



## Operation & Maintenance Program—Summer Vegetation Update

### Introduction

This report will provide an update on the District's Operation & Maintenance (O&M) Department activities in the summer of 2014 including work completed 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 December 2014. 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

The O&M department continues to respond to damage caused by high water conditions throughout the District by:

- Identifying sites damaged by sustained high water and coordinating appropriate repair work
- Communicating known areas of concern to local municipalities and property owners
- Managing flood damage assessments of District lands and submitting documentation to Hennepin County Emergency Management and the Federal Emergency Management Agency (FEMA) for federal and state funding assistance for the declared disaster. Within the next two weeks, O&M staff will be meeting with a representative from FEMA for a kick-off meeting during which FEMA will review flood damaged areas and determine which repair work is eligible for federal and state assistance.

## 2014 Fall Inspections



Regional ponds, shoreline stabilizations, wetland restorations and other project sites and District facilities are typically inspected in the spring and fall of every year. O&M Department staff began fall inspections on September 8<sup>th</sup> and will inspect 40+ sites that may have sustained damage due to high water conditions. With lower water levels, staff are able to access these projects and determine if erosion, bank cutting, or plant die-off has occurred and coordinate appropriate repair work. Remaining sites that are less sensitive to high water damage will be inspected following this initial inspection effort. Over the last month, action has already been taken to abate or restore flood damage at some sites. Staff has also worked with property owners and municipalities along Minnehaha Creek to remove debris and fallen trees that have caused obstructions.



*Minnehaha Creek, August 8 and August 21*

## Capital Projects in Warranty Phase

### Minnehaha Creek Reach 20 Restoration

- **Constructed:** 2013-2014
- **Summary:** The boardwalk portion of the trail system reached substantial completion in early June 2014, and the bituminous trail system is being constructed as conditions permit. The second phase vegetation restoration began with buckthorn removal in areas that provide view sheds of Minnehaha Creek from the trails. Additional tree and shrub enhancement plantings will be installed this fall. Locations of plants chosen for the site have been revised in response to a new understanding of where water tends to pool on site and areas that better support upland vegetation. Staff is currently developing a monitoring plan to guide US Army Corps of Engineers' permit required monitoring.
- **Maintenance:** Maintenance in 2014 included mowing of annual weeds and spot spraying for invasive species. Buckthorn resprouts and seedlings were also treated. Cattail management has included herbicide treatment of plants in prescribed management areas. The stormwater pond south of Excelsior has been spot mowed to control invasives and promote the establishment of seeded native species.



*Reach 20, August 19*

### Steiger Lake Wetland Restoration

- **Constructed:** 2013
- **Summary:** Inspections revealed that the tree and shrub plantings are handling the high water well. Native cover crop seed germinated well and was establishing, but showed signs of decline due to inundation. Native perennial seed germinated and will continue to establish next growing season.
- **Maintenance:** The cover crop was mowed in some areas to promote more diverse growth. Invasive species have been mowed, spot-sprayed, or hand-pulled as appropriate. Cattails around the perimeter were hand-wicked to slow encroachment. This management of cattails, as well as reed canary grass, was based on a decision to aggressively manage invasive wetland plants in hopes of limiting competition by these species and promoting better native plant establishment. A small island in a pond adjacent to the site was mowed to prevent reed canary grass and Canada thistle seed entering the wetland.



*Steiger Wetland, July 9*

### Minnehaha Creek Reach 14 Restoration

- **Constructed:** 2013
- **Summary:** Construction of 16 residential stream buffers between W. 54<sup>th</sup> Street and France Avenue in Edina was completed in November 2013.
- **Maintenance:** The three year vegetation maintenance and establishment period began in mid-May. Maintenance has included mowing, spot spraying, and hand-pulling of invasive species. Site inspections during high water have revealed the need for repair and replanting on many of the restoration sites. O&M staff is working with contractors to determine the best approaches for re-establishing vegetation on the sites.



*Reach 14, June 6 and June 25*

### Six Mile Marsh Prairie Restoration (SMMPR)

- **Constructed:** 2013
- **Summary:** All mesic prairie and wet prairie areas have been seeded. Buckthorn removal was completed throughout January and February of 2014. A complete site inspection was completed on August 27<sup>th</sup> and revealed that the site is establishing very nicely and on schedule.
- **Maintenance:** This project is in its second year of a three-year vegetation maintenance and establishment period. Spot mowing was completed in mid-August to control non-native annual and biannual plant species. Spot spraying of wetland edges was completed in August and will be done again in October, with an additional fall spot spray for cool season grasses. A foliar overspray in the woodland and savanna areas will take place in early October to help control buckthorn seedlings. Additional buckthorn removal will be completed along the east property line in coordination with the landowner to the east.



*Six Mile Marsh Prairie Restoration, August 27*

### Langdon Saunders Raingardens

- **Constructed:** 2012
- **Summary:** Four curb-cut raingardens were constructed and planted in the South Saunders Neighborhood in the fall of 2012 to help reduce runoff volumes.
- **Maintenance:** District staff will perform vegetation maintenance on the raingardens through 2015. A fresh batch of mulch was installed this spring. Raingardens performed well during heavy spring and summer rains. A small number of plants were replaced to correct original plant placement and species selection. Homeowners are pleased with the appearance and function of the raingardens.



*Langdon Saunders Raingardens, August 7*

### Chelsea Woods Channel Restoration

- **Constructed:** 2012
- **Summary:** The District and City of Plymouth entered into a Memorandum of Agreement to jointly address an eroded drainage channel in the area of 18<sup>th</sup> Avenue and Dunkirk. The District and City coordinated the design and the channel restoration was completed last summer. Under high water conditions, the channel restoration has held up well with plants and live stakes establishing and stabilizing the banks.
- **Maintenance:** Trees, shrubs, and other plants will be maintained throughout the growing season. A small area of bare ground near the inlet was replanted with native plugs to stabilize soil and prevent weed invasion.

## 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:** Spot mowing and spot spraying to control populations of reed canary grass, narrow-leaf cattail, and other non-native species is being completed throughout the 2014 growing season. This has entailed a higher degree of hand-work due to persistent high water throughout the site.

### **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 have been completed.

### **Methodist Hospital—Minnehaha Creek Re-meander**

- **Constructed:** 2009
- **Summary:** For this project, the District partnered with Methodist Hospital on the meandering of Minnehaha Creek. The project involved re-meandering the creek, wetland vegetation restoration, and construction of a boardwalk.
- **Maintenance:** Methodist Hospital has hired Prairie Restorations, Inc. (PRI) to continue the vegetation maintenance throughout 2014. Maintenance has included mowing and spot sprays for invasive species throughout the growing season.

### **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:** The Minnehaha Creek Headwaters Shoreline and Gideon Glen sites received a prescribed burn in early May. The other eight sites received a full site mowing in the spring. Selective mowing and herbicide applications continued throughout the 2014 growing season to control annual and perennial weeds at all ten sites. Work at several sites was delayed due to high water conditions, but WHR has made significant progress as water levels have decreased. Native plantings at the Nokomis stormwater ponds, Southwest Calhoun Ponds, and Cedar Meadows were damaged by high water conditions. O&M staff will meet with Minneapolis Park Board staff to plan repair work to sites with vegetation loss. Some replanting will be necessary. Independence Wetland is functioning well with annual weeds, reed canary grass, and volunteer willows being managed. Tamarack trees planted in the wetland performed well during high water. The Headwaters Shoreline, Long Lake Shoreline, and Gideon Glen have excellent native cover despite spring and summer flooding.



*Headwaters Shoreline, July 8*