

## MEMORANDUM

**To:** MCWD Board of Managers  
**From:** Laura Domyancich  
**Date:** November 13, 2014  
**Re:** 2014 Fall Operation & Maintenance Program—Vegetation Update

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### Introduction

This report will provide an update on the District's Operation & Maintenance (O&M) Department vegetation management activities in the fall of 2014 including work on capital projects that are in warranty phase, as well as past capital projects and their associated maintenance activities. The next update will occur in May of 2015. If there are questions regarding any elements of this report, please contact Laura Domyancich at (952) 641-4582 / [Ldomyancich@minnehahacreek.org](mailto:Ldomyancich@minnehahacreek.org) or Tiffany Schaufler at (952) 641-4513 / [Tschaufler@minnehahacreek.org](mailto:Tschaufler@minnehahacreek.org).

The O&M Department (Laura Domyancich and Tiffany Schaufler) are responsible for:

- Overseeing installation and management of vegetation components for 26 current capital project sites
- Managing contracted vegetation maintenance at 20 past capital project sites
- Inspecting 50+ District projects and 25+ lands to identify maintenance needs
- Operating the Grays Bay Dam
- Managing the inspection and contracted maintenance of 25 stormwater ponds
- Coordinating restoration work on District properties and easements
- Managing demolition projects on District properties
- Developing management plans for District properties
- Monitoring water levels, water quality, and vegetation establishment as needed for capital project permit requirements

### O&M Department Objectives

The O&M department oversees the District's land management and vegetation restoration activities. Staff focuses on satisfying Board directives including the development of management plans for District

lands and a long-term maintenance Capital Improvement Plan, enhancing land management policies, and working more closely with planning staff on initial project development.

## 2014 Flood Response

MCWD has contracted with Wenck Associates to develop a 2014 Flood Report, which will include information gathered during a main stem stream assessment of the District's six major creeks conducted by Wenck and O&M staff in September and October 2014. O&M staff also inspected all District projects and infrastructure to identify damage. The O&M Department continues to coordinate with FEMA and other involved agencies to use this gathered information to submit damage assessment documentation to FEMA for potential federal and state financial disaster assistance. FEMA reporting was due on Friday, November 7, O&M Staff will be providing a review of the 2014 flood damage,



*Obstruction on Painter Creek, October 16*



*Obstruction on Minnehaha Creek, October 13*

proposed repairs, and FEMA process on Thursday, November 13, and a final flood report will be presented to the Board in December 2014.

Flood repair response to date has included coordinating contractors to remove flow-obstructing woody debris from Minnehaha Creek and Painter Creek, cover crop hydro-seeding of the Reach 14 project on Minnehaha Creek, and completing an adjusted planting and seeding plan for the Reach 20 project.

## Additional 2014 Fall Inspections

An additional late-season inspection was performed for sites with heightened sensitivity to high water conditions, including sites with newly establishing vegetation or sites prone to debris accumulation. Overall, newly vegetated sites performed well under high water. The Steiger Wetland restoration had an abundance of arrowhead, blue vervain, and swamp milkweed. These wetland sites that serve to receive stormwater runoff functioned very well under prolonged high water conditions. These inspections also revealed that several inlets to stormwater ponds required clearing to allow water flow freely. These inspections, and the associated maintenance completed, provide the assurance that sites will be prepared to handle snowmelt and stormwater runoff in the spring.



*Above and below: Steiger Wetland, September 22*



Many trees throughout the watershed were stressed during high water conditions. Trees near the Nokomis stormwater ponds did not survive prolonged inundation and are marked for removal. However, some upland areas near the Nokomis stormwater ponds, that were historically wetlands, re-vegetated to typical wetland species after spending much of the growing season inundated. It is likely that a wetland seed bank is present in the areas around the stormwater ponds and the seed bank germinated under saturated soil conditions this summer.



*Nokomis Gateway (L) and Nokomis Amelia (R), November 6*

## Capital Projects in Warranty Phase

### Minnehaha Creek Reach 20 Restoration

- **Constructed:** 2013-2014
- **Summary:** Following recession of high water conditions, work continued on the bituminous trail sections. O&M staff is working with the vegetation contractor to adjust planting locations and quantities with a better understanding of moisture gradients across the site. Staff is currently working on the monitoring plan to guide US Army Corps of Engineers' permit required monitoring.
- **Maintenance:** The vegetation contractor continued to manage herbaceous invasive species on the site in response to flood disturbance during the growing season and in preparation for installation of plant material this fall.



*Reach 20, November 7*

### Steiger Lake Wetland Restoration

- **Constructed:** 2013
- **Summary:** Vegetation across the site performed very well given the prolonged inundation of the growing season. The original seed mix included species with a wide moisture tolerance, which germinated and flowered this growing season. This fall, the site had abundant blue vervain, swamp milkweed, monkey flower, and boneset.
- **Maintenance:** Hybrid cattail and reed canary grass were aggressively managed in the latter half of the growing season. This approach was taken to ensure that invasion by these species would be diminished and establishment of native species would be supported. Once native plants are able to become dominant and produce seed, these species will be able to outcompete persistent invasive species.



*Steiger Wetland, September 22*

### Minnehaha Creek Reach 14 Restoration

- **Constructed:** 2013
- **Summary:** Due to prolonged inundation of the 16 streambank restorations in 2014, sites were significantly damaged due to high water conditions, and seed and plant material installed in 2013 was considered a total loss. As water levels dropped on Minnehaha Creek, many streambanks were dominated by bare ground, though installed erosion control materials were in place. The vegetation contractor managed invading weeds on the sites as conditions allowed throughout the growing season. In order to provide some cover for erosion control and prevention against weed invasion in these highly disturbed areas, a cover crop of winter wheat, fowl bluegrass, Virginia wild rye, and lake sedge was hydroseeded into the sites on October 28. The vegetation contractor will be growing 2200 replacement plants over the winter of 2014-15 for planting in late spring 2015.



*Above and below, Reach 14 Hydroseeding, November 6*



### **Six Mile Marsh Prairie Restoration**

- **Constructed:** 2013
- **Summary:** All of the vegetation communities have been seeded. A complete site inspection with the project designer and contractor at the end of August revealed that the site is establishing very nicely and on schedule.
- **Maintenance:** This project is in its second year of a three-year vegetation management and establishment period. Spot mowing and spot spraying took place throughout the fall and targeted hybrid cattail, reed canary grass, and buckthorn seedlings.



*Staff Tour at the Six Mile Marsh Prairie Restoration, Nov. 4*

## **Maintenance of Past Capital Projects**

### **County Road 26 Painter Creek Re-meander/ Wetland Restoration**

- **Constructed:** 2008
- **Summary:** Project included excavation of a new channel meander to direct flow across a wetland to improve nutrient removal of the system, installation of a new weir to direct low flow through the new channel meander, and vegetation restoration.
- **Maintenance:** As water levels receded across the site, the vegetation contractor was able to complete necessary mowing and herbicide application to manage hybrid cattail and reed canary grass.

### **301 Rolling Hills Drive (Johnson) Wetland Restoration**

- **Constructed:** 2008
- **Summary:** This project included the conversion of approximately 20 acres of crop and pasture land to prairie vegetation, restoration of three wetlands, a vegetated treatment wetland basin, installation of a berm and control structure for water level manipulation, and woodland plantings.
- **Maintenance:** Mowing and spot sprays for invasive species throughout the 2014 growing season were completed following the recession of high water conditions. A hedgerow of buckthorn on the north property line was also cut and stump-treated this fall.

### **10 Site Vegetation Management Contract**

- **Summary:** At the end of April, the District entered into a two-year contract with Wetland Habitat Restorations (WHR) to carryout vegetation management at the following 10 sites: Nokomis ponds (Gateway, Amelia, Knoll), SW Calhoun pond, Cedar Meadows, Twin Lakes Park pond, Minnehaha Creek Headwaters shoreline, Long Lake ponds and shoreline, Independence Wetland, and Gideon Glen.
- **Maintenance:** Selective mowing and herbicide applications continued throughout the end of the 2014 growing season to control annual and perennial weeds at all ten sites. Work at several sites was delayed due to extended high water conditions, but WHR made significant progress as water levels decreased. Some native plantings at the Nokomis stormwater ponds, Southwest Calhoun Ponds, and Cedar Meadows were damaged by high water conditions. O&M staff met with Minneapolis Park Board staff to plan repair work to sites with vegetation loss. Some replanting will be necessary at Amelia and Gateway Ponds. Many trees are marked for removal by MPRB staff near the Nokomis Ponds as they did not survive the prolonged soil saturation this year. Independence Wetland is functioning well with annual weeds, reed canary grass, and volunteer willows being managed. Tamarack trees planted as part of the original wetland at Independence Wetland performed well during high water. The Headwaters Shoreline, Long Lake Shoreline, and Gideon Glen sites have excellent native cover despite spring and summer flooding.



*Gideon Glen, September 16*