# Resolution 2016-275

## Resolution Approving a Memorandum of Understanding with the Shingle Creek Watershed Management Commission Allowing for the Access, Installation and Maintenance of an Iron - and Biochar – Enhanced Sand Filter on the Creekview Park Stormwater Pond Property and a Creek Diversion Project with Filterbed Installation in a Stainless Steel Chest on the Webber Park Falls Property

Whereas, The mission of the Minneapolis Park and Recreation Board (MPRB) is to permanently preserve, protect, maintain, improve, and enhance its natural resources, parkland, and recreational opportunities for current and future generations;

Whereas, The MPRB has the authority to manage and operate park facilities;

Whereas, MPRB owns the Creekview Park Property and the Webber Park Property;

Whereas, The Shingle Creek Watershed Management Commission (SCWMC) is a nonprofit advocate and long standing partner with the MPRB in the preservation and protection of Shingle Creek, a valued natural resource in the City of Minneapolis;

Whereas, The SCWMC and West Mississippi Watershed Management Commission (WMWMC) obtained a federal grant to fund a project to field-trial iron and biochar enhanced sand filters with stormwater runoff in order to reduce bacteria load to Shingle Creek and the Mississippi River;

Whereas, The SCWMC passed a resolution approving the Memorandum of Understanding (MOU) to work cooperatively with the WMWMC and the MPRB to construct an iron- and bio-char sand filter at Creekview Park Stormwater Pond and a creek diversion project with filterbed installed in a stainless steel chest at the Webber Park Falls;

Whereas, MPRB legal counsel has reviewed and approved the MOU and MPRB Forestry has reviewed and approved the tree protection details; and

Whereas, This resolution is supported by the vision and goal of the MPRB 2007 – 2020 Comprehensive Plan, of “Urban forests, natural areas, and waters that endure and captivate” and “Sound management techniques to provide healthy, diverse, and sustainable natural resources”;

RESOLVED, That the Board of Commissioners approve the Memorandum of Understanding with the Shingle Creek Watershed Management Commission allowing for the access, installation and maintenance of an Iron - and Biochar – Enhanced Sand Filter on the Creekview Park

Stormwater Pond Property and a Creek Diversion Project with Filterbed Installation in a Stainless Steel Chest on the Webber Park Falls Property; and

RESOLVED, That the President of the Board and Secretary to the Board are authorized to take all necessary administrative actions to implement this resolution.

TO: Operations & Environment Committee

FROM: Justin Long, Assistant Superintendent for Environmental Steward

DATE: September 21, 2016

SUBJECT: Resolution Approving a Memorandum of Understanding with the Shingle Creek Watershed Management Commission Allowing for the Access, Installation and Maintenance of an Iron - and Biochar – Enhanced Sand Filter on the Creekview Park Stormwater Pond Property and a Creek Diversion Project with Filterbed Installation in a Stainless Steel Chest on the Webber Park Falls Property

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**BACKGROUND**

This action approves a Memorandum of Understanding (MOU) with the Shingle Creek Watershed Management Commission (SCWMC) allowing for the access, installation and maintenance of an Iron - and Biochar – Enhanced Sand Filter on the Creekview Park Stormwater Pond Property and a Creek Diversion Project with filterbed installation in a stainless steel chest on the Webber Park Falls Property.

Shingle Creek has been designated as an Impaired Water for periodically exceeding the state water quality standard for bacteria due to the impact of stormwater. This designation requires the identification of sources and strategies for reducing bacteria loading to the Creek. The SCWMC and West Mississippi Watershed Management Commissions (WMWMC) obtained a federal grant to fund a project to field-trial technology to reduce the bacteria load impacting Shingle Creek and the Upper Mississippi River.

Technical Assistance will be provided by the University of Minnesota's St. Anthony Falls Lab for this project. The Lab has developed the iron-enhanced sand filters on stormwater ponds to remove dissolved phosphorus from urban runoff. Biochar, a specially engineered type of charcoal, added to iron-enhanced sand filters has been effective in laboratory studies and with this project will be field tested to determine its effectiveness in a real world setting.

Minneapolis Park and Recreation Board (MPRB) and SCWMS staff have developed an agreement in the form of a MOU to clarify the intent of the projects. The SCWMS Board approved the MOU on August 11, 2016. This MOU between SCWMS and the MPRB allows SCWMS and WMWMC access, installation and the maintenance of an iron- and biochar-enhanced sand filter on the Creekview Park Stormwater Pond Property (2 parcels), and a creek diversion project with filterbed installation in a stainless steel chest on the Webber Park Falls property (1 parcel).

The Creekview Stormwater site will be modified with an enhanced Minnesota Filter. Inflow, outflow, and ambient water quality will be monitored to assess the effectiveness of the filter. Monitoring the impact of adding biochar to the sand will add a powerful new tool to urban stormwater treatment best management practices.

The Webber Park Falls site will apply this technology to a filter that will directly treat diverted water flow from Shingle Creek. An iron- and biochar- enhanced filterbed will be constructed in a heavy duty steel chest. A pipe will intercept flow from the Creek at the falls and route it to the filter, where it will percolate to the bottom and then be piped back to the creek. The purpose of this study is to determine whether the removals from this type of direct treatment can be scaled up to make an impact on bacteria concentrations in the Creek.

MPRB Legal Counsel has reviewed and given its approval to this MOU. MPRB Forestry has reviewed and approved the tree protection details. Access to the site will be granted through a construction permit issued by the MPRB Planning Division.

The SCWMC and the WMWMC will be responsible for the design, construction and maintenance of the improvements in accordance with the terms and conditions of the MOU. The MPRB will allow access to the properties for construction and maintenance of the filters on these sites.

Upon conclusion of the study, the iron- and biochar- enhanced filterbed constructed in a heavy duty steel chest with creek diversion at the Webber Falls site will be uninstalled. The modified filter at the Creekview Stormwater site will remain, but will not change the visible character of the parkland.

No MPRB funds will be used to implement this work.

**RECOMMENDATION**

Staff recommends approval of a Memorandum of Understanding with the Shingle Creek Watershed Management Commission Allowing for the Access, Installation and Maintenance of an Iron - and Biochar – Enhanced Sand Filter on the Creekview Park Stormwater Pond Property and a Creek Diversion Project with Filterbed Installation in a Stainless Steel Chest on the Webber Park Falls Property.

This action is supported by the following vision and foal statement in the MPRB 2007-2020 Comprehensive Plan:

**Vision Theme 1:** Urban forests, natural areas, and waters that endure and captivate

**Goal:** Sound management techniques provide healthy, diverse, and sustainable natural resources

**HISTORY:**

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| **09/07/16** | **Operations & Environment Committee** | **ADOPTED** |

**ATTACHMENTS:**

- Project Summary (PDF)
- MOU Biochar Sand FIlter Project Agreement - 479926v3 (DOC)

Prepared By: Lori Smiley, Office Support Specialst III, Environmental Operations
Review:

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|---|---|---|
| Debra Pilger | Completed | 08/23/2016 1:22 PM |
| Justin Long | Completed | 08/25/2016 2:10 PM |
| Jayne Miller | Completed | 08/29/2016 8:50 PM |
| Operations & Environment Committee | Completed | 09/07/2016 5:20 PM |
| Minneapolis Park and Recreation Board | Pending | 09/21/2016 5:00 PM |