation of a regional natural area north of West Union Road at the confluence of Rock Creek and Holcomb Creek.

**Tier 2:**

Acquire key links to complete continuous public floodplain.

Expand regional natural area at the confluence of Rock Creek and Holcomb Creek.

Expand acquisition of the headwaters area to link Rock Creek Greenway with Forest Park.

**Partnership Objectives:**

Support the City of Hillsboro and Washington County in the protection of the 100-year floodplain.

Pursue partnership opportunities with the City of Hillsboro, Washington County, Tualatin Hills Parks & Recreation District, Tri-Met and Unified Sewerage Agency to leverage the regional Open Space bond dollars targeted to the Rock Creek Corridor.

**Executive Officer's Recommendation:**

The Executive Officer recommends passage of Resolution No. 96-2301.

# STAKEHOLDER INTERVIEWS
# ROCK CREEK GREENWAY

**Wink Brooks, Hillsboro Planning Director**
**Phone:** 681-6153

Comments:

important to have a regional discussion of acquisition of the 100 year floodplain vs. exactions or dedications
Hillsboro doesn't count the floodplain as "buildable" land
Hillsboro quite successful in obtaining dedication of the floodplain as a condition of development approval
position that open space acquisition efforts should focus inside the UGB and should emphasize values for people; need green infrastructure to balance higher densities
areas outside of the UGB are not "at risk" for development; wooded uplands adjacent to the FP inside the UGB have no protection

**Russ Sterenberg, Hillsboro Parks Director**
**Scott Talbott, Hillsboro Parks Planner**
**Phone:** 681-6220

Comments:

Rock Creek Greenway can be a wonderful public amenity for the community & region; currently little public awareness and advocacy for the greenway
Hillsboro doesn't have overall master plan for the Greenway; focusing on public ownership of the floodplain to link and connect other larger open spaces such as the Tualatin River, Rood Ridge Park, Noble Woods park.
May also be opportunities to link the Greenway with the BN rails-to-trails project
Rock Creek crosses through two privately owned golf courses - could complicate opportunities for linear public greenway
Need Metro's help to establish a vision for this corridor; currently just reacting to development projects and trying to get floodplain area under public ownership
critical to build public support and advocacy for what this corridor could be

**Hal Bergsma and Ross Van Loo**
**Washington County Planning Dept.**
Phone: 640-3519

Comments:

- floodplain/wetland areas are heavily regulated by federal, state and local programs
- wooded uplands receive very little protection under existing programs
- 100-year floodplain is typically protected with development review - may be reserved as an open space tract or transferred to THPRD
- county allows density transfers from floodplain to upland areas
- why spend regional dollars to buy creek corridors that are already protected by many layers of government
- recognize that it may take years to pull a system together with incremental dedication
- Holcomb Lake area should be considered - it is adjacent to urban area and contiguous with other Rock Creek public ownership sites
- regional $$ should be focused on key upland sites adjacent to the floodplain - recognize that these sites will be very expensive
- focus on open space near LRT station areas where high densities are planned
- most of the Rock Creek Greenway will fall under Hillsboro's jurisdiction and they are considered the key local agency

**Andy Priebe, Planner**
**Tualatin Hills Park & Recreation District**
Phone: 645-6433

Comments:

- public doesn't care whether natural areas are owned/managed by Metro, the county, cities or THPRD
- public expects cooperation and coordination between the different providers
- acquisition, conservation and protection of natural areas is part of the mission of THPRD; balance with active recreation areas & facilities
- Rock Creek Greenway important for linkages/corridor connections
- focus on land areas with diversity and unique attributes; THPRD would have a difficult time justifying acquisition of sites outside of the UGB
- extreme pressures to tie up sites quickly; shocked at prices of land within the UGB
- THPRD has been receiving dedication of floodplain/wetland areas through the Washington County/Beaverton development review process

recognize that it is very difficult to develop trails in floodplain/wetland/riparian areas
corridor building should be a central theme of the acquisition efforts
THPRD still shows power corridors for potential trail/bikeway connections. BPA is changing posture on trails because of concerns regarding EMF. This may shift greater emphasis to creeks for connectivity

**Susan McLain, Metro Council**
**John Fregonese, Metro Growth Management**
Phone: 797-1750

Comments:

Rock Creek Greenway reflects strong 2040 public values: access to nature; ribbons of green through the urban area; separation of communities by natural features
linear nature of greenway provides great access to nature for a wide geographic area
few large sites within the UGB; acquisition should consider smaller upland sites adjacent to the floodplain
look for partnership opportunities with the City & USA
Rock Creek can be a tremendous open space resource and amenity for an area that is urbanizing very rapidly
Metro will be asking locals to tighten up floodplain regulations as one of the tools to speed implementation of 2040
Susan indicated that Jackson Bottom provided a good example of what this area could be; partnership roles; tremendous educational resource
John felt that it made the most sense to focus Metro funds on acquisition of a few key "beads" along the necklace - floodplain with adjacent upland and riparian areas
Proximity to nature critical in LRT station areas - opportunities for very creative planning with intensive development framed by the natural creek corridor
protection of the creek/riparian corridor is most important; with selective access only

**Lori Faha, Water Quality Program**
**Unified Sewerage Agency**
Phone: 648-8730

Comments:

draft plan for Rock Creek, Bronson and Willow Subbasin - will go before the USA Board for adoption in the Spring of 1996
plan emphasizes nonstructural solutions to water quantity/quality problems - ordinances for riparian protection, erosion control, education
Holcomb Lake site north of West Union the priority site for water quality: stormwater detention would be a major benefit to flood control and natural area protection downstream
USA willing to put $$ toward public ownership; potential for compatible uses; no visible change in existing natural conditions except during high water periods
segment of Rock Creek north of Orenco is a functioning floodplain with associated wetlands.and shading offered by vegetation
good enhancement opportunities where creek and riparian corridor has been heavily disturbed through the two golf courses .
confluence of Dawson & Rock Creek identified by ODFW for fisheries potential
USA regulations require 25 foot setback from top of bank for water quality - only applies to new development
balanced cut and fill regulations deal with issues of flood control

**Friends of Rock, Bronson & Willow Creeks**
**c/o Mary Vogel @ Tualatin Riverkeepers**
Phone: 624-0855

Comments:

sense that people didn't know what portions of Rock Creek would be acquired with the bond measure; residents of Bethany thought that tributaries would be eligible
some questioned the wisdom of spending funds on 100-year floodplain that is restricted from development
why not look at acquisition of upland areas adjacent to the floodplain; make purchase contingent upon dedication of the floodplain
upland sites will be expensive - they are buildable
sense that contractors aren't using erosion control measures properly
no strong feelings from this group whether funds should be focused inside or outside of the UGB. Don't want Metro held hostage with unrealistic price demands

sense that natural areas along the LRT corridor are doomed; pressure for higher densities near LRT may conflict with desires to preserve open space in proximity to higher densities

**Scott Pemble, Planning Director**
**Multnomah County**
Phone: 248-3043

Comments:

county has completed Goal 5 inventories for the west hills; special regulations for stream corridors and wildlife corridors
headwater areas outside of the UGB are typically in forest designations; county cannot regulate forest harvest activities (must comply with FPA regulations)
county can regulate siting of new dwellings; typically require a 300 foot setback from the center of the stream; some provisions for variances
wildlife corridor regs. deal with fencing along the roads; very difficult to enforce
sense that domestic animals and agricultural practices probably have the most impact on stream & wildlife corridors; forestry practices can coexist
are headwater areas at risk? Outside of the UGB, resource zoning in place, stream corridor overlays -- not as vulnerable as other sites

**Rand Fisher**
**Washington County SWCD**
Phone: 681-0953

Comments:

some new rural land management regulations taking effect for the Tualatin Basin
emphasize non-disturbance area of 20 feet from top bank of streams
best management practice to fence and keep livestock out of streams
try to maintain/restore riparian corridor
FPA kicks in for harvest of timber for sale (even applies to sale of firewood); depends on enforcement
very slow process of education; goal of better coordination of all planning/regulatory efforts within the watershed
SWCD regulations will apply to any farmer using grant/loan programs; no application to rural residences with no commercial farm activities

Appendix A-2

Rock Creek Public Workshop
2/13/96
Attended by 10 people

QUESTIONS AND COMMENTS:

What is the land use along the northernmost edge of Rock Creek?
Mostly farm and forest. EFU and Agricultural Zoning.

What is the time frame for Metro to purchase land?

What about Beaverton Creek? Will you make any acquisistions there?
The proposed plan is to concentrate around the nodes where Beaverton Creek meets Rock Creek. Beaverton local share funds may be used in other areas.

How will Urban Reserve Study Areas impact this? Where is the boundary on Metro's maps?
Not shown on map. Not one of our main criteria.

By the golf course, 216th St. is slated to become a major arterial. How will the traffic impact the biological element there? How much effort will be made to coordinate urban development with open spaces?
We are unaware of these plans but will research. Transportation authorities that consultant spoke with did not mention that plan.

Did 100 year flood plain change significantly after floods?
There have been some new flyovers to determine that. Results are not known yet.

Consultant led discussion of "Is the 100 year flood plain adequately protected?"

Where is the balance between protecting and providing access to open spaces?
Metro biologist explained stabilization and general purpose of the bond measure.

If you conclude that 100 year floodplains are protected, are they then a lower priority?
That conclusion cannot be drawn at this time. Mentioned Hillsboro's successful dedication policy.

Do municipalities have the authority to require dedications?
Hard to answer, in some instances it may resemble a taking.

Builder in audience told of some floodplain building regulations.

# Evaluation of Target Area Based on Regional Target Area Criteria

## ROCK CREEK GREENWAY AND ASSOCIATED HABITATS

Seven creek reaches have been identified for acquisition efforts within the Rock Creek Basin target area. In addition to the creek corridor itself, associated upland and wetland habitats have been reviewed. These areas were evaluated by staff and consulting biologists through a review of previous studies and updated field inventories. All sites were evaluated for their regional significance based upon the criteria for regional target areas.

This summary is organized by creek reach. Associated habitats area included within the individual reach descriptions and identified as such. Reaches are defined as follows:

Reach 1 Rock Creek mouth at the Tualatin River upstream to Brookwood Avenue

This section includes approximately 288 acres of riparian and associated forest and meadow upland habitats. The lower portion of this reach from the Tualatin Valley Highway to the mouth winds through a broad floodplain area of commercial, rural residential, light industrial, and parkland developments. Above the Tualatin Valley Highway the forested riparian corridor narrows as it winds through residential neighborhoods. Near Ash Street the riparian vegetation is bounded by "fingers" of forest habitat and a large block of upland conifer forest. Dominant plants within the riparian habitat include Douglas-fir, big leaf maple, red alder and Oregon ash within wetland areas, and Himalayan blackberry, willow, red osier dogwood, hazelnut, Indian plum, Pacific ninebark, vine maple in the shrub layer. Native herbaceous plants include stinging nettle, ladyfern, and trillium and non-native plants include sow thistle, impatiens, and buttercups.

Habitat value with Reach 1 is considered moderate based upon the presence of continuous but narrow riparian vegetation, the site's connection to the Tualatin River, tributary streams, and upland forested areas, and the fact that the area is subject to a high level of disturbance from adjacent homes and business and the invasion of non-native seed sources from urban landscaping. The exception if the forested knoll at Ash Street which is given high value. This habitat is rare within the urban setting and as such becomes important for sustaining local bird and mammal populations as well as areas for dispersal and resting for other species traveling to more suitable habitats elsewhere. Public access is currently limited and would be difficult to provide due to the narrowness of the riparian habitat.

Despite the urban setting, this area still plays an important role in providing shaded stream habitat (thermal control), and in the broader floodplain areas, streamflow dissipation during flooding events. For the most part, however, this section of Rock Creek has little associated upland habitats that can support a broader range of wildlife species. The site is visible from various adjacent roads and properties within the UGB and in the southern portion below the Tualatin Valley Highway from outside the UGB. Restoration potential is high for areas currently under public domain. For the most part removal of non-native invasive plants and the addition of shrubs and herbs where they are lacking would be all that was needed to improve habitat value within this reach.

Reach 2 Brookwood Avenue upstream to Baseline Road

This section includes approximately 168 acres of continuous riparian vegetation as well as associated upland and wetland habitats at the mouths of Dawson and Beaverton creeks (approximately 61 acres within the floodplain). The width of the riparian strip varies and in some areas is bounded by open

meadows. Dominant riparian overstory trees and shrubs include red alder and Oregon ash (wetland areas), wild rose, snowberry, and vine maple. Upland riparian and associated habitats include big leaf maple and Douglas-fir. At the confluence of the mainstem Rock Creek with Dawson Creek, the extensive forest habitat include both upland and wetland associated species. These include western red cedar, Oregon ash, big leaf maple, willows, wild rose, cascara, hazelnut, vine maple, red osier dogwood, nettles, salmonberry, galium, vanilla leaf and in the wetlands, skunk cabbage, cattail, and juncus effusius. The site is well connected to other habitats along tributary streams and in adjacent uplands.

Habitat value is generally moderate to high within Reach 2 due to the continuous riparian vegetation, the presence of predominantly native plants, both wetland and upland habitats of sufficient size and health that they support a wide variety of wildlife species as well as perform important floodplain protection functions and provide water quality benefits. The highest valued habitat exists at the confluences with Dawson. Milk, and Beaverton creeks and in Noble Wood Park.

The site is visible within the UGB from adjacent properties and local streets. It is not visible from outside the UGB. Public accessibility is possible within certain areas of this reach but would be counterproductive to habitat protection is some areas within the floodplain. Currently, for example, the large forested habitat immediately south of the Commons at Creekside housing development, is posted no access to protect the wildlife habitat. As a result of limiting access this habitat functions to provide secure nesting and foraging opportunities for songbirds, salamanders, deer, and cutthroat whose habitat is rapidly diminishing within the urban developable landscape. Along with the confluence area at Beaverton Creek, this area also provides suitable habitat for salamanders and other amphibians as well as rearing habitat for fish.

Habitat restoration within this reach would be minimal and require only limiting access, removal of non-native vegetation, and the addition of native shrubs and herbs in all habitat types. Controlling access from existing and planned future housing developments could be problematic.

Reach 3 Baseline to Old Cornell Road

This reach includes approximately 72 acres of riparian habitat and acres of associated upland or wetland habitats. Dominant trees include red alder, big leaf maple, Douglas-fir and western red cedar. Shrub and herbaceous plants occur as either open or closed canopies and include Himalayan blackberry in the more disturbed edge areas, snowberry, wild rose, mock orange, hazelnut, vine maple, reed canary grass, pasture grasses, trailing blackberry, starry solomon's seal, and skunk cabbage in the wetland habitats. Past surveys show a high diversity of bird and mammal species use this reach for foraging, nesting, and travel. Beaver sign has also been observed. Habitat value ranges from low where riparian vegetation is highly disturbed or non-existent (Orenco Golf Course, Neumann Drive development) to high at the Cornelius Pass bridge. At this road overpass the floodplain includes back channel areas and mostly native plants which provide floodplain protection and water quality benefits. Most of Reach 3 would be considered of moderate value due to the presence of a greater or lesser width of riparian and adjacent upland habitat, which provides cover and thermal protection for the stream. Habitat continuity has been broken where vegetation is lacking thus limiting general habitat value to moderate.

Restoration potential is low. The reach is identified for intense commercial development associated with the Light Rail stations and residential development which has already begun. Development to creekside will negatively impact the benefits currently provided by the vegetated stream corridor. Visibility into the site is present along major roads and from adjacent within the UGB. Visibility from outside the UGB is possible from Highway 26. Public access will likely be high due to expected and planned development making protection of the higher value habitat difficult.

Reach 4 Old Cornell Road to West Union Road

This reach includes approximately 144 acres of riparian habitat. The portion from Old Cornell Road to Highway 26 is vegetated by a narrow strip of upland forest habitat. Dominant trees include Douglas-fir, red alder and big leaf maple with a few individual mature Oregon oak. In some areas the creek has been modified to provide alternate channels and backwater areas which support stands of willows and some wetland species such as cattail, sedges, and rushes. Reed canary grass is also present in the herbaceous layer as well as Himalayan blackberry and wild rose. Canopy closure averages 80-90% during the growing season. Downed logs are present in the channel and some upland areas providing cover and forage for aquatic and terrestrial wildlife. Habitat value is generally moderate based upon the extent and health of the riparian vegetation. Where the riparian habitat is fragmented in several places by major roads and the golf course/housing development north of Highway 26, habitat value is low.

The site is visible from within the UGB and from major roads and some properties immediately outside the UGB and likely from houses on higher ground.

A portion of this reach is presently under public ownership with active land management coordinated between the city of Hillsboro and Unified Sewerage Agency. Restoration has already begun in this area. A potential long-term management problem is controlling access from the major roads and housing developments planned for this area. Increased public access would limit habitat protection to the overstory trees which provide thermal control for the aquatic environment. Disturbance is likely to be high in the understory not only from public access but also from encroachment of non-native invasive plants from surrounding development.

Reach 5 West Union Road to NW Germantown Road

This reach includes approximately 324 acres of upland and wetland riparian habitat as well as associated blocks of upland forest and backwater marsh wetland (e.g. PCC campus site). Overstory trees include black cottonwood, red alder, willows, big leaf maple, Douglas-fir, western red cedar, and Oregon ash in the wetlands. Shrubs and herbs include non-native species such as Himalayan blackberry and many native species including wild rose, blue elderberry, snowberry, hazelnut, vine maple, sword fern, and various sedges and rushes, cattail and reed canary grass in the wet areas. Shrub layer development varies within subareas depending upon development and grazing activities.

Associated habitats to the creek include Holcomb Creek and Holcomb Lake, the marsh at PCC, and scattered upland forest habitat within the agricultural lands. This reach is well connected to other habitats providing nesting, foraging, and travel opportunities for mammals (deer, raccoon), birds, amphibians and reptiles, and prey sources such as aquatic and terrestrial insects. This reach is well connected to tributary stream corridors and upland habitats associated with the mainstem and the tributaries. The site's broad floodplain currently provides floodplain protection and water quality benefits except where riparian vegetation is lacking. Habitat value is moderate to high depending upon the level of disturbance, and the lack of well-developed native riparian vegetation which is very narrow in places. The highest valued habitat occurs in conjunction with Holcomb Lake. In this area the forest habitat is of sufficient size (estimated to be 80 acres) to support nesting and denning for a number of birds and mammals. The wetland forest of Oregon ash is rare within the urban metropolitan area. An active great blue heron rookery also exists in this area.

The site is visible from inside the UGB and from roads and properties within the Urban Reserve Area. The potential for restoration is high and would requiring removal of non-native invasive plants, limiting grazing in the riparian corridor, and the addition of native herbs, shrubs, and trees. In some areas it may be necessary to review the hydrology to assess if past changes need to be corrected in order to restore

floodplain habitat. To protect the integrity and functions of the highest valued habitat, public access would need to be limited in those areas.

Reach 6 NW Germantown Road to Cornelius Pass Road

This reach includes approximately 164 acres of riparian and associated upland and wetland habitats. Dominant overstory trees include big leaf maple, red alder, Douglas-fir, and some Oregon ash in wet areas. Shrubs include Himalayan blackberry in the disturbed areas at the edges of adjacent pastures or open agricultural fields and along the roadsides; and wild rose, Oregon grape, and snowberry. Herbaceous plants include native species such as sword fern and various flowering plants. Reed canary grass exists in more or less dense stands in flat areas of open meadows that lie immediately adjacent to the riparian corridor.

Where Rock Creek crosses Cornelius Pass Road the creek channel has been moved and now flows along the edge of an agricultural field. The riparian vegetation is mostly young red alder trees with little or no shrub layer. A large upland forest which includes as small tributary stream is located within this reach and encompasses approximately 100 acres of mixed conifer and hardwood species. Dominant trees include red alder, Douglas-fir, and big leaf maple.

Habitat value in Reach 6 varies. Where the creek has been moved and the riparian vegetation sparse the habitat value is low because floodplain protection is lacking. In the mid-section of this reach the forest cover (estimated at 100 acres) is extensive providing protection to the stream habitat as well as providing upland nesting, denning, foraging, and travel habitat to a variety of wildlife species. This forested area has high habitat value due to its size and its well established vegetative cover. The reach is connected both upstream and downstream on the mainstem, to a tributary stream north of NW Germantown Road, and to the high value upland forest.

The site may be visible on the far horizon from within the UGB on major roads, such as Highway 26. The site is also visible from the Urban Reserve area along major roads and from adjacent properties. Restoration potential is high and would require removal of non-native invasive plants, replanting with native species, and returning the creek's natural channel where it has been moved. This would restore the floodplain protection values now missing in this area. Public access should be limited in the high value forest to maintain the integrity of this habitat.

Reach 7 Eastern Headwaters Areas from Abbey Creek north to NW Skyline Road at NW Newberry Road

This reach includes the Abbey Creek tributary and an unnamed tributary system to its north. Abbey Creek includes approximately 65 acres of riparian habitat. The creek begins in heavily forested upland areas in the West Hills and flows through forest and farmland until it enters Rock Creek just south of Germantown Road. Within the farmlands riparian vegetation is discontinuous occurring in some areas as grassy banks and in others as forest habitat. Dominant overstory trees include red alder, big leaf maple, and willows with big leaf maple and Douglas-fir the clear dominants in associated riparian uplands.

At the headwaters area, habitat is primarily upland forest dominated by Douglas-fir, western red cedar, red alder and big leaf maple. The shrub layer is well developed and includes many native species such as ocean spray, tall Oregon grape, snowberry, salmonberry, hazelnut, and salal. Dead and down woody material is common within the creek channel and in adjacent uplands providing denning and foraging habitat for small mammals and insects. Snags are generally lacking thus limiting nesting opportunities for cavity nesting birds.

With the exception of those portions of Abbey Creek which flow through its broad floodplain area near Kaiser Road, the habitat value is high due to the diversity and complexity of the vegetation, its connection to Forest Park and the creek systems, and its size which provides suitable nesting, denning, foraging, and travel habitat for birds, large and small mammals, amphibians and reptiles, fish, and insects. Within the broad floodplain, riparian vegetation is non-existent in some place due to agricultural practices. Near Kaiser Road there is a small area of scrub-shrub wetland which is a fairly rare habitat in the drainage system. The site is connected downstream to the mainstem Rock Creek, and to forest and meadow habitats throughout the West Hills.

The site is visible from points within and outside of the UGB. Restoration is needed the broad floodplain area and would require limiting or removing livestock access and the replanting of native trees and shrubs appropriate to the habitat type, wetland or upland. Public access could be accommodated in the floodplain and forested areas so that important high value blocks of habitat area protected while other recreational opportunities are made available.