JOINT POWERS AGREEMENT
FOR THE IMPLEMENTATION OF
THE WOODCREST CREEK IRON ENHANCED SAND FILTER PROJECT

This Agreement is made and entered into this ___ day of ______________, 2019, by and between the Coon Creek Watershed District, a metropolitan watershed district and political subdivision of the State of Minnesota, 12301 Central Avenue NE Suite 100, Blaine, Minnesota 55434, hereinafter referred to as the “District”, and the City of Coon Rapids, a Minnesota municipal corporation, 11155 Robinson Drive, Coon Rapids, Minnesota 55433, hereinafter referred to as the “City”.

WITNESSETH

WHEREAS, The District and the City share a common interest in improving water quality in Woodcrest Creek and downstream Coon Creek located within the City of Coon Rapids and within the Coon Creek Watershed District; and

WHEREAS, The District and the City intend to construct an iron enhanced sand filter within the existing inline stormwater pond west of Woodcrest Drive NW, to reduce total phosphorus and E. coli loading; and

WHEREAS, The District has been awarded partial state grant funding to design and construct this water quality improvement project; and

WHEREAS, Minnesota Statutes section 471.59 authorizes political subdivisions of the State of Minnesota to enter into joint powers agreements for the joint exercise of powers common to each.

NOW, THEREFORE, IT IS MUTUALLY STIPULATED AND AGREED AS FOLLOWS:

I. PURPOSE
The District and City agree that it is mutually beneficial for the District and the City to undertake the implementation of the iron enhanced sand filter project (“Project”) to reduce total phosphorus and E. coli loading in Woodcrest Creek and Coon Creek.

II. METHODS
A. Preliminary Planning/Approval
The District, in consultation with the City, shall provide for the planning, engineering, construction, and construction administration for the Project.

B. Design
The District shall be responsible for all engineering and design services and will prepare plans and specifications for the Project in consultation with the City. The District shall not go out for bids until such time as the City has approved, in writing, the plans and specifications for the Project. 60% Design Plans developed by the District Engineer are attached as Exhibit A.
C. Bidding/Construction

The District shall do the calling for all bids and the accepting of all bid proposals, and shall cause the construction of the Project in conformance with the approved plans and specifications and the applicable Grant Agreements’ requirements. The award of the bid to the lowest responsible bidder shall be made in consultation with the City prior to the execution of the construction contract. After receipt of all necessary governmental approvals, the District shall cause the commencement of the Project’s construction and shall manage the Project through to completion.

III. COST ALLOCATION

A. The total estimated cost of completing the Project is $889,080.

B. The District has received two Clean Water Fund grants administered by the Minnesota Board of Water and Soil Resources in the amount of $95,986.50 Watershed Based Funding and $376,093 Projects and Practices and will apply these funds towards the total Project costs incurred.

C. The District shall contribute up to $200,000 for engineering and construction costs.

D. The City shall contribute up to $217,000 for construction costs and may incur minimal costs for City staff time related to Project coordination. Within 45 days of invoice the City will pay the District its share of the above construction costs as specified in the District’s project invoice.

IV. SITE ACCESS

The City agrees to grant the District and its contractors and agents access to the portions of the Project site on City-owned land for Project construction and future inspection. The City agrees that the District may install interpretative signage at the Project site to educate visitors on water quality and best management practices.

V. TERM / TERMINATION

This Agreement shall continue in full force and effect for the expected life span of the project, 25 years post-construction not to exceed December 31, 2046.

VI. CONTRACTS AND PURCHASES

A. All contracts let and purchases made pursuant to this Agreement shall be made by the District in conformance to State laws and the applicable Grant Agreements’ requirements. All contracts shall contain the following indemnification paragraph:

i. The Contractor agrees that it will hold harmless, indemnify, and defend Coon Rapids, its council members, officers, agents and employees against any and all claims, expenses, losses, damages or lawsuits for damages arising from or related to the negligent provision, or failure to provide, services hereunder.

B. All contracts shall include the insurance requirements as set forth in Exhibit C, which is attached hereto and incorporated herein.

VII. STRICT ACCOUNTABILITY

A strict accounting shall be made of all funds and report of all receipts and disbursements shall be made upon request by either party.
VIII. MAINTENANCE OF IMPROVEMENTS
The City will assume responsibility of future maintenance of the Project components as outlined in the Operations and Maintenance plan attached in Exhibit B.

IX. NONCOMPLIANCE
Should the land occupier fail to maintain the practice during its effective life, the land occupier is liable to the State of Minnesota for the amount up to 150% of the amount of financial assistance received to install and establish the practice unless the failure was caused by reasons beyond the land occupier’s control, or if conservation practices are applied at the land occupier’s expense that provide equivalent protection of the soil and water resources.

X. NOTICE
For purposes of delivery of any notices hereunder, the notice shall be effective if delivered to the District Administrator, 12301 Central Avenue NE Suite 100, Blaine, Minnesota 55434, on behalf of the District, and to the City Manager for the city of Coon Rapids, 11155 Robinson Drive, Coon Rapids, Minnesota 55433, on behalf of the City.

XI. INDEMNIFICATION
The District and City mutually agree to indemnify and hold harmless each other from any claims, losses, costs, expenses or damages resulting from the acts or omissions of the respective officers, agents, or employees relating to activities conducted by either party under this Agreement.

XII. ENTIRE AGREEMENT / REQUIREMENT OF WRITING
It is understood and agreed that the entire agreement of the parties is contained herein and that this Agreement supersedes all oral agreements and all negotiations between the parties relating to the subject matter thereof, as well as any previous agreement presently in effect between the parties to the subject matter thereof. Any alterations, variations, or modifications of the provisions of this Agreement shall be valid only when they have been reduced to writing and duly signed by the parties.

XIII. GOVERNMENT DATA PRACTICES
The District and City will comply with the Minnesota Government Data Practices Act, Minnesota Statutes Chapter 13, as amended, as it applies to all data created, collected, received, stored, used, maintained or disseminated by the District or the City under this Agreement.
IN WITNESS WHEREOF, the parties of this Agreement have hereunto set their hands on the dates written below:

Coon Creek Watershed District:

By: ___________________________
   Anthony Wilder, President, Board of Managers
Dated: _________________________

By: ___________________________
   Tim Kelly, District Administrator
Dated: _________________________

City of Coon Rapids:

By: ___________________________
   Jerry Koch, Mayor
Dated: _________________________

By: ___________________________
   Matt Stemwedel, City Manager
Dated: _________________________
Exhibit A 60% Design Plans
Exhibit B

Woodcrest Creek Iron-Enhanced Sand Filter
BMP Operations and Maintenance Plan

The intent of this plan is to ensure the long-term efficacy of the Woodcrest Creek iron-enhanced sand filter (IESF). This effort will involve all of the project partners, including the Coon Creek Watershed District (CCWD), and the City of Coon Rapids, with the goal of maximizing and sustaining the effectiveness of this practice. This plan was developed based on maintenance plans for similar stormwater treatment systems and from conversations with stormwater professionals who have worked directly with IESFs in the field and laboratory. As this is an emerging technology, there is no long-term data to judge maintenance needs or horizons over the project’s lifetime with certainty. This plan will need to be updated as more information is gained concerning these practices.

Operations and Maintenance needs of this practice are summarized in this document within two categories:
1) Inspections and maintenance
2) Performance monitoring

The frequency of these actions will be determined based on project goals and resources of the project partners.

Inspections and Maintenance
Following installation, on-site inspections of the project should be performed to ensure the practice is operating at design capacity. Routine inspection and maintenance will be handled by the City of Coon Rapids. The CCWD may provide guidance and technical assistance as needed. Media replacement will be coordinated jointly and financed by the CCWD. Specific items to look for during each inspection are summarized on the inspection form, included on pages 3 and 4 of this document. Inspections should occur as often as needed but minimally will be conducted monthly for the first treatment season and then seasonally (spring, mid-summer, fall) thereafter. Inspections should occur recently after storm events such that filter appearance, drawdown, and overall function can be assessed within a single visit. It is recommended that inspections and monitoring be coordinated jointly for at least the first treatment season to ensure all parties are familiar and comfortable with the filter operation and their individual role. The length of time between the end of rainfall and the inspection should also range to ensure drawdown time is being properly assessed. Prior to entering the field, the inspector should know the length of time and amount of the most recent rainfall in the area and enter these values into the inspection sheet.

Summarized below are other important notes for visual inspections:

1) The IESF should be inspected for:
   a) Media - a hard crust at the surface that appears impermeable or does not break apart easily should be broken apart by scraping/tilling or removed and replaced with media
   b) Media - a gray muck or clay-like build-up (may feel slimy to the touch) should be removed. Removal may result in loss of media which should be replaced.
   c) Media - sediment and/or organic debris accumulation on the top of the IESF in a manner that inhibits infiltration through the IESF. (note: If the rate of sediment and organic matter accumulation on the IESF increases, it may indicate that the capacity of the pond to settle and store solids is compromised).
   d) Media – hard encrusted gray or black layers deeper in the media
   e) Liner – evidence of leakage

2) If any of the conditions in 1(a-d) above are noted it should be remedied immediately, as it can adversely affect filtration rates. If conditions described in 1(a-c) are noted, remove accumulation and loosen the surface layer of the media with a rigid tined rake. If the conditions noted in 1(d) are present, these aggregates have been known to limit flow through IESF systems and can significantly reduce performance. If these are found, a thorough tilling of the filter media or even replacement of the entire filter media may be necessary as this is often evidence of either (i) poor iron-sand mixing prior to installation or (ii) development of a confining layer.
Performance Monitoring

BMP effectiveness in reducing phosphorus and *E. coli* export to Woodcrest is best determined through analysis of water quality samples. The CCWD will be responsible for coordinating monitoring. The frequency of sampling should occur often enough to adequately determine that the filter is operating as designed. It is recommended that high resolution monitoring is performed within the first three years to test for *E. coli* removal, phosphorus retention, or potential phosphorus and/or iron leaching from the IESF. This could include monitoring at least once per month in the first three years and bi-monthly monitoring for years 4-5 and every five years thereafter. Monitoring frequency should be adjusted to adequately determine the efficacy of maintenance actions, such as skimming a top layer to improve infiltration or replacing filter media.

Water quality samples should be taken from both the inlet to the IESF (i.e. pond) and from the IESF outlet to determine water chemistry changes within the practice. Key constituents to measure include *E. coli*, total phosphorus (TP), and dissolved phosphorus (ortho P; OP). Dissolved oxygen and pH should be measured if P leaching is observed. MPCA guidelines for sample preparation and analysis should be followed for all samples acquired.

If multiple P measurements taken at the IESF outlet exceed baseline concentrations from the first 2 years and/or exceed water quality standards, phosphorus binding sites within the filter media may have been exhausted. If this occurs, samples of the sand-iron media should be collected and analyzed to determine the ratio between TP and total iron. TP to total iron ratios that exceed 5 mg-TP per 1 g of elemental iron indicate that phosphorus binding sites have reached capacity and that the filter media should be replaced.

While paired grab samples of *E. coli* and P concentrations from the filter inflow and effluent will provide information on bacteria and nutrient removal efficacy, hydrologic analysis is needed to estimate the annual load reductions to Woodcrest Creek and Coon Creek and to identify changes in the media infiltration rates. The easiest method to gather these data is with a battery-operated transducer or other water level monitoring device left in the field continuously. Water level recording frequency should be refined based on the hydrograph of the pond. Because the design drawdown for the pond through the filter media is 48 hours, water level monitoring every 4 hours should provide adequate resolution to estimate treated water volumes.

**NOTE:** The majority of iron filings used in the IESF are small and harmless. However, it is possible that some iron filings may be sharp and/or abrasive. Maintenance staff should take appropriate precautions when working with the media.
Woodcrest Creek IESF Inspection Form

Date of Inspection: ____________________________
Inspector’s name(s): ____________________________
Time since last rainfall (hr): ___________________
Quantity of last rainfall (in): ____________________
Were monitoring samples taken as part of the inspection (Yes or No): __________
   If Yes, how many samples taken: ____________________________
   Which constituents will be analyzed: ____________________________
Date of sample analysis: ____________________________
Is the pond above the permanent pool depth (Yes or No): __________
Is there water above the filter bed (Yes or No): __________
Is water exiting the practice outfall (Yes or No): __________
   If Yes, does effluent water have any special characteristics (iron color, odor, slow discharge, etc.):

<table>
<thead>
<tr>
<th>Maintenance Item</th>
<th>S</th>
<th>U</th>
<th>Comments/Actions Required</th>
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<tbody>
<tr>
<td>1. Debris Cleanout</td>
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<tr>
<td>Filter area clear of trash and debris</td>
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<td>Control structure clear of trash and debris</td>
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<td>2. Vegetation</td>
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<td>Deep-rooted vegetation removed from on and around the filter bed</td>
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<td>3. Sediment Deposition</td>
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<td>Evidence of sediment deposition on filter bed</td>
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<td>4. Sand media</td>
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<td>Condition of media (evidence of discoloring, clumping, clogging)</td>
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<td>5. Outlet / Inlet Condition (visual inspection unless televising is determined necessary)</td>
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<td>Condition of outlet control structure from IESF and pond (evidence of blowout, clogging, large deposition of sediment)</td>
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<td>Condition of inlet bench from pond (evidence of sloughing, leakage)</td>
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<td>6. Cleanout Riser Condition</td>
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<td>Condition of cleanout risers (6 total)</td>
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<td>7. Dewatering</td>
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<td>Evidence of leakage from pond to IESF</td>
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<td>Evidence (staining, standing water, departure from normal operation) of filter clogging (if yes, see notes on page 1 for corrective actions)</td>
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<td>8. Structural Integrity</td>
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<td>Condition of embankment (evidence of leaks, holes, slope failures, woody vegetation)</td>
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<td>Evidence of structural damage (leaks, cracks, etc)</td>
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<td>9. Overall IESF functionality</td>
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<td>Evidence of odors (gasoline, oil, rot, etc.)</td>
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<td>Evidence of flow bypass</td>
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<td>10. Overall Pond functionality</td>
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<td>Sediment deposition in the pond that threatens IESF performance</td>
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<td>11. Miscellaneous Items: _______</td>
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S=Satisfactory   U- Unsatisfactory

Maintenance actions taken: [If any of the above items were marked unsatisfactory, explain the actions taken and time table for correction. Attach additional pages as necessary.]
EXHIBIT C
CONSTRUCTION/MAINTENANCE
INSURANCE REQUIREMENTS

The Contractor shall obtain and maintain in full force for the duration of the contract the insurance designated as follows.

Worker’s Compensation: The Contractor shall take out and maintain during the life of the contract, Worker’s Compensation Insurance for all of his employees employed at the work site. If any employees are engaged in hazardous work not covered by Worker’s Compensation Insurance, the Contractor shall provide adequate protection from Employer’s Liability Insurance for protection of employees not otherwise protected.

Liability Insurance Requirements (Liability and Auto): Contractor shall maintain commercial general liability (CGL), and if necessary commercial umbrella insurance, with a limit of not less than $1,000,000 each occurrence. If such CGL insurance contains a general aggregate limit, the general aggregate limit shall be not less than $2,000,000 and the aggregate limit shall apply on a per-project basis. The CGL insurance shall cover liability arising from premises, operations, independent Contractors, products-completed operations, personal injury and advertising injury, and Contractually-assumed liability. The City of Coon Rapids shall be named as an additional insured under the CGL.

Contractor shall maintain automobile liability insurance, and if necessary, umbrella liability insurance with a limit of not less than $1,000,000 each accident. If such insurance contains a general aggregate limit, the general aggregate limit shall be not less than $2,000,000. The insurance shall cover liability arising out of any auto, including owned, hired, and non-owned autos.

A certificate of insurance acceptable to Coon Rapids shall be filed prior to the commencement of the work. The certificate and the required insurance policies shall contain a provision that the coverage afforded under the Contract will not be canceled or allowed to expire until at least 30 days prior written notice has been given.

Fire Insurance: The Contractor shall carry full insurance against loss by fire and wind damage upon all material in place or stored at the site for installation. This provision does not exclude material partially paid for by the Owner. This insurance shall be for the full insurable value of the material and shall be kept in full force until final acceptance and payment of the work by the Owner.

If any section of the work entails special hazards the Contractor shall provide riders to the Public Liability and Property Damage Insurance to provide protection from these special hazards.