



**MONTGOMERY COUNTY DEPARTMENT OF PARKS**  
THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

Agenda Item No. \_\_\_\_\_

January 3, 2007

**MEMORANDUM**

**TO:** Montgomery County Planning Board

**VIA:** Mary Bradford, Director of Parks *MB*  
Michael F. Riley, Chief Park Development Division *MFR*  
Douglas Alexander, Project Management Supervisor *DA*

**FROM:** Doug Burton, Project Manager *DB*

**SUBJECT:** Facility Plan for Restoration and Improvements to the On-Site Sewer Line Serving Rock Creek Regional Park.

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**I. STAFF RECOMMENDATION**

- 1) Approve Facility Plan for the Restoration and Improvements of the existing On-Site Sewer Line serving Rock Creek Regional Park, including cost estimate.
- 2) Approve project for competition in the FY09-14 Capital Improvements Program, at which time the priority and schedule will be determined.

**II. PROJECT PURPOSE**

Due to the continued flooding problems at Lake Needwood and the high incidences of system failures, staff recommends improvements to the existing sewer system at Lake Needwood. The goal for this facility plan is to assess the current condition of the existing on-site sewer system at Lake Needwood and to recommend innovative, economical, and environmentally sensitive options for correcting any problems encountered during the field inspection.

Staff contracted with the consulting firm of URS Corporation to perform the work under the multi-disciplinary procurement contract with The Commission.

In mid October 2006, staff notified surrounding property owners and civic associations about the facility plan purpose and project recommendations. A pamphlet was mailed which comprehensively explains the process for

determining the recommended sewer alignment, invites comments, and provides notice of the Board meeting. To date, staff has not received comments from the surrounding community or from civic associations.

### **III. PREVIOUS PLANS AND PROGRAMMING**

#### **A. Rock Creek Regional Park Master Plan**

Rock Creek Regional Park consists of 1,810 acres, developed in the 1960s, and includes Lake Needwood, a 75-acre man-made impoundment located on the main Rock Creek stream, and the smaller Lake Bernard Frank located on the North Branch Tributary, both developed for lake-oriented recreation and flood control. In the Lake Needwood area of the Park, facilities include on the west side, the Needwood Golf Course and Needwood Mansion, and on the east side, Visitors Center and Boathouse, three picnic areas, with shelters, restrooms, and playgrounds, an archery range, hiking trails, and maintenance yard. Beach Drive connects these facilities on the east side of the lake (see Attachment A, Vicinity Map).

The October 2000 Rock Creek Master Plan includes a Utility Feasibility Study, which consists of a compilation of existing utility information for the Park and recommendations for improving the infrastructure for both the existing facilities and to accommodate future development of the Park. The purpose of the study was to establish the existing condition of sewer and water systems within the Park and to identify improvements required and cost to support the existing level of development, as well as for the future, master plan recommended level of development.

Of the many sewer and water deficiencies and recommended improvements identified in the Utility Study, the Master Plan recommended an upgrade of the utilities for the Maintenance Yard and Picnic Areas 2 and 3, located on the east side of Lake Needwood, as the priority for utility capital improvements in the Park (see Attachment B, Table III-4, Master Plan Recommendations / Priorities, from page 98 of the Plan). Of these, staff subsequently identified the sewer system to be the most in need of improvement.

#### **B. Existing Sewer System**

The existing on-site sewer system, which was built in the 1960s, serves the Visitors Center and three picnic area restrooms. The system consists of approximately 6,750 feet of gravity sewer, approximately 1,000 feet of force main, 34 manholes, and two ejector-pump stations. The restrooms and Visitors Center drain to a 36-inch WSSC sewer outfall at the south end of the Lake. The sewer connection consists of a 6 and 8-inch terra cotta gravity line, which in Picnic Areas 2 and 3, is in poor condition. Restroom 3 is connected to two holding tanks and is not connected to the sewer line. An aging main pump station serving these picnic areas is unreliable and is subject to infiltration. The Visitors

Center pumping station, with submersible effluent pumps and 2-inch force main, is in disrepair and is subject to Lake flooding.

Water service is supplied by a 6-inch and 4-inch dead-end feed from the WSSC distribution main located below the dam emergency spillway. Water service improvements were not included in the facility plan.

The Maintenance Yard is not connected to the sewer line and has its own septic system and drain field, which have inadequate capacity for any expansion. The facility plan includes a sewer connection to the Maintenance Yard. The Maintenance Yard is undergoing a separate facility plan, which will include sewer and water service.

#### **C. FY 07- 12 Capital Improvements Program**

The FY 05-10 CIP identifies this project in Facility Planning: Non-Local. The project is continued in the FY 07-12 CIP. Staff began the project in second half of the two-year CIP cycle (FY 06, or July 2005), with the intention of completing it in FY 07 and presenting it to the Board in time for consideration for its inclusion in the FY 09-14 CIP for design and construction. With this in mind, the project was begun on July 12, 2005.

### **IV. PROJECT DESCRIPTION**

#### **A. The Facility Plan Project was subdivided into three tasks:**

- Project Initiation Phase, including data gathering and reconnaissance
- Facility Planning Phase, including alternative designs, selection, permit issues, and cost
- Facility Plan Approval Phase, including community notice, staff approvals, and final report

#### **B. The Detailed Design Phase will follow Facility Planning if approved by the Board and will include the following tasks:**

- Detailed system design
- Natural Resource Inventory/Forest Stand Delineation and a Forest Conservation Plan, if required
- All applicable WSSC Reviews and Permits

#### **C. Facility Plan Project**

Facility plan alternatives were submitted to the staff PDCO committee for review and selection of the preferred alternative. A draft final plan was prepared and submitted for review by all pertinent M-NCPPC stakeholders. Following review by all M-NCPPC stakeholders, URS prepared a final draft plan, which was incorporated into the pamphlet mailed to surrounding property owners and civic

associations. In addition, URS prepared the final Facility Plan Report for presentation to the Board (see attached URS Report).

URS engineers conducted a thorough reconnaissance of the sewer system on two visits to Lake Needwood. The visits were conducted on August 10 and September 19, 2005. During these visits, URS engineers used the most current information provided by staff to attempt to correlate the various sewer system components and structures shown on the drawings with those structures found in the field.

Based on the review of the drawings, discussions with Lake Needwood personnel, and the site reconnaissance, URS assessed the various sections of the main line sewer system, including the major components and structures associated with the sewer system. Photographs were taken during the site reconnaissance and are referenced to the various system components described in the Report. The photographs are presented in Appendix A in the attached URS Report.

Appendix B of the Report contains summary notes of meetings with staff and Appendix C contains surveys of the sewer system.

From November 2005 through April 2006, URS conducted a Closed Circuit Television (CCTV) inspection of the primary sewer line (from Manhole 1 to Manhole 33) located in the three picnic areas. The CCTV inspection consisted of maneuvering a 6-foot long, self-propelled camera upstream and downstream from a specific manhole through straight, unclogged pipe sections. When a clog (due mainly to heavy root intrusion or a manhole bend) was encountered, the camera was extracted from the pipe and filming continued from the opposite direction in the same section of pipe. The camera was equipped with an internal measuring device, so that the distance the camera traveled upstream or downstream from one structure to another could be accurately measured and recorded. The images recorded by the camera were televised simultaneously as they were filmed and were later copied onto a DVD as a permanent record of the CCTV survey. A complete summary of the CCTV inspection, including the Manhole Inspection Report, is presented in Appendix D of the attached URS Report.

Appendix E of the Report describes the design alternatives considered, and Appendices F and G provide guidelines, specifications, and other technical material.

## **V. SEWER SYSTEM**

### **A. Primary Associated Structures:**

Lake Needwood has five structures associated with the primary sewer line system:

Visitors Center and Boathouse

Restroom No. 1

Restroom No. 2

Restroom No. 3

Main Pump Station

In addition, the park's Maintenance Yard, which is located 1,200 feet north of Picnic Area 3, has its own septic system, which consists of a holding tank and drain field that is not connected to the primary sewer line. This tank is pumped out approximately every two years.

Visitors Center and Boathouse. Sewage from the Visitors Center and Boathouse drains to an antiquated septic tank and sump equipped with a grinder pump. The sump was built in the 1960s and is in disrepair, constantly filling with groundwater infiltrating through cracks in its walls. It often overflows onto the surrounding ground during the summer months, when the park demand is high. Sewage is pumped from the sump via a 2-inch PVC line to Manhole 14, where it then flows by gravity downstream through the system. Contractors use vacuum trucks to pump the solids out of the sump on a routine basis.

Restroom 1. Sewage from Restroom 1 drains to a septic tank, which stores the solids and drains liquids via a 4-inch pipe to Manhole 14. A contractor pumps out this tank on a biennial basis. From Manhole 14, the liquids flow by gravity downstream through the system to the junction with the WSSC sewer line. This portion of the sewage system is considered to be in fair to good condition.

Restroom 2. Sewage from Restroom 2 drains to a 1,500-gallon septic tank, which is used to store solids. The tank is only approximately 3 or 4 years old, and is pumped out annually by a contractor. Liquids from this tank drain down a steep slope via a 4-inch pipe to Manhole 17. According to the CCTV inspection, the condition of this pipe is very poor. From Manhole 17, the liquids flow by gravity downstream to Manhole 15A and into the main pump station. This pipe segment is in poor to fair condition.

Restroom 3. Restroom 3 was built in 1999 to replace the two small bathhouses at Picnic Area 3 that were torn down. It was at that time the primary sewer line was abandoned from Manhole 33 to Manhole 17. Sewage from Restroom 3 drains to a pair of septic holding tanks near the parking lot for Picnic Area 3. The tanks are not connected to the primary sewer line, so they must store all of the solids and liquids from Restroom 3 until pumped out by a Park contractor. Two 3-inch PVC pump-out pipes rising above the ground surface are located next to the tanks' entrance manholes. These two tanks are sometimes pumped out as frequently as every two weeks during busy summer months.

Main Pump Station. The Main Pump Station, located between Manholes 15A and Manhole 14, was built in the 1960s and is in poor operating condition. The Main Pump Station contains two large, old grinder pumps that are controlled by level floats. One of these pumps was likely installed when the pump station was constructed. The pumps are 3-phase with 4-inch diameter outlets.

The depth of the concrete sump is approximately 18 feet from ground elevation. The pumps are located at the bottom of the sump, and a platform is located 8 feet below the pump station lid at grade.

Reportedly, the pumps routinely cease operating for no apparent reason, causing maintenance problems for Park personnel.

The pump station floods when the lake level rises above the elevation of the manhole lid (approximately two times a year), and when this occurs, the pump station runs for extended periods of time.

When the pump station has clogged in the past, several manholes upstream from it have overflowed onto the surrounding ground surface. The pump requires resetting several times each month.

## **B. Sewer Pipe Condition**

From Manhole 1 upstream to Manhole 14, the pipe was filmed and the condition found to be good. For the 6-inch force main between the pump station and Manhole 14, only 170 feet of pipe could be televised upstream of Manhole 14 before a bend greater than 22 degrees prevented the camera from advancing any farther. The camera could not be inserted in the pump station due to the permanent pump connections, and thus the 6-inch pipeline was not televised from the pump station downstream. The sections of pipe between the main pump station and Manhole 17 upstream were filmed and found to be in poor to fair condition. Due to roots and severe clogs in the sewer pipeline between Manhole 17 and Manhole 30, only partial segments of pipe could be televised between those two manholes during the initial attempt in November 2005.

During the week of April 24, 2006, URS completed the CCTV work of the sanitary sewer line for those segments that were clogged and could not be televised during the earlier effort. Prior to undertaking the CCTV work, URS' subcontractor, Video Pipe Services, cleaned approximately 3,860 linear feet of 6- and 8-inch sewer pipe that was clogged with heavy roots, root balls, and debris. Subsequent to the pipe cleaning, URS televised the remaining segments of sewer pipe, with several exceptions as noted in the URS Report, due to sharp bends, lack of adequate access, or blockages.

All other segments from Manhole 29 to Manhole 17 were cleaned and televised. The pipe is deemed to be in poor condition with many penetrations of the pipeline by heavy roots and several pipe joint separations noted.

## **C. Summary of Deficiencies in the Existing System:**

Based on the information that URS obtained during the site investigation and CCTV inspection related to the existing conditions of the Park's sewer system, the following is a summary of the deficiencies:

The sewage holding sump and pump station located at the Visitors Center and Boathouse is in disrepair and floods routinely, creating substantial maintenance problems for Park personnel.

The main pump station often fills with groundwater or lake water when the lake level rises during flood stage.

The two pumps and liquid level switches in the main pump station are unreliable.

The discharge pipeline from the Bathhouse 2 septic holding tank is in poor condition.

The primary sewer pipeline from Manhole 29 to Manhole 17 is in poor condition.

The "siphon" line from Manhole 30 to Manhole 29 is in extremely poor condition and will always be subject to acute maintenance issues.

The two septic holding tanks associated with Restroom 3 do not have liquid outlet drains, and thus a significant amount of maintenance is required to sustain the capacity of the tanks.

The Maintenance Yard at the far north end of the park has its own septic system separate from the rest of the main sewer line, which is not sufficiently sized to accommodate future expansion (as noted above, the Maintenance Yard is the subject of a separate facility plan).

#### **D. Environmental Issues:**

The proposed renovations to the existing sewer mains require a balance between the need to protect the existing environmental resources and a need to provide a well designed and easily maintainable sewer system. The most obvious resource is Lake Needwood. Other important natural resources that require protection include the forest, specimen trees, wetlands, steep slopes and erodible soils. Each of the alternative designs considered were assessed for environmental impacts. Although, in part, the recommended alternative is based on cost, the primary reason for the recommended alternative for constructing a new sewer line, is based on the fact that relocating the pipeline adjacent to Beach Drive minimizes the loss of trees. It also places the new line at least 100 feet farther from Lake Needwood, thus minimizing potential impacts from adjacency to lake water and flooding.

#### **E. Design and Construction Permitting:**

In order to construct a retrofitted or new sewer line in the Park under any of the three alternatives, M-NCPPC will need to contact WSSC to obtain permits for the sewer line work. WSSC is the controlling permitting authority for this project. Because all of the alternatives involve the construction of various new segments of sewer pipeline, M-NCPPC must submit design plans to WSSC as part of the "Onsite Plan Review" process. This is a streamlined review and approval process for simple, uncomplicated sewer replacement projects, and WSSC estimates that it can take from 3 to 4 months to obtain permits through this process. In addition, M-NCPPC must make a separate submittal of the design plans, which must contain erosion and sediment control plans, to the WSSC Environmental Group. This group will issue a separate "Sediment and Erosion Control Permit" to M-NCPPC at the pre-construction site meeting. It is not anticipated that any additional permits will be required for disturbance of wetland areas.

The Environmental Planning staff has reviewed the Facility Plan referenced above (see Exhibit C, Environmental Planning Staff memo). Staff recommends approval of the plan with the following condition:

A Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) must be submitted at the time the selected alternative progresses to a detailed design process within M-NCPPC. The NRI/FSD will determine whether the project may be exempt from the requirement for a full forest conservation plan.

## **VI. RECOMMENDATIONS**

### **A. Alternative Designs**

Based on the investigation of the existing conditions of the Lake Needwood sewer system, and the resulting deficiencies, the following three design alternatives are proposed. The alternatives address the system deficiencies and provide the necessary upgrades to the system to meet present and future demands. The three alternatives and associated construction only cost are as follows:

- Alternative 1: replacing the existing system with a new pipe alignment upstream of Manhole 14 - \$834,825,
- Alternative 2: replacing the existing system along its original alignment upstream of Manhole 14 to Manhole 28 - \$1,004,692
- Alternative 3: rehabilitating the existing sewer system along the original alignment upstream of Manhole 14 to Manhole 28 - \$734,391

Based on the site investigation, URS believes that the 8-inch sewer pipeline downstream from Manhole 14 to the junction with the WSSC system is in fair to good condition; therefore, no recommendation has been made for upgrading this segment of the system.

The following system upgrades are common to all three alternatives, and thus, URS recommends that they be incorporated into each of the three design alternatives:

- Connect the Maintenance Yard north of the existing sewer system.
- The section of the sewer line between Manhole 30 and Manhole 29 was originally intended to function as a siphon line, but has since been abandoned and has subsequently filled with sediment, gravel, and root debris. This section of the existing line, along with the section running upstream to Manhole 33, should be totally abandoned and filled with fly ash and concrete.
- Retrofit the septic tanks currently collecting and holding all waste from Restroom 3 with a drain line that will allow fluids to drain by gravity into the proposed sewer line replacement system extending upstream to the Maintenance Yard.



- Due to its extreme deficiencies, replace the pump station serving the Boathouse and Visitors Center, and 375 feet of 2-inch PVC pressure sewer that connects the pump station with Manhole 14.
- Install new pump and lift stations powered by 3-phase direct buried cable running from two existing Pepco vaults: one near the Maintenance Yard, the other adjacent to the Boathouse.
- Excavate and repair cracks, joint offsets, root penetration, and infiltration at pipe joints with galvanized steel collars and stainless steel bands at 28 locations in the pipeline downstream of Manhole 14.

## **B. Recommended Alternative 1: Replace Existing System with New Alignment**

Design Alternative 1 consists of relocating the existing sanitary sewer system alignment upstream of Manhole 14, as shown in Drawing D-1 in Appendix E of the URS Report, and extending the system to the Maintenance Yard. Alternative 1 consists of a new gravity and pressure PVC sewer line that connects to Manhole 14, and runs upstream along Beach Drive north to the Maintenance Yard. As shown in Drawing D-1, Alternative 1 consists of 16 new 4-foot diameter manholes along the new alignment, including 3 lift station manholes, 3 transition manholes, and 10 standard manholes. Alternative 1 also includes a new pump station at Restroom 2 that will pump liquids leaving the septic tank into the new main sewer line.

The pump station at the Boathouse and Visitors Center will be replaced and the septic tanks from Restroom 3 will be tied into the new main sewer line. Alternative 1 consists of approximately 3,330 feet of 8-, 6-, and 4-inch PVC gravity sewer line and 2,520 feet of 4- and 2-inch PVC pressure sewer line (this includes the connections from the two septic tanks for Restroom 3, the septic tank for Restroom 2, and the septic tank for the Visitors Center and Boathouse).

No pump station manhole is required at the septic tanks holding solids from Restroom 3. Alternative 1 includes replacing Manhole 14 with an approved WSSC transition manhole, if necessary.

The new alignment proposed in Alternative 1 crosses Beach Drive in several places, Needwood Lake Drive in two places, and runs directly through the parking lot for the Picnic Area and Restroom 3. Approximately 750 linear feet of asphalt pavement will need to be replaced along the new alignment, also including sections of pavement between the Visitors Center and Boathouse, and the junction point of the old and new alignment at Manhole 14.

In constructing the new alignment, the contractor must avoid removing any trees in wooded areas larger than 4-inches in diameter. The proposed new alignment travels as closely to the road and as far away from forested areas as possible.

Alternative 1 includes abandoning all sections of the existing sanitary sewer main line from Manhole 14 upstream to Manhole 33. This involves filling approximately 4,010 feet with fly ash and concrete. Along this section of the line,

at least 19 manholes and the main pump station must also be abandoned and filled with fly ash and concrete.

### C. Overall Recommendation

Alternative 1 provides the best long-term solution for the Lake Needwood sewer renovation. The costs for Alternative 1 and 3 are fairly comparable, but Alternative 1 offers a new, streamlined sewer system from the Maintenance Yard downstream to Manhole 14, and includes flows from Restrooms at Picnic Areas 2 and 3. The new sewer system would be constructed close to Beach Drive, and would therefore provide the most convenient access to the system for future maintenance.

Because the only flows to Manhole 14 emanate from the Maintenance Yard and from Restrooms 2 and 3, installation of new, smaller lift stations in this new sewer line adjacent to Beach Drive would be more cost effective than overhauling and maintaining the existing main pump station downstream of Manhole 15A. The new sewer alignment would also move the sewer conveyance system much farther away from the Lake, thus minimizing potential environmental impacts to the lake.

Under this design alternative, connection of Restroom 3 holding tanks to the new main sewer line and replacement of the pump station at the Visitors Center will also substantially reduce the future maintenance requirements for the Park.

## VII. PROJECT COST

Rehabilitation of existing sewer lines from Manhole 1 to Manhole 14 and the replacement of existing sewer lines from Manhole 14 upstream to the Maintenance Yard.

### SUMMARY OF COST FOR ROCK CREEK REGIONAL PARK

Construction Costs *	\$ 834,825
Construction Contingency 30%	\$ 250,448
<b>TOTAL CONSTRUCTION COST</b>	<b>\$1,085,273</b>
System Design 8%	\$ 108,527
Design Contingency 15%	\$ 16,279
Design Chargebacks 15%	\$ 16,279
Construction Chargebacks 5%	\$ 54,264
<b>TOTAL DESIGN COST</b>	<b>\$ 195,349</b>
<b>TOTAL PROJECT COST</b>	<b>\$1,280,622</b>

\* 2006 dollars

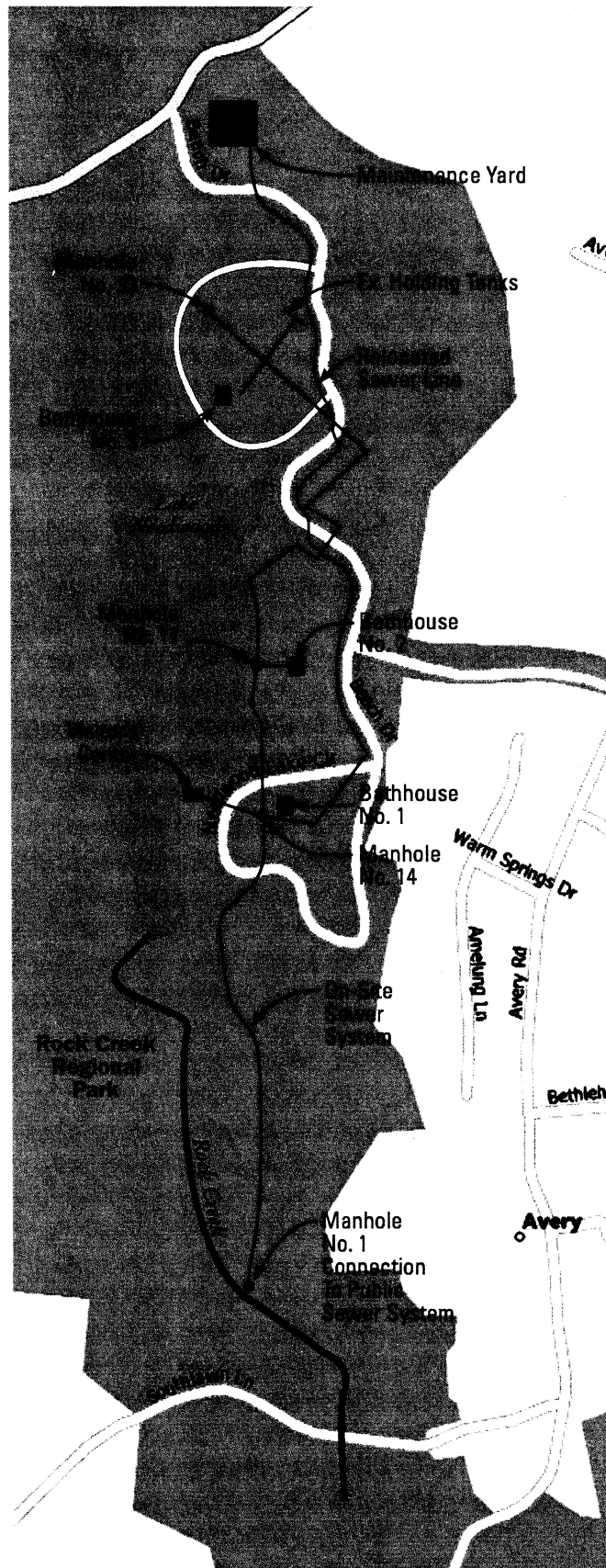
## **VIII. ATTACHMENTS**

**Attachment A – Vicinity Map**

**Attachment B – Master Plan Table III 4**

**Attachment C – M-NCPPC Environmental Planning Memo**

**Attachment D – URS Facility Plan Report**



**Lake Needwood Vicinity Map**

## ROCK CREEK REGIONAL PARK MASTER PLAN

**III. MASTER PLAN FOR RECREATIONAL DEVELOPMENT IN ROCK CREEK PARK**

Table III-4: Master Plan Recommendations / Priorities

Priority	Location - Description	Number	Cost (2)
1 (see note 1)	Dam Service Road	9.g.	\$ 28,900.
2	Expand Maintenance Complex	9.e.	\$ 1,420,600.
	Upgrade utilities for maintenance yard and picnic areas 2 and 3	9.d.	(3)
3	Picnic Area 2 – Visitor Information Pavilion with parking area, Beach Drive roadway realignment and pave/expand existing gravel parking lot	2.b. & 2.c.	\$ 298,300.
	Close off Needwood Road-Beach Drive entrance and add vehicular turnaround after Picnic Area 3	9.b.	\$ 85,650.
4	Picnic Area 3 – Replace 1/8 mile retaining wall		(4)
5	Picnic Area 2 – Access Control Station and upgrade landscaping	2.a. & 2.d.	\$ 48,750.
	Picnic Area 2 – Adventure Playground and Accessible tot lot	2.f., 2.g., 2.h	\$ 312,000.
6	Lake Needwood - Visitor Center / Boat House Renovation	4.a.	\$ 493,935.
7	Meadowside – Renovate Nature Center	7.a	(4)
8	Hard Surface Trail - West of Lake Needwood	6.	(5)
	Lake Needwood - Provide trail head/picnic/parking /restrooms and playground area	4.b.	\$ 768,300.
9	Hard Surface Trail - Lake Needwood to Lake Frank Connector	6.d.	(5)
	Switchback from Avery Road Parking Lot	6.h.	(5)
10	Natural Surface Trail – East of Lake Frank	6.	(5)
	Natural Surface Trail – From Lake Frank to Gude Recreational Park	6.	(5)
11	Lake Needwood - Provide accessible pier and access path	4.c.	(6)
12	Picnic Area 3 – Add accessible tot lot and ADA compliant paths	3.c. & 3.d.	\$ 95,745.
13	Lake Frank – Provide stationary accessible lookout	5.a.	(6)
	Remove old asphalt from parking lot and repave 10' corridor, and add handicapped parking spaces inside the park at Trailway Drive entrance		(5)
14	Lake Needwood - Provide stationary fishing piers and access and stabilize pathway around east side	4.d.	(6)
15	Picnic Areas 1, 2, & 3 - Restore and stabilize eroded areas	1.d., 2.i. & 3.e.	(7)
16	Picnic Area 1, 2 & 3 - Replace four (4), six (6) and six (6) picnic shelters respectively	1.a., 2.e. & 3.a.	\$ 624,000.
17	Meadowside – Add ADA interpretive trail and stabilize existing trails	7.b. & d.	(5)
18	Signage Program	9.c.	(8)
19	Picnic Areas 1 and 3 - Replace small play area and complete accessible paths to Picnic Area 1.	1.b & 1.c.	\$ 108,745.
20	Lake Needwood - Provide terraced lookout decks and pier	4.e.	(6)
21	Lake Frank – Provide stationary fishing piers and access	5.b.	(6)
22	Beach Drive Bike Lane Improvements	6.	(5)
23	Hard Surface Trail - East of Lake Frank	6.	(5)
24	Natural Surface Trail – Gude Park to Lake Needwood and up Rock Creek below Muncaster Mill Road.	6.	(5)
25	Meadowside - Re-pave parking area	7.c.	\$ 94,380.
	Needwood Mansion - Pave Parking Lot	9.h.	\$ 35,250.
26	Hard Surface Trail - Gude Recreational Park Connector	6.	(5)

**MEMORANDUM**

**TO:** Douglas Burton, Park Development Division

**VIA:** Mary Dolan, Environmental Planning

**FROM:** Michael Zamore, Environmental Planning

**DATE:** July 6, 2006

**SUBJECT:** Facility Plan for Restoration and Improvements to On-site Sewer Line Serving Rock Creek Regional Park, Lake Needwood.

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The Environmental Planning staff has reviewed the facility plan referenced above. Staff recommends **approval** of the plan with the following condition:

1. Applicant to submit a Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) at time the selected alternative progresses to a detailed design process within the M-NCPPC. The NRI/FSD will determine whether the project may be exempt from the requirement for a full forest conservation plan.

**Discussion**

The Park Development Division (PDD) of the Montgomery County Department of Park and Planning proposes to replace the existing sewer system at Lake Needwood. Design Alternative 1 is the preferred option of the three alternatives being considered. PDD has submitted conceptual drawings of the preferred alignment for Design Alternative 1. This alignment runs mainly along established roadways (Beech Drive, Lake Needwood Drive) and through the parking lot for the Picnic Area and Boathouse No. 3. Except for small sections it keeps away from forested areas and the consultants have been instructed to avoid removing trees larger than 4 inches in diameter. Environmental Planning staff supports the selection of this alignment as it potentially creates the least environmental impact. We recommend that it be selected for further detailed design.

**Environmental Guidelines**

The existing sewer alignment runs in part, along the shoreline of Lake Needwood. There are concerns of possible leakage into the lake environment during flooding or periods of

heavy rain. The preferred option includes abandoning all sections of the existing sewer main line upstream of Manhole No. 14, and filling with fly ash and concrete, several manholes and the main pump station.

### **Forest Conservation – Chapter 22A**

The project must submit an NRI/FSD for review by Environmental Planning staff when the selected alternative progresses to a detailed design process within the M-NCPPC. The NRI/FSD will determine whether the project is exempt from preparing a full forest conservation plan. The project could qualify for a “modification to existing developed property” exemption per Section 22A-5(t) of the Forest Conservation Law if it does not remove more than a total of 5,000 square feet of forest or affect any forest in a stream buffer. PDD should consider tunneling portions of the sewer alignment (especially the connection to the new pump station at Bathhouse No. 2 and the alignment south of Bathhouse No. 1) to reduce the project footprint and minimize forest impacts. Given the proximity of specimen and significant trees to the sewer alignment the project may be subject to a Tree Save Plan even though it qualified for an exemption from forest conservation.

### **Sediment Control**

The Washington Suburban Sanitary Commission (WSSC) will handle the project's sediment control permitting requirements.