

**METROPOLITAN COUNCIL**  
**390 North Robert Street, St. Paul, MN 55101**  
**Phone (651) 602-1000 TDD (651) 291-0904**

**DATE:** October 21, 2010

**TO:** Metropolitan Parks and Open Space Commission

**FROM:** Arne Stefferud, Planning Analyst-Parks (651-602-1360)

**SUBJECT:** (2010-xxx) Big Marine Park Reserve Master Plan, Washington County  
(Referral No. 50003-1)

**INTRODUCTION**

Washington County has submitted a master plan for Big Marine Park Reserve. This plan updates the 1988 master plan. The master plan update builds on the previous master plan by:

1. Updating site improvements within the park reserve
2. Preserving contiguous habitat corridors for upland/wetland wildlife, mature oak forests, and potential aquifer recharge areas.
3. Establishing native landscape buffers along the park's perimeter
4. Limiting vehicular access to the park from adjacent roadways
5. Including trails for bike/pedestrian, horse-back riding and cross country ski use
6. Introducing mountain bike trails, an archery trail target loop, and campgrounds

This memorandum analyzes the master plan against the criteria for reviewing regional park master plans. It recommends approving the master plan because it is consistent with applicable portions of the *2030 Regional 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*. 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.

## ANALYSIS

### 1. Boundaries and Acquisition Costs

The first Regional Parks Policy Plan adopted in 1974 recommended the general area for a park reserve on the southern shore of Big Marine Lake. The majority of the land was composed of privately owned parcels. Washington County prepared a master plan which identified the park's boundaries and a first phase development plan, which was approved by the Metropolitan Council in 1988. Between the years 1988-2000 parcels were acquired from negotiated purchases with willing sellers. Between the years 200-2004 the Veteran's Camp was removed from the park boundary to become a permanent inholding within the park.

The park reserve's existing boundary encompasses 1,892 acres. As of December 2009, 657 acres (37%) has been acquired as shown in **Figure 1: Existing Big Marine Park Reserve Property Ownership** and highlighted in green. The park's boundary is shown in red. Individual parcels are outlined in yellow.

Figure 1: Existing Big Marine Park Reserve Property and Ownership



Washington County’s current policy position on land acquisition is to acquire land from willing sellers when criteria and priorities are met for the purchase. There are currently 24 parcels north of County State Aid Highway (CSAH) 4 and 25 parcels south of CSAH 4 remaining to be purchased. The total assessed market value of these parcels is \$21,311,400 as shown below:

**Big Marine Park Reserve Estimated Acquisition Costs (2010 Assessed Market Value)**

Land North of County State Aid Highway 4	\$11,150,300	383 acres
Land South of County State Aid Highway 4	\$10,161,000	852 acres (includes Mud and Turtle Lakes)
<b>Total Cost</b>	<b>\$21,311,400</b>	<b>1,235 acres</b>

Actual costs of acquisition will differ from the amount shown here because each parcel will be appraised and negotiations on that parcel will determine the actual purchase price. Plus costs related to the acquisition will be incurred including the cost of the appraisal, pro-rated shares of property taxes due on the parcel at the time of closing, a property tax equivalency payment to the township due at the time of closing, Phase 1 environmental assessment if necessary, and stewardship costs including capping a well, structure removal and boundary marking.

A priority system has been established for the acquisition of these parcels with an emphasis on acquiring land north of CSAH 4 which can be integrated with existing park access and development. The priority rating for these acquisitions is as follows:

**A. Priority Parcels – Have all of the following:**

- Located immediately adjacent to public water or county park land
- Contain high quality woodland or wetland natural resource
- Situated in close proximity to already acquired county park land (3-4 parcels away)
- No existing significant structures (over \$130,000 assessed value)
- County Staff will contact land owners on an annual basis

**B. Priority Parcels – Have the following:**

- Contain natural resource water, wetland, or woodland feature and is a park inholding within acquired parcels
- Situated in close proximity to already acquired county park land (3-4 parcels away)
- County Staff will contact land owners on a bi-annual basis

**C. Priority Parcels – Have one or more of the following:**

- Contains public water frontage, woodlands, or wetlands
- Within close proximity to already acquired park land (3-4 parcels away)
- Parcel has potential for loss to further development if not purchased when it is available for sale
- County Staff will discuss purchase if contacted by the owner. Acquisition will also be reviewed with County Board if further study is recommended.

**D. Priority Parcels – Have one or more of the following:**

- No or low quality water frontage, or natural resource amenities
- Limited connection to other County land and/or has limited potential for development in the near future

## **Stewardship Plan**

As lands are acquired stewardship activities would be done to convert it from private use to park use. These activities include boundary marking, capping wells when applicable, and vegetation management/restoration activities.

### **2. Needs Analysis**

In 2008, Phase I development of the park opened for use. It included an improved boat landing access to Big Marine Lake, a swimming beach, a large playground, picnic facilities and a trail system. Based on sample counts of visitors to the park in the summer and data collected from visitors to the park in 2008, annual visit estimates to the park in 2008 and 2009 are shown below:

#### **Big Marine Park Reserve Annual Visit Estimates**

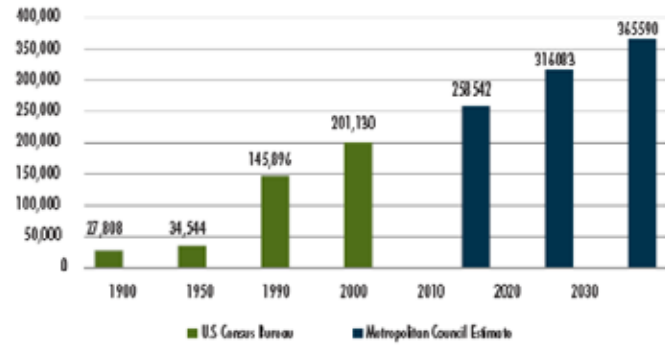
Year	Estimated Annual Visits
2008	58,400
2009	154,300

The master plan notes that Washington County has the fifth largest population in the State and is projected to continue in that role to the year 2030. The following table and chart illustrates the county's population and forecasted growth.

#### **Washington County Population and Forecasted Growth**

	U.S Census Bureau	Metropolitan Council Estimate
1900	27808	
1950	34544	
1990	145896	
2000	201130	
2010		258542
2020		316083
2030		365590

Source: Washington County 2030 Comprehensive Plan



In 2008, a visitor survey of Big Marine Park Reserve was conducted by consultants to the Metropolitan Council. Sixty-three percent of those surveyed were between the ages of 25 to 44. Surveyed visitors to the park participated in the following activities:

Recreation Activity	% of Survey Respondents Who Participated in Activity
Walking, Hiking	13%
Biking	3%
Swimming	33%
Picnicking	20%
Playground Use	50%
Sunbathing	3%
Relaxing	3%
Boating	7% (includes power and non-powered boating activities)
Fishing	3%
Dog Walking	3%

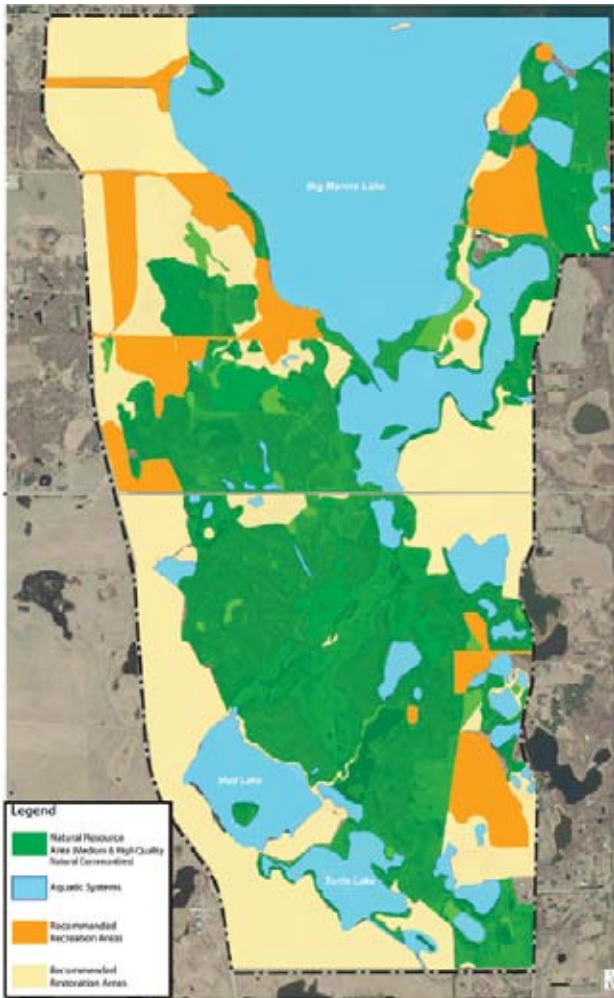
The master plan notes that Phase I development of the park is attracting younger families. As the park is developed with other facilities described in the development section below, and as the population of the county increases, the park will serve more and more visitors.

### 3. Development

As stated in the master plan, the overriding design challenge for Big Marine Park Reserve lies in protecting the quality and connectivity of its many valuable open water, wetland, and other natural resources; plus protecting land and water based wildlife habitat areas. Based on the Natural Resources Management Plan for the park, recommended recreational use areas were identified which had the lowest quality natural resources or were already disturbed by current or prior agricultural use. As a general principal guiding the development of the park, higher use active recreation areas are located north of CSAH 4 where they can be easily accessed from the main entrance drive to the park and minimize the need for additional roadway circulation. Lower impact recreational activities and amenities have been located south of CSAH 4 where more emphasis has been placed on the protection and interpretation of natural resources and development of low impact trail systems around the perimeter of the park.

The following map illustrates areas proposed for:

- Protection/interpretation of high quality natural resource areas (in green)
- Aquatic systems--wetlands and open water bodies (in blue)
- Recreation areas (in brown)
- Restoration of disturbed areas for natural resource management and interpretation (in yellow)



The master plan proposes the development of the following recreation and visitor support facilities and their estimated costs in 2010 dollars:

Recreation or Visitor Support Facility	Estimated Cost (2010 dollars)
Campground with contact station, shower/restroom building, and dump station, road and parking pads to support recreational vehicles/trailers (35 sites), car/tent camping (42 sites), camper cabins (7), picnic shelter, play area, 8-foot wide nature trail of 1 mile, boat access for motorized and non-motorized craft	\$1,858,500
Group and equestrian camping area with aggregate entrance drive/parking lot, vault toilets and secondary entrance signage	\$ 168,000
Primitive camping area (walk-in tent only) with 6 foot wide soft surface trail	\$ 25,000
Paved trail loop system (9.5 miles—10 feet wide) including boardwalks and signage	\$1,196,000
Trail underpasses (2) of CSAH 4	\$ 500,000
1.8 mile hiking only trail loop with 280 lineal feet of boardwalk (6 foot wide soft surface trail) and signage. Trail would provide seasonal mountain biking (fall) and snowshoeing (winter) uses.	\$ 165,000
0.7 mile field archery trail loop ( 6 foot wide soft surface trail) with targets and signage	\$ 43,000

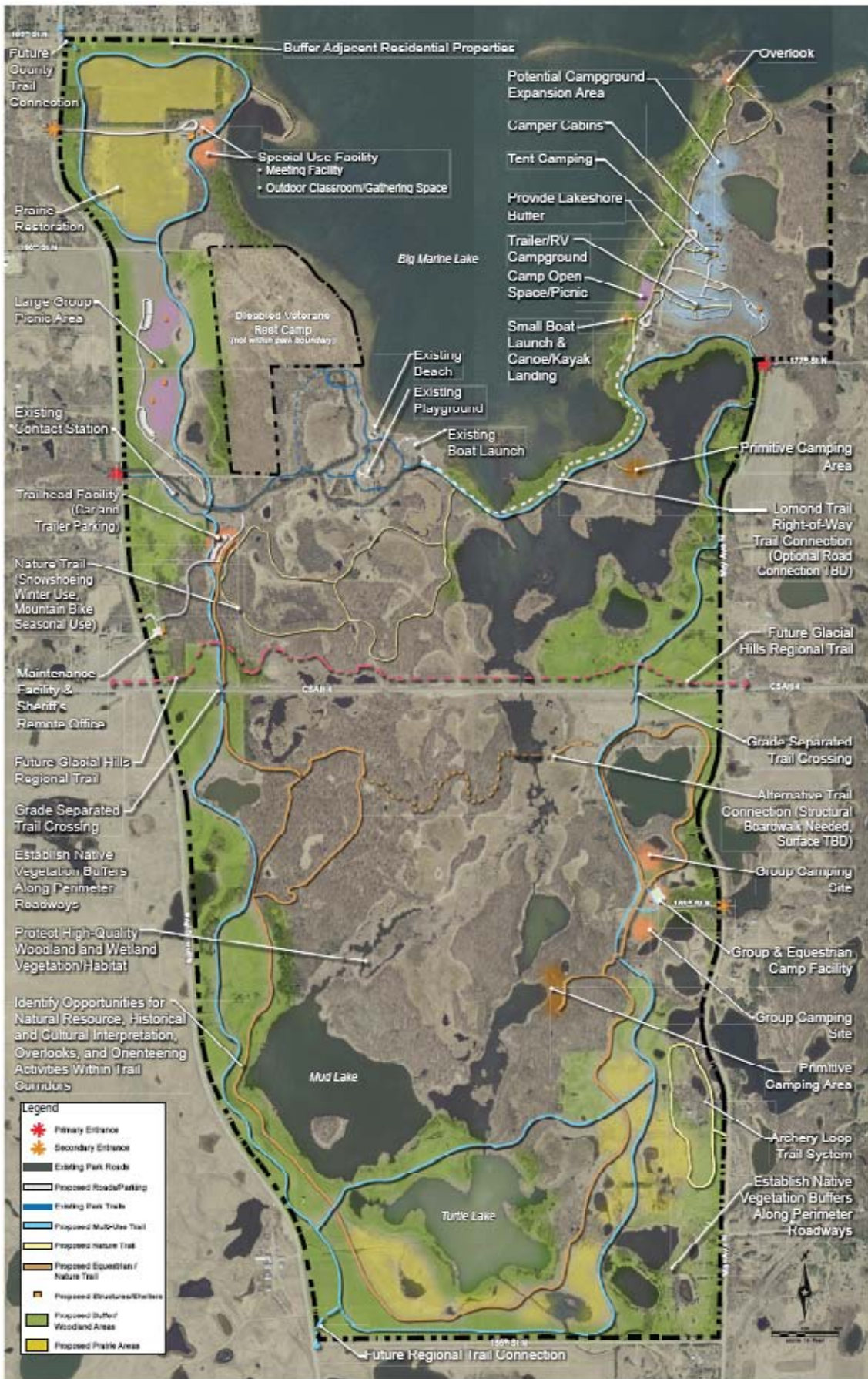
4.9 mile equestrian/hiking trail loop (10 foot wide soft surface trail)	\$ 265,500
Special use facility for environmental education/special event rental space with associated entrance drive/parking area, demonstration gardens, outdoor classroom, nature trail, and fishing pier/overlook	\$ 761,000
Large group picnic area with associated entrance drive/parking area, paved trails, two picnic shelters, play area, restroom building and well.	\$ 985,000
Trailhead facility including associated entrance road and parking area, informal picnic area, vault toilets, warming house/trail information building and signage and trail user furnishings (bike and ski racks).	\$ 447,500
Park maintenance and Sheriff's remote office facility including associated entrance drive/parking area, gated storage yard, cold storage building, heated maintenance shop/storage building, well and septic system,	\$ 646,500
Design fees, contract/construction management/contingency (25%)	\$1,765,375
<b>Total Cost</b>	<b>\$8,826,875</b>

Detailed cost projections are shown in **Appendix A: Big Marine Park Reserve Site Development Program Cost Projection**

A map illustrating the location of these facilities in the park is shown in **Figure 2: Preferred Development Concept Map for Big Marine Park Reserve.**

**Figure 2: Preferred Development Concept Map for Big Marine Park Reserve**





**4. Conflicts**

Surrounding residential and agricultural land uses and the park reserve are generally compatible. Minor conflicts arising from private encroachment into the park through unauthorized trails or structures are resolved on a case by case basis. Similarly issues regarding the park's impact on adjacent land owners are resolved on a case by case basis.

**5. Public Services**

The development plan for the park utilizes existing roads, sewers and electrical utility services currently provided. Additional wells and links to the park's septic treatment system or new septic systems are proposed in the development plan.

**6. Operations and Maintenance**

The Washington County Parks Division is responsible for management and operations of the County's park and trail system. The costs to operate and maintain the park reserve in 2009 was \$136,500 for staffing costs and \$88,000 for operations costs such as equipment maintenance, materials and electrical utilities.)

Revenues from park visitors are generated from vehicle permit fees, concession sales and picnic shelter rental fees. The future development of large group picnic areas, campground facilities, and a special use facility will contribute towards increased visitation, and additional revenues for the park.

The master plan does not project future operations and maintenance costs, but notes that, "before developing any of these new facilities, it will be important to secure additional staffing and funding to ensure they can be planned and accommodated within the County's yearly operations and maintenance budget."

**7. Citizen Participation**

Public open house meetings were held in October 2009 and February 2010 to receive input on issues, opportunities and priorities for the master plan. Furthermore, all open house documents were posted on the County's web site for public review and comment, and draft copies of the master plan were made available at County libraries. The master plan summarized comments from the two open houses, as well as on-line comments. All recorded comments were included in an appendix to the plan. A summary of the open house meetings follows:

**October 21, 2009 meeting summary**

Locate all new vehicular entrances to the park reserve along Manning Avenue to minimize the potential for increased traffic along May Avenue.
Incorporate equestrian loop trail system south of CSAH 4.
Do not locate modern campground facility in northwest corner of the park along Manning avenue because of noise and traffic impacts on residential neighborhood north of 185 <sup>th</sup> Street.
Incorporate a mountain bike trail system somewhere in the park.
Locate active use recreational areas away from sensitive natural areas.

**February 24, 2010 meeting summary**

Preferred location of equestrian trail head along 165 <sup>th</sup> Street along May Avenue.
Preferred location of the modern campground facility on the northeast corner of the park which minimizes impact on adjacent residents.
Concern about noise and light pollution generated by group camping facilities located near 165 <sup>th</sup> Street entry along May Avenue.
Provide adequate vegetation buffer between special use facility on northwest corner of the park and residential neighborhood north of 185 <sup>th</sup> Street.
Support for diversity of hard and soft surface trail types proposed south of CSAH 4.

In addition to the meetings cited above, a technical advisory committee was created with representatives from City of Forest Lake, City of Hugo, City of Scandia, May Township, Washington County Parks and Open Space Commission, and Carnelian-Marine Watershed District. Furthermore, the plan was reviewed by the Washington County Parks and Open Space Commission and the Washington County Board.

## **8. Public Awareness**

Promotion of Washington County's park and trail systems has been implemented using the County's website to inform citizens about programming and activities available at the parks and trails, and posting updates on planning efforts underway for Future Park and trail improvement projects. Public comment and feedback is exchanged using the County's email system. Other public awareness initiatives are implemented via displays at the Washington County Fair, Washington County Service Centers, plus publishing articles in County Commissioner quarterly newsletters, and publishing advertisements in local and metropolitan area newspapers.

## **9. Special Needs**

Washington County carries out the following activities to provide access and recreational opportunities to persons with disabilities, minorities and other special population groups:

- Developing facilities in accordance with Americans with Disabilities Act standards and guidelines.
- Free Tuesday program—no vehicle entry permit required on the first Tuesday of the month.
- Offering fishing tackle at no cost to park visitors at Big Marine Park Reserve, Lake Elmo Park Reserve and St. Croix Bluffs Regional Park (Fishing in the Neighborhood Program)

## **10. Natural Resources**

The plan identifies the unique natural features that justified why this park is a park reserve, which limits recreational development to 20% of the land area in the park, with the remaining 80% managed to preserve the natural resources in that area. The master plan contains an analysis of the plant communities that grew in the park prior to European settlement in 1850. At that time, the vegetation was comprised of aspen-oak dominated forests with conifer bogs and swamps, wet prairies and open water lakes. The plan includes an inventory of current plant communities and wildlife species found in the park.

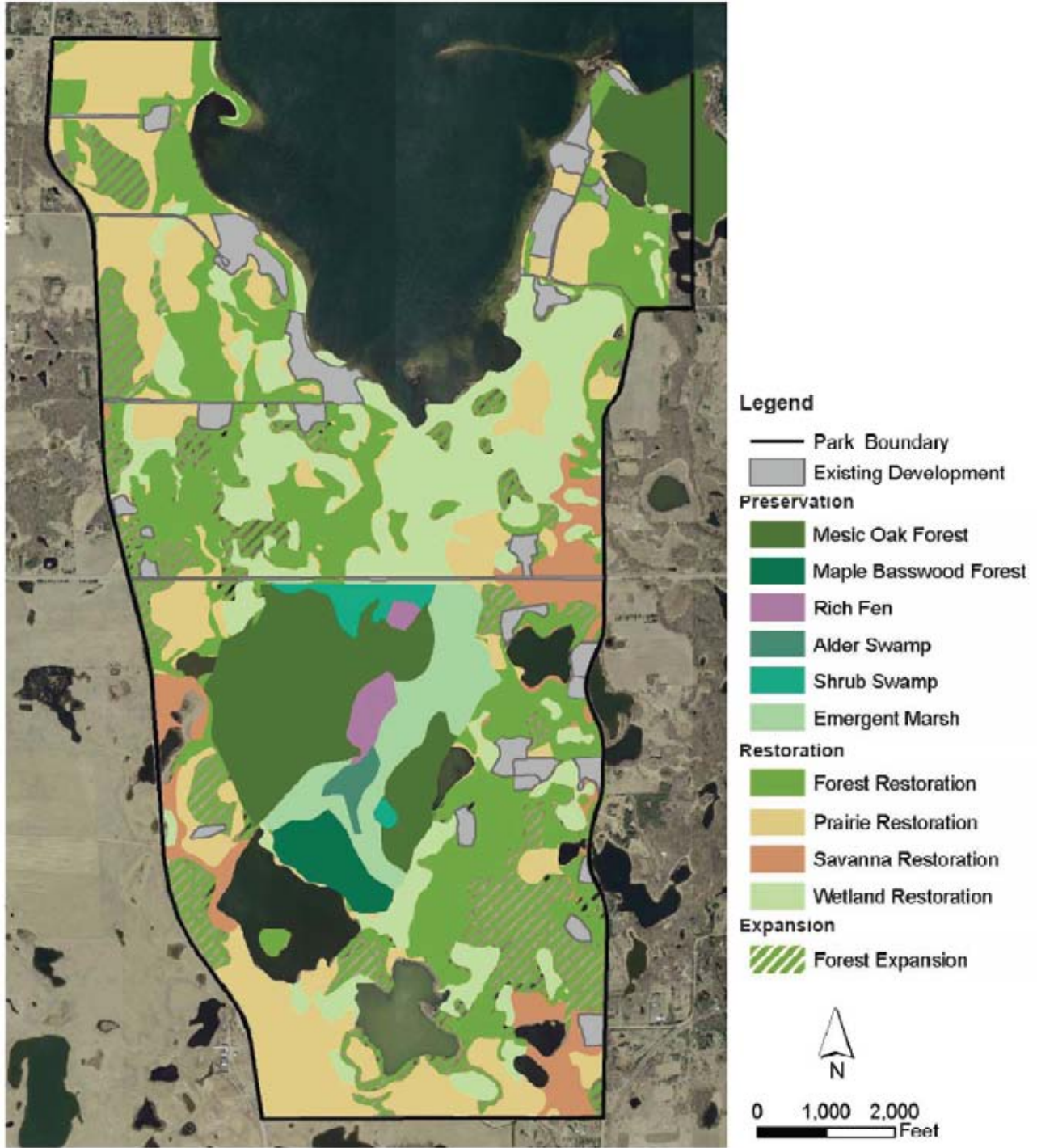
The plan contains a map and management techniques to:

1. Preserve existing high quality plant community areas defined by the Minnesota Biological Survey.
2. Restore degraded plant community areas
3. Expand particular forest communities in areas where they once grew using seed stock from adjacent trees

A map of the natural resources management plan is shown in **Figure 3: Big Marine Park Reserve Natural Resources Management Plan**

The recreational and visitor support facilities for the park were located to be sensitive to the natural resource management plan. There are 132 acres within the park classified as being impacted by existing or proposed development. This includes existing or proposed park/trail development as well as existing private development within the park. As private land is acquired, it will be assessed on an individual basis to determine the most appropriate type of natural resource restoration for that parcel.

Figure 3: Big Marine Park Reserve Natural Resources Management Plan



The estimated costs for natural resource restoration efforts ranges from \$1,875,000 to \$2,537,500. Details for these costs are shown in the following table:

**Big Marine Park Reserve Natural Resource Restoration Cost Estimates**

Cover Type	Acres	Cost per acre	Total Cost
Forest Communities	350	\$1,500 – 2,000	\$525,000- \$700,000
Upland Prairie	375	\$2,000 - 2,500	\$750,000 - \$937,500
Wetland Systems	300	\$1,500 – 2,000	\$450,000 - \$600,000
Savanna	100	\$1,500 – 3,000	\$150,000 - \$300,000
Total Area	1,125 acres		\$1,875,000 - \$2,537,500

The annual costs to maintain these restored areas as well as existing high quality areas ranges from \$192,500 to \$305,00 as detailed below:

**Big Marine Park Reserve Natural Resource Annual Maintenance Cost Estimates**

Cover Type	Acres	Cost per acre	Total Cost
Forest Communities	350	\$1,500 – 2,000	\$70,000 - \$105,000
Upland Prairie	375	\$2,000 - 2,500	\$37,500 - \$75,000
Wetland Systems	300	\$1,500 – 2,000	\$60,000 - \$90,000
Savanna	100	\$1,500 – 3,000	\$25,000 - \$35,000
Total Area	1,125 acres		\$192,500 - \$305,000

**REVIEW BY OTHER COUNCIL DIVISIONS:**

**Environmental Services** (Roger Janzig)—No impacts

**Environmental Services** (Jim Larsen) – No impacts

**Metropolitan Council Transportation** (Ann Braden)—No impacts

**CONCLUSIONS:**

1. The update to the Big Marine Park Reserve Master Plan (Referral No. 50003-1) is consistent with requirements of the *2030 Regional Parks Policy Plan*.
2. The estimated acquisition cost of \$21,311,400; capital improvement cost of \$8,826,875; and natural resource restoration costs between \$1,875,000 and \$2,537,000 are eligible for Metropolitan Council Regional Park Capital Improvement Program (CIP) consideration. Metropolitan Council approval of the master plan does not obligate future funding from the Regional Parks CIP to finance those costs. Plan approval only allows Washington County to seek funding for projects in the plan through the Regional Parks CIP.

**RECOMMENDATION:**

That the Metropolitan Council approve the update to the Big Marine Park Reserve Master Plan (Referral No. 50003-1).

## Appendix A: Big Marine Park Reserve Site Development Program Cost Projection

Implementation Cost Projections	Unit	Cost
<b>Modern Campground</b>		
Removals, Clearing And Grubbing		\$40,000.00
Grading/Storm Water Improvements		\$125,000.00
Entrance Drive, Parking Lot And Turn-Around	9276 Sy	\$185,000.00
Park Entrance Sign		\$25,000.00
Contact Station		\$175,000.00
Dump Station		\$15,000.00
Well And Septic		\$35,000.00
Trailer/Rv Campsites (35)		\$122,500.00
Car/Tent Campsites (42)		\$84,000.00
Vault Toilets		\$10,000.00
Restroom/Shower Facilities		\$500,000.00
8 foot Wide Nature Trail	5612 Lf	\$40,000.00
Overlook		\$15,000.00
Camper Cabins (7)		\$140,000.00
Picnic Shelter		\$50,000.00
Play Area		\$75,000.00
Dock		\$25,000.00
Canoe/Kayak Launch		\$12,000.00
Restoration And Buffers	5 Acres	\$35,000.00
<b>Total</b>		<b>\$1,858,500.00*</b>
<b>Group Camping Area</b>		
Removals, Clearing And Grubbing		\$15,000.00
Grading/Storm Water Improvements		\$45,000.00
Secondary Park Entrance Sign		\$15,000.00
Aggregate Entrance Drive/Parking Lot	4889 Sy	\$40,000.00
Vault Toilets		\$10,000.00
Kiosk		\$15,000.00
Furnishings And Signage		\$8,000.00
Restoration And Buffers	4.5 Acres	\$20,000.00
<b>Total</b>		<b>\$168,000.00*</b>
<b>Primitive Camping</b>		
Clearing And Grubbing		\$3,000.00
6 foot Wide Soft Surface Trail		\$9,000.00
Furnishings		\$10,000.00
Restoration And Buffers		\$3,500.00
<b>Total</b>		<b>\$25,500.00*</b>
<b>Paved Trail Loop System</b>		
Clearing And Grubbing		\$20,000.00
10 Foot Wide Bituminous Trail	49767 Lf	\$1,100,000.00
Trailside Amenities And Signage		\$30,000.00
Boardwalks		\$46,000.00
Restoration And Buffers		
<b>Total</b>		<b>\$1,196,000.00*</b>
<b>Pedestrian Underpass(es)</b>		
East Underpass		\$250,000.00
West Underpass		\$250,000.00
<b>Total</b>		<b>\$500,000.00*</b>
<b>Hiking Only Trail Loop</b>		
Clearing And Grubbing		\$12,000.00
6 foot Wide Soft Surface Trail	9536 Lf	\$68,000.00
Trailside Amenities And Signage		\$5,000.00
Boardwalk	280 Lf	\$80,000.00
<b>Total</b>		<b>\$165,000.00*</b>

<b>Archery Trail Loop</b>		
	<b>Unit</b>	<b>Cost</b>
Cleaning And Grubbing		\$5,000.00
6 foot Wide Soft Surface Trail	4090 Lf	\$30,000.00
Restoration And Buffers	.5 Acres	\$3,000.00
Targets And Signage		\$5,000.00
<b>Total</b>		<b>\$43,000.00*</b>
<b>Equestrian/Hiking Trail Loop</b>		
Cleaning And Grubbing		\$20,000.00
10 foot Wide Soft Surface Trail	4.9 Miles	\$235,000.00
Restoration And Buffers	3 Acres	\$10,500.00
<b>Total</b>		<b>\$265,500.00*</b>
<b>Special Use Facility</b>		
Removals, Clearing And Grubbing		
Grading		\$40,000.00
Entrance Drive, Parking Lot And Turn-Around		\$120,000.00
Retreat Facility		\$400,000.00
Well And Septic		\$35,000.00
Outdoor Gathering Patio		\$80,000.00
Demonstration Gardens		\$12,000.00
Outdoor Classroom		\$35,000.00
Overlook/Fishing Pier		\$10,000.00
Nature Trail		\$15,000.00
Restoration And Buffers	4 Acres	\$14,000.00
<b>Total</b>		<b>\$761,000.00*</b>
<b>Large Group Picnic Area</b>		
Removals, Clearing And Grubbing		\$10,000.00
Grading		\$70,000.00
Entrance Drive/Parking Lots	13200 Sy	\$265,000.00
Bituminous Trails	1710 Sy	\$35,000.00
Hilltop Shelter		\$150,000.00
Picnic Shelter		\$75,000.00
Play Area		\$75,000.00
Restroom Facility		\$200,000.00
Well		\$20,000.00
Connection To Existing Septic		\$15,000.00
Restoration/Wetland Buffer	20 Acres	\$70,000.00
<b>Total</b>		<b>\$985,000.00*</b>

<b>Trailhead Facility And Parking Area</b>	<b>Unit</b>	<b>Cost</b>
Removals, Clearing And Grubbing		\$10,000.00
Grading		\$35,000.00
Trail/Walk Connections	1030 Sy	\$21,000.00
Entrance Drive/Parking Lot	4637 Sy	\$95,000.00
Warming House		\$250,000.00
Furnishings		\$3,500.00
Kiosk		\$15,000.00
Vault Toilets		\$10,000.00
Equestrian Staging Facilities		\$8,000.00
<b>Total</b>		<b>\$447,500.00</b>
<b>Maintenance Facility</b>		
Removals, Clearing And Grubbing		\$10,000.00
Grading		\$30,000.00
Entrance Drive/Parking Lot/Concrete Walk		\$25,500.00
Gated Storage Yard		\$34,000.00
Office Building/Sheriffs' Remote Office		\$300,000.00
Well And Septic		\$35,000.00
Workshop/Heated Storage	1375 sf @ \$75/sf	\$105,000.00
Cold Storage Building	1375 sf @ \$60/sf	\$85,000.00
Aggregate Access Road To Trailhead		\$12,000.00
Restoration/Buffers	3 Acres	\$10,000.00
<b>Total</b>		<b>\$646,500.00</b>
<b>Subtotal</b>		<b>\$7,061,500.00</b>
Contingency, Design, And Administration (2.5%)		\$1,765,375.00
<b>Grand Total</b>		<b>\$8,826,875.00</b>