

METROPOLITAN COUNCIL
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DATE: November 2, 2007

TO: Metropolitan Parks and Open Space Commission

FROM: Jan Youngquist, Senior Planner-Parks (651) 602-1029

SUBJECT: (2007-222) Cottage Grove Ravine Regional Park Master Plan update, Washington County

INTRODUCTION

Washington County has submitted a development master plan for Cottage Grove Ravine Regional Park for Metropolitan Council review and approval.

The *2030 Regional Parks Policy Plan* (Chapter 2 – Policies and Strategies, Section D – Planning, Strategy 4A- Master Plans), describes the role of the master plan in the regional park system. The policy requires that any project proposed for funding in the Metropolitan Regional Parks Capital Improvement Plan (CIP) be consistent with a Metropolitan Council approved regional park master plan.

This memorandum contains a review of the Cottage Grove Ravine Regional Park Master Plan based on its consistency with the *2030 Parks Policy Plan*.

AUTHORITY TO REVIEW

Minnesota Statute 473.313, Subdivision 1 requires Regional Park Implementing Agencies to, “prepare, after consultation with all affected municipalities, and submit to the Metropolitan Council, and from time to time revise and resubmit to the council, a master plan and annual budget for the acquisition and development of regional recreation open space located within the district or county, consistent with the council’s policy plan.” (i.e., the *2030 Regional Parks Policy Plan*)

Minnesota Statute 473.313, Subdivision 2 authorizes the Metropolitan Council to review, with the advice of the Metropolitan Parks and Open Space Commission, master plans for the regional park system. Plans are reviewed for their consistency with the *2030 Regional Parks Policy Plan* and other Council policy plans. If a master plan is not consistent with Council policy, the Council should return the plan to the implementing agency with its comments for revision and resubmittal.

BACKGROUND

Cottage Grove Ravine Regional Park is located in southern Washington County, in the city of Cottage Grove. The location of the regional park is depicted in Figure 1. The Cottage Grove Ravine, for which the regional park is named, is about one-half mile wide with some steep slopes averaging 80-100 feet deep from ravine floor to bluff tops. The park's natural landscape qualities were a major consideration in development of the master plan.

The previous master plan for this park was approved by the Metropolitan Council in 1992. This master plan update includes some of the provisions of the previous plan, but reflects changes in the park's recreational and educational demands and puts an emphasis on natural resource stewardship.

Figure 1—Location of Cottage Grove Ravine Regional Park



ANALYSIS

1. Boundaries and Acquisition Costs

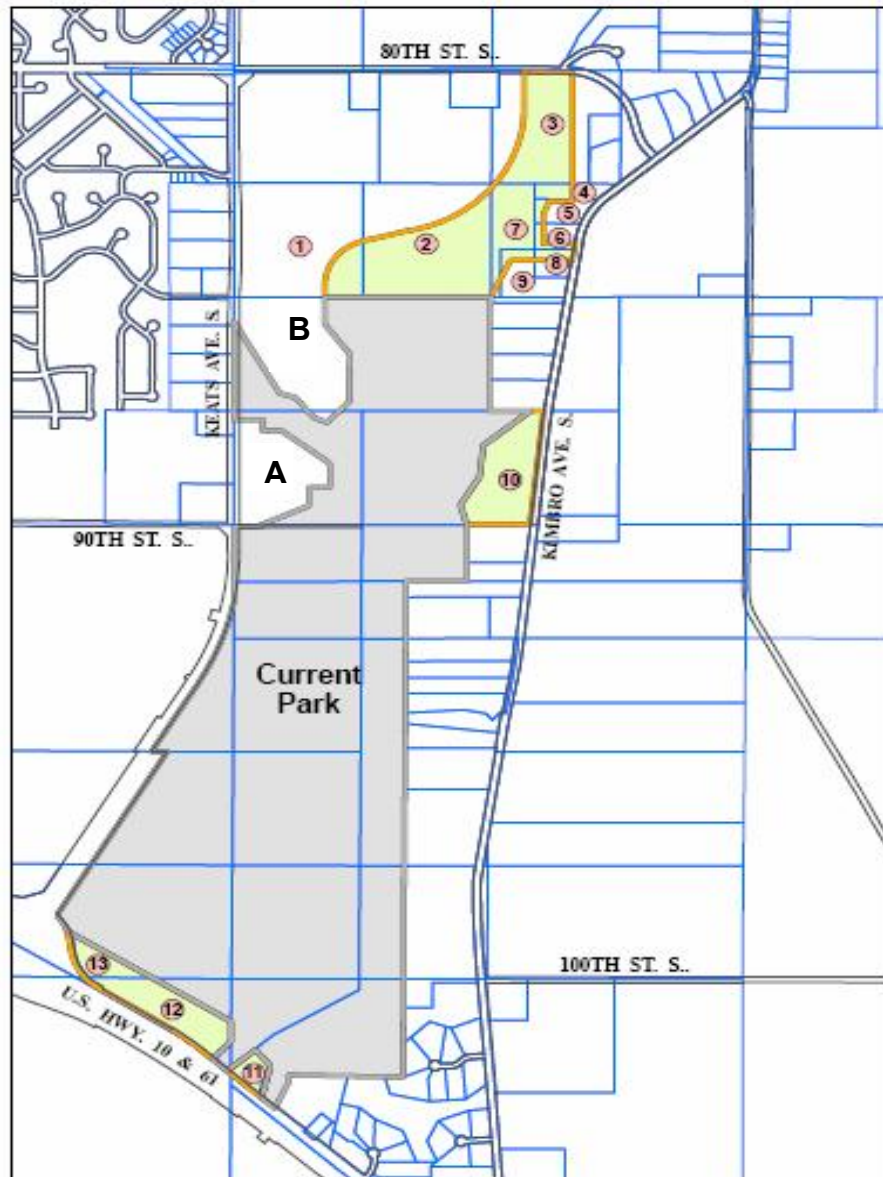
The park currently consists of approximately 515 acres, with a proposed ultimate size of approximately 576 acres. Expansion will occur through acquisition on a willing-seller basis or through dedications as part of future development. Previous master plans identified three inholding parcels, located at the southern boundary of the park (Parcels 11, 12 and 13—depicted in Figure 2 and described in Figure 3). Parcels 11 and 12 have been identified for outright

purchase in this master plan. Parcel 13 is dissected by roadways, therefore, only the portion of the parcel that is shown in the park boundary in Figure 2 is proposed for acquisition. Acquisition of these parcels will eliminate the potential of having structures in the view-shed of the proposed park overlook and would also reduce the potential for encroachment issues in the future.

The master plan also proposes to expand the boundary at the northern and eastern edge of the park (Parcels 1-10). These parcels are consistent with the City of Cottage Grove's East Ravine Land Use Plan and would help protect the drainageway between the park and 80th Street South. These parcels would also allow trail access to the park from the north and the west.

The park boundary along Parcels 1, 2 and 3 will follow the general planned alignment for a future parkway that will lead along the edge of the park boundary as it connects 80th Street to 90th Street.

Figure 2—Park Boundary and Inholding Parcels



Acquisition of full parcels is not necessary in the north portion of the park. Washington County sees value in acquiring portions of lots, including steep slopes, without the need to acquire the entire parcel. Acquisition of this property is envisioned through park dedication at the time of development of the remainder of the parcels.

Figure 3—Inholding Parcels and Estimated Market Values

Parcel	Total Acres	Estimated Market Value	Comments
1	40	\$585,000	Acquisition of portion of property
2	40	\$600,000	Acquisition of portion of property
3	30.5	\$454,500	Acquisition of portion of property
4	3.08	\$385,800	Acquisition of portion of property
5	3.54	\$290,000	Acquisition of portion of property
6	3.25	\$349,800	Acquisition of portion of property
7	7.4	\$92,500	Acquisition of portion of property
8	3.15	\$299,000	Acquisition of portion of property
9	7.58	\$364,300	Acquisition of portion of property
10	15.8	\$197,500	Acquire entire parcel
11	2.3	\$260,600	Acquire entire parcel
12	12.5	\$295,800	Acquire entire parcel
13	18.51	\$252,900	Acquisition of portion of property—remainder of the parcel is not contiguous to park

The estimated market value from Washington County tax statements for the parcels proposed to be acquired outright (Parcels 10-12) totals \$753,900. Acquisition costs of Parcels 1-9 and 13 are undetermined at this time and will be dependent upon the amount of acreage acquired and whether the land is obtained through park dedication or purchase.

In December 2004 (Item 2004-162), the Metropolitan Council approved a land exchange to convert no more than 38.5 acres of Cottage Grove Ravine Regional Park for a joint Cottage Grove/Washington County public service center in exchange for an equal amount of land northeast of the existing park boundary. The Council also agreed to release the restrictive covenant on those acres removed from the park, subject to approval of an agreement between Washington County and the City of Cottage Grove. The agreement states the County and City will work together to replace the land removed from the park on an acre for acre basis between January 1, 2006 and December 31, 2015. The replacement land shall have natural characteristics similar to the park.

In September 2005, the Metropolitan Council released the restrictive covenant on 17.7 acres of land for development of the Washington County Service Center (Figure 2, Parcel “A”). The removal of 17.7 acres allows up to 20.8 acres to be removed from the park boundary in the future for the Cottage Grove Municipal Center (Figure 2, Parcel “B”). . If development of this facility does not occur, the property would remain part of the regional park. The 17.7 acres removed for

the Washington County Service Center has not been replaced yet, and is the subject of a request to amend the land exchange approval (Metropolitan Council Item 2007-374)

Figure 4—Park Acreage Summary

Current park acreage owned by Washington County	515.3 acres
Land removed for other public purpose	(-) Up to 38.5 acres
Inholding parcels identified in previous master plans to be acquired	+ 24.8 acres
Land added to park boundary in this master plan	+ Approx. 75 acres
Ultimate park acreage under master plan boundaries	Approx. 576 acres

2. Stewardship Plan

The stewardship plan promotes an ecosystem-based approach to restoration and management. Its goals are to enhance the health of the ecosystems, enhance the biological diversity of its native habitats, and provide an appropriate balance between resource protection and recreational use. Key priorities of the natural resources stewardship plan include:

- Water resources management –manage sources of runoff
- Ravine stabilization—control erosion
- Remove non-native invasive woody vegetation—including buckthorn, black locust and honeysuckle
- Remove non-native invasive herbaceous vegetation—including garlic mustard, reed canary grass, smooth brome and Kentucky bluegrass
- Install native plant material—after removal of invasive plants, plant ecologically appropriate plant material
- Initiate ecological management program—conduct prescribed burning, management mowing and spot herbicide
- Initiate ecological monitoring and adaptive management program—recommended to be monitored annually

The general phasing of the stewardship program would include: Phase 1—testing to understand restoration needs; Phase 2—major restoration and remediation; and Phase 3—maintenance.

3. Needs Analysis

Park usage at Cottage Grove Ravine Regional Park is expected to grow over time. The population of Washington County is projected to increase by 57 percent from 2000 to 2020 and by 82 percent from 2000 to 2030. The population growth will introduce more potential park users to the area. Also, development of new recreational facilities and amenities will continue to draw new visitors to the park. Once the planned trails linking this regional park to the larger regional park and trail system are developed, park usage will be enhanced.

4. Development

The master plan represents a balance between recreational and educational use and preserving the natural and ecological value of the site. The majority of the proposed development is separated from the most sensitive areas within the park, with the exception of nature trails and overlooks where a direct connection to the natural setting is needed. Large scale features such as the trailhead center, lodge, park drives and paved trails are located in areas that are already disturbed, where impacts can be managed or where fragmentation of the nature systems is less of an issue.

Regional parks do not have the specific requirement for a maximum development of 20 percent of the land area with 80 percent left as natural open space, that applies to park reserves. Although Cottage Grove Ravine is a regional park, it was clear during the public master planning process that preserving as much natural open space as possible was very important. The overall built footprint of the park under this master plan is less than 15 percent. Although this is not a requirement for a regional park, it reflects the public's desire to preserve open space while still providing various forms of recreation.

The park is divided into two major development zones, the lake development zone and the trail development zone, shown in Figure 5.

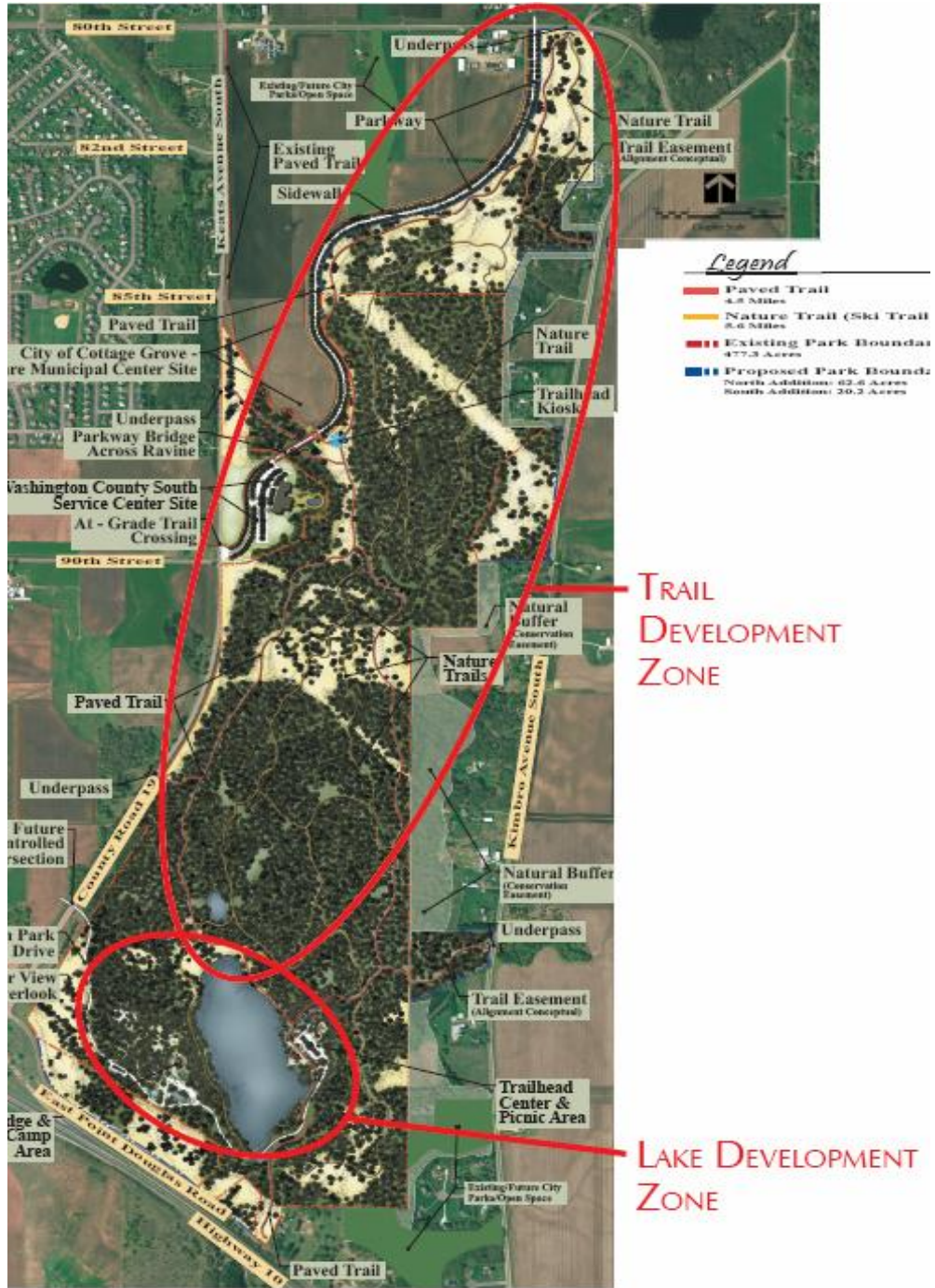
Lake Development Zone: This zone is located in the area of Ravine Lake and will accommodate the following amenities:

- **Trailhead Center/Picnic Grounds Area**—The trailhead center will be a 3,000 square foot building with a capacity of approximately 200 people. The building will include a three season picnic shelter, four season activity room/warming house, restrooms and storage. In addition to the existing fishing pier, other amenities in this area will include an updated picnic shelter, a canoe/kayak launch and rack, and an expanded parking lot.
- **Lodge/Day Camp Area**—The lodge will be a 1,200 square foot building with a capacity of approximately 50 people, with the capability to be expanded. The building will include a general activity space, modest kitchen facilities, restrooms and storage. An outdoor plaza will include sitting areas, picnic tables and grills.

—The day camp is proposed for the wooded area north of the lodge and will accommodate up to 60 people for youth day camps and occasional overnight group camping. A group gathering area will be nearby, which will include a small sheltered outdoor classroom structure and a council ring with simple bench seating.

—An outdoor skills area will be near the day camp. Potential activities include an orienteering training area and a ropes course, although specific design features will be determined prior to master plan implementation.

Figure 5—Park Development Zones



Trail Development Zone: This zone encompasses the vast majority of the park and focuses on preserving the site’s natural amenities while providing trail opportunities for recreation and education. The master plan described shared-use paved trails and natural trails.

- **Shared-Use Paved Trails**—A looped paved trail will be developed for potential year-round use. The trail will be 10 feet wide and limited to non-motorized activities including walkers, joggers, bicyclists and in-line skaters.

—A key element of the paved trail is its connections to planned regional trails. The master plan describes Cottage Grove Ravine Regional Park as a key destination point along an extensive planned trail network.

—Two proposed regional trails will connect to Cottage Grove Ravine Regional Park. The master plan illustrates the conceptual location where regional and city trails will connect to the park, with actual access points to be determined as development occurs in the future.

- The Washington County Greenway Regional Trail will connect the city of Hastings to Cottage Grove Regional Park, Lake Elmo Park Reserve and Big Marine Park Reserve.
- The Grey Cloud Island Regional Trail will connect the planned Grey Cloud Island Regional Park to Cottage Grove Ravine Regional Park to the east and to the proposed Prairie View Regional Trail to the northwest.

—The paved trail loop internal to the park will be approximately 3 miles. Overall, a total of 4.5 miles of paved trails will be provided. The trail alignment is purposefully on the periphery of the park in most areas to maximize the overall mileage and to leave the more central and larger areas for nature trails.

—The master plan allows for development of another paved loop in the northern portion of the park if warranted by demand in the future.

- **Natural Trails**—A five mile network of natural-surfaced trails will be provided for year-round use. In many cases, the same trail alignment will be used for summer hiking and winter skiing. When the natural trails are constructed, sustainable design practices, including a “rolling grade” design pattern, will be used to prevent erosion.

—Trail sections that will be used only in the summer will be limited to hikers and joggers. The mowed trail width will be four feet to allow hikers to walk side by side while keeping the trail intimate and natural.

—Where the trail will be used for cross country skiing, the trail width will be 12 to 14 feet as required for grooming ski trails.

—The natural trails traverse all of the major ecological systems in the park, which provides the opportunity to have a structured interpretive program to inform the public about natural resources and the importance of active stewardship.

—Observation overlooks, interpretive signage, benches and vault-style toilets will be provided in select locations.

Figure 6—Proposed Development and Estimated Costs

Priority	Development Component	Comment	Cost Estimate (in 2007 dollars)
1	Paved Trails	High-use amenity, can be developed independent of other development, provides link between regional/local trail systems	\$550,000
2	Nature Trails	Limited costs and high use amenity make this a cost effective priority	\$150,000
3	Main Park Drive and Parking Lots	Needed to improve vehicular access through the park and to accommodate park development listed below	\$750,000
4	Riverview Overlook	Simple amenity that complements other facilities in the park	\$25,000
5	Trailhead Center and Plaza	Likely to be a popular, high demand facility—funding may take several years to obtain through the regional funding cycle	\$850,000
6	Play Structure	Will need to be relocated with development of the trailhead center and parking lot	\$120,000
7	Canoe/Kayak Launch and Rack	Simple, cost effective amenity that complements the trailhead center	\$40,000
8	Renovate Existing Picnic Shelter	Current structure can be used in the interim with routine maintenance	\$100,000
9	Family and Small Group Picnic Areas along Park Drive	Simple, cost effective amenity that complements other facilities in the park	\$36,000
10	Lodge, Day Camp, Group Gathering Area, Outdoor Skills Area	Lower priority at this time which gives the County time to examine demand for this facility	\$640,000
Total Master Plan Development Cost Estimate			\$3,261,000
Contingency and Professional Fees (30%)			\$980,000
TOTAL ESTIMATED COST MASTER PLAN DEVELOPMENT			\$4,241,000

5. Conflicts

The master plan incorporates the plans recently developed by the City of Cottage Grove and the South Washington County Watershed District, so there are no anticipated conflicts between land uses or other plans. The master plan also includes provisions to link the new county service center and proposed city hall complex to the park. The plan was developed envisioning improving connections to the community, rather than creating conflicts.

6. Public Services

Restrooms in the trailhead building, picnic shelter and group meeting facility will utilize wells and septic systems. Access to the park is currently on the frontage road to Highway 61, but will be moved so the access will come directly off of CSAH 19 (Keats Avenue). The road access is being coordinated with a commercial development on the west side of CSAH 19 so the intersections will align. It is likely that signals will be installed at the intersection in the future. Existing interior roads will be used for most of the new development.

7. Operations

Rules, regulations and ordinances: The use of County parks and trails is governed by Washington County's Ordinance No. 174. The Ordinance addresses public use, general conduct, general parkland operations, recreation activity, motorized vehicles, traffic and parking, as well as protection of property, structures and natural resources. Kiosks and signs will inform park and trail users about permitted and prohibited activities. The Washington County Sheriff's Department will respond to emergencies and criminal complaints.

Operations –Maintenance: The operation of Cottage Grove Ravine Regional Park is similar to other park facilities in the County. Maintenance and regular cleaning is done year-round with full-time employees (5 employees for all parks) and is supplemented with seasonal staff in the summer. Refuse and recycling materials are collected in barrels that are regularly emptied by park staff.

Operations and Maintenance Costs & Funding Sources

The 2007 operating budget for the Washington County Parks Division is \$1,882,400. Funding for operations and maintenance come from the County Levy (46 percent), vehicle permit sales (20 percent), sales and rentals (19 percent) and Metropolitan Council/State grants (14 percent).

Operations and maintenance work, including staff and materials, for Cottage Grove Ravine Regional Park is estimated to be approximately \$50,000 annually. Administrative costs are estimated at approximately \$25,000. Once the development proposed in the master plan is fully complete, the increase in operations and maintenance costs is projected to be \$20,000 per year. The increase in costs would be associated with heat and electricity costs as well as cleaning of the new buildings. No new staff is anticipated for this development. Routine maintenance will continue to be done by staff from other parks.

8. Citizen Participation

The general public and special interest groups were invited to participate in the master planning process. A Technical Advisory Committee included representation from Washington County Parks, the Washington County Parks and Open Space Commission, City of Cottage Grove, City of Woodbury, South Washington County Watershed District and the Washington Conservation District. Public meetings and open houses were also held. Formal meetings with the Washington Parks and Open Space Commission and Board of Commissioners provided additional opportunities for public input.

9. Public Awareness

Washington County uses the following outreach components to improve public awareness of its park and trail facilities, programs and services:

- Printed Materials—Brochures and maps are distributed on a regular basis. Park and trail fliers are also distributed to County departments, libraries, community agencies and other contacts.
- Electronic Communication—The County has a website to inform citizens about the Park Commission meetings, the master planning process, as well as park and trail facilities and programs. Additionally, the public can contact the Parks Department through the email system.
- Other Outreach—Other forms of outreach include displays at the Washington County Fair, articles in the County Commissioner’s quarterly newspaper, and the display of information at County Service Centers and park kiosks. The County also publishes news releases and ads in local and metropolitan newspapers that highlight upcoming programs and facility openings.

10. Special Needs

The master plan described the philosophy of universal design, which combines the basic principles of barrier-free design with a more comprehensive view of human capabilities. The philosophy of universal design as designed by *Universal Access to Outdoor Recreation* includes:

- People purposely choose settings for their recreation activities
- Choices are made with the expectation of achieving specific recreational experiences
- Desire is to provide as broad of a spectrum of activities and recreational settings as practical for a given site

The objective is to apply the principles to provide recreational activities that are appropriate for the park setting. The master plan recommends that the design process include a cross-section of people with and without disabilities to help ensure that facilities will serve the intended populations.

A design objective of trail development will be to maintain a high degree of accessibility. The paved trails will maintain a grade of 5 percent or less wherever possible. Given the site topography, this will be challenging in some places. In these instances, signage will be used to alert trail users about upcoming steeper grades.

This master plan proposes several trail connections to the community, and there is no fee associated with accessing the park by trail. A fee is charged for vehicular access to the park, however.

11. Natural Resources

The master plan took a comprehensive look at the natural resources of the park. Preserving natural open space and ecological health was fundamental to development of this master plan.

Natural Resources Inventory: The City of Cottage Grove conducted a natural resources inventory for Cottage Grove Ravine Regional Park in the late 1990s. The park consists of a variety of native plant communities that range from relatively high quality to significantly altered and degraded quality, due to past land uses and the lack of stewardship. Nineteenth century accounts of pre-settlement vegetation indicate that the park was dominated by hardwood forest with oak, elm and basswood as the dominant canopy types.

Currently the sites uplands contain old fields, oak forest and conifer plantations. Low areas include lowland forests and emergent marshes and wet meadows. An inundation of invasive species is evident in the park, which contributes to the decline of the remaining historical vegetative cover in the park. Although some of the ecological decline cannot be entirely reversed, there are opportunities to forestall further decline and make substantial progress toward sustaining a natural landscape.

Surface Water and Groundwater Resources: Washington County Parks will collaborate with the Minnesota Department of Natural Resources, Washington Conservation District and South Washington Watershed District on the management of Ravine Lake. The County will focus on:

- Stabilizing water levels to prevent flooding and the unnecessary ecological impacts to riparian areas
- Preserving wildlife habitat along the lake shoreline
- Maintaining the scenic value of the lake for the enjoyment of park visitors
- Ensuring a stable and productive fishery for local fishers to enjoy on a year-round basis

Stormwater management at Cottage Grove Ravine Regional Park will rely on natural infiltration. A natural infiltration approach to stormwater management is fundamental to creating sustainable trails and other development where impacts to adjacent ecological systems are to be kept to a minimum. The natural infiltration approach relies on passive overland routing of runoff rather than storm sewers, engineered ponds and other built structures. The four components of a natural infiltration system are:

- Shallow Natural Infiltration Swales and Basins Systems—Initially, stormwater runoff is routed into swales or raingardens planted with native plants with deep root systems. These provide initial infiltration and removal of pollutants as well as disperse runoff across upland and prairie systems.
- Upland Systems—Prairies and upland forests slow down the rate of flow associated with stormwater leaving hard surfaces.
- Wetland Systems—Wetlands provide stormwater detention and biological treatment prior to runoff entering streams and lakes.

- Water Body Systems—Water fluctuations in lakes and rivers will be much more natural and stable. By limiting unnatural water fluctuations, native plants will be vital.

Washington County will also apply best management practices when a new development is being implemented in order to manage stormwater, prevent erosion and limit non-point source water pollution.

Vegetation Management: The following techniques were identified for vegetation management and restoration in the park:

- Prescribed Burning—This is described as the single most useful and important management method required for restoring many native plant communities.
- Weeding and Brushing—Manual reduction of existing dense shrub growth will be needed to prepare the site for prescribed burns, especially in locations where buckthorn is prominent.
- Seed Harvesting/Disbursement/Planting— Some seed banks may remain in park soils, which can be used for the restoration of native systems. Seeds and plants from local sources will also be required to ensure that sufficient quantity and quality exists for the restoration program. In the long-term, the park will be its own source for seeds and plants.

Wildlife Management: The regional park’s landforms, access to water and ecological diversity are important to avian and waterfowl species. Other forms of wildlife, ranging from deer to opossums, can be found in the park as well. On-site observation suggests that species adaptable to disturbed landscapes, such as deer, are thriving. Other species that are less adaptable are not sighted as often and are more threatened.

To reduce habitat fragmentation, the master plan recommends that the physical design and management of trails and other development should incorporate the needs of wildlife and protect the ecological values that are important to threatened species.

The master plan identified the potential costs for the natural resources stewardship program. Since the stewardship program is in its infancy, Washington County does not have reliable data available for projecting costs associated with ecological restoration and management. Unit cost estimates were derived from past projects in the region.

Cover Type	Acres	Range of Cost/Acre	Total Cost Range
Forest Systems	494	\$1,500 to \$4,000	\$741,000 to \$1,976,000
Prairie Systems	52	\$1,500 to \$3,000	\$78,000 to \$156,000
Wetland Systems	15	\$1,500 to \$3,000	\$22,500 to \$52,500
Total Estimated Natural Resource Restoration Costs			\$841,500 to \$2,652,500

REVIEW BY OTHER COUNCIL DIVISIONS:

Environment & Surface Water Management (Jim Larsen) –No comments—well prepared document.

Environmental Services – Sewers (Roger Janzig) – The plan calls for development of a Cottage Grove Municipal Center located near Metropolitan Council Gravity Interceptor (9701) which is within the Keats Avenue South and 90th Street rights-of-way. To assess the potential impacts to our interceptor system, prior to initiating this project, final plans should be sent to Scott Dentz, Interceptor Engineering Manager (651-602-4503) at the Metropolitan Council Environmental Services Department for review and comment.

Metropolitan Council Transportation (Ann Braden) –No comments.

CONCLUSIONS:

1. The *2030 Regional Parks Policy Plan* requires that master plans include information on eleven items reviewed in the “analysis section” above. It also requires that sufficient information be included on the estimated cost of the acquisition and development proposed in the master plan. This review concludes that the Cottage Grove Ravine Regional Park Master Plan (Referral No. 20042-1) contains sufficient information to meet the requirements of the *2030 Regional Parks Policy Plan* and that it is generally consistent with the requirements of the plan.
2. The estimated cost of master plan development is \$4,241,000 in 2007 dollars. The master plan identifies three inholding parcels for outright acquisition, with a combined 2007 estimated market value of \$753,900. Acquisition costs of other inholding acreage will be dependent upon the amount of acreage acquired and whether it is obtained through park dedications through future development or through purchase. Therefore, the quantifiable estimated cost for implementation of the master plan is \$4,994,900 in 2007 dollars.
3. Natural resources restoration costs consist of a rough estimate of \$841,500 to \$2,652,500. In order for these costs to be eligible for funding in the future, Washington County should submit more refined and detailed cost estimates prior to requesting funding.
4. Approval of this master plan does not commit the Council to any funding at this time. Future development funding based on this master plan would be done through the Regional Parks Capital Improvement Program (CIP). Council action is required to approve the CIP and to approve specific grants to Washington County.

RECOMMENDATIONS:

1. That the Metropolitan Council approve the Cottage Grove Ravine Regional Park Master Plan (Referral No. 20042-1).
2. Require that prior to development, final plans be sent to Metropolitan Council Environmental Services for review and comment to insure the integrity of the interceptor system.
3. Require that Washington County submit more refined and detailed cost estimates for natural resources restoration work prior to requesting Council funding for these costs.