



## Grant All-Detail Report Projects and Practices 2019

**Grant Title** - Woodcrest Pond biochar- and iron-enhanced sand filter

**Grant ID** - C19-2888

**Organization** - Coon Creek WD

<b>Original Awarded Amount</b>	<b>\$376,093.00</b>	<b>Grant Execution Date</b>	<b>3/20/2019</b>
<b>Required Match Amount</b>	\$94,023.25	<b>Original Grant End Date</b>	12/31/2021
<b>Required Match %</b>	25%	<b>Grant Day To Day Contact</b>	Justine Dauphinais
<b>Current Awarded Amount</b>	\$376,093.00	<b>Current End Date</b>	12/31/2021

### Budget Summary

	Budgeted	Spent	Balance Remaining*
Total Grant Amount	\$376,093.00	\$376,093.00	\$0.00
Total Match Amount	\$276,622.00	\$277,334.48	\$-712.48
Total Other Funds	\$0.00	\$0.00	\$0.00
<b>Total</b>	<b>\$652,715.00</b>	<b>\$653,427.48</b>	<b>\$-712.48</b>

\*Grant balance remaining is the difference between the Awarded Amount and the Spent Amount. Other values compare budgeted and spent amounts.

### Budget Details

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
Construction	Urban Stormwater Management Practices	Current State Grant	Woodcrest Pond biochar- and iron-enhanced sand filter	\$376,093.00	\$376,093.00	1/28/2020	N

Activity Name	Activity Category	Source Type	Source Description	Budgeted	Spent	Last Transaction Date	Matching Fund
Construction	Urban Stormwater Management Practices	Local Fund	City of Coon Rapids	\$217,000.00	\$191,977.89	11/19/2020	Y
Project Coordination & Administration	Administration/Coordination	Local Fund	in kind CCWD staff time	\$10,872.00	\$11,151.68	12/31/2020	Y
Public Engagement	Education/Information	Local Fund	in kind CCWD staff time	\$6,750.00	\$3,141.93	12/31/2020	Y
Technical & Engineering Assistance	Technical/Engineering Assistance	Local Fund	CCWD	\$42,000.00	\$71,062.98	12/31/2020	Y

### Activity Details Summary

Activity Details	Total Action Count	Total Activity Mapped	Proposed Size / Unit	Actual Size / Unit
100M - Presentations	1		1 COUNT	1 COUNT
104M - Workshop/Clinics	1		1 COUNT	1 COUNT
712M - Bioretention Basin	1	1	0.45 AC	0.49 AC

### Proposed Activity Indicators

Activity Name	Indicator Name	Value & Units	Waterbody	Calculation Tool	Comments
<b>Construction</b>	PATHOGENS (E. COLI)	80 CFU	Coon Creek	Literature Value	80% reduction, not 80 cfu. MN stormwater manual
<b>Construction</b>	PHOSPHORUS (EST. REDUCTION)	69 LBS/YR	Coon Creek	P8 Urban Catchment Model	Based on 77% TP removal efficiency per the MN Stormwater Manual

## Final Indicators Summary

Indicator Name	Total Value	Unit
PATHOGENS (E. COLI)	946,600,000,000.00	CFU
PHOSPHORUS (EST. REDUCTION)	69.00	LBS/YR

## Grant Activity

Grant Activity - Construction		
<b>Description</b>	<p>This activity includes construction site preparation &amp; maintenance, mobilization of equipment, installation of the filter bench and interpretive signage, demobilization of equipment, and site restoration.</p> <p>All work will be completed by a qualified contractor selected using a competitive bidding process with oversight from Wenck Engineering and City and CCWD staff.</p> <p>Access, staging, and construction will all occur on land owned by the City of Coon Rapids.</p> <p>Key milestones:            -Contractor(s) awarded by Oct 31, 2020            -Substantial completion by Mar 30, 2021            -Vegetation establishment by Aug 31st, 2021</p> <p>It should be noted that construction is planned for fall 2019, but acquisition of an USACE permit may delay construction until 2020.</p>	
<b>Category</b>	URBAN STORMWATER MANAGEMENT PRACTICES	
<b>Start Date</b>	31-Oct-19	<b>End Date</b>
<b>Has Rates and Hours?</b>	No	
<b>Actual Results</b>	<p>The project was advertised via public bid in October 2019 and awarded to Peterson Companies. A USACE permit was not needed for construction, so construction occurred roughly a year ahead of schedule. Construction started in November 2019, substantial completion occurred on 6-12-2020 with the filter operational by the first week of July 2020. The project engineer signed off on final completion, including site restoration on 12-17-20 (see attached form). Performance monitoring from July-October 2020 indicates that the filter is meeting design specifications for treatment volume and pollutant removal efficiencies and will therefore meet pollutant removal targets of 69 lbs TP/ yr and 80% E. coli (~947 billion CFUs/yr) once operational for a full year. An interpretive sign was installed at the project site in November 2020 (see attached photo).</p>	

Activity Action - Iron and biochar enhanced filter			
Practice	712M - Bioretention Basin	Count of Activities	1
Description	An approximately 300' x 67' filter bench constructed along existing pond. The filter will be divided in half with Iron-enhanced sand media on one side and iron and biochar-enhanced sand on the other.		
Proposed Size / Units	0.45 AC	Lifespan	25 Years
Actual Size/Units	0.49 AC	Installed Date	1-Jul-20
Mapped Activities	1 Point(s)	Technical Assistance Provider	Private Consultant

Final Indicator for Iron and biochar enhanced filter			
Indicator Name	PHOSPHORUS (EST. REDUCTION)	Value	69
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) LBS/YR	Calculation Tool	P8 Urban Catchment Model
Waterbody	Coon Creek		
Final Indicator for Iron and biochar enhanced filter			
Indicator Name	PATHOGENS (E. COLI)	Value	946600000000
Indicator Subcategory/Units	WATER POLLUTION (REDUCTION ESTIMATES) CFU	Calculation Tool	MIDS
Waterbody	Coon Creek		

## Grant Activity - Project Coordination & Administration

<b>Description</b>	<p>This activity includes project coordination meetings with partners (City of Coon Rapids Staff &amp; Engineer), construction management (securing permits, bid process, contracts, oversight), financial tracking, and all required grant reporting in eLink.</p> <p>This activity will be carried out by CCWD staff and serve as in-kind match.</p> <p>Specifically, Justine Dauphinais, Water Quality Coordinator will be responsible for day-to-day project management, financial tracking, and grant reporting with administrative oversight by Tim Kelly, District Administrator and Julie Peterson, Accountant. Jon Janke, Operations and Maintenance Coordinator will be responsible for construction management in conjunction with the District Engineer, Ed Matthiesen (See Technical/Engineering Assistance Activity).</p> <p>Key milestones:</p> <ul style="list-style-type: none"> <li>-JPA with City of Coon Rapids executed prior to any grant expenditures</li> <li>-Final design plans completed by June 30, 2020</li> <li>-Contractor(s) awarded by October 31, 2020</li> <li>-Annual reporting in eLink by Feb 1, 2020</li> <li>-Final report by Dec 31, 2021</li> </ul>		
<b>Category</b>	ADMINISTRATION/COORDINATION		
<b>Start Date</b>	22-Mar-19	<b>End Date</b>	31-Dec-20
<b>Has Rates and Hours?</b>	Yes		
<b>Actual Results</b>	Regular communication and coordination between CCWD staff, the project engineer, City of Coon Rapids staff, and the BWSR Board Conservationist occurred. A JPA with the landowner (Coon Rapids) was executed, the project was advertised for public bid and awarded to Peterson Companies, and construction oversight was provided by CCWD staff. All grant administration and reporting requirements were fulfilled in accordance with deadlines.		

## Grant Activity - Public Engagement

<b>Description</b>	<p>Efforts will be made to engage the public throughout the entire project. Local stakeholders will be invited to participate in a public open house to discuss local water quality impairments, the proposed BMP, and to gather feedback. Project updates will be published in the City of Coon Rapids' newsletter and on the CCWD's website. Content for an interpretive sign to be installed at the project site will be developed. Additionally, CCWD staff will attend the City of Coon Rapids' annual summer neighborhood meeting held at Woodcrest Park to discuss TP and E. coli reduction strategies that individuals can undertake at home. Furthermore, to engage water resource professionals, the results of this project will be presented at the annual MN Water Resources Conference</p> <p>This activity will be carried out by CCWD staff and serve as in-kind match.</p> <p>Specifically, Dawn Doering, Information &amp; Education Coordinator, will oversee all public engagement efforts with assistance from Britta Dornfeld, Outreach Assistant. Justine Dauphinais, Water Quality Coordinator, will present the results of the project at the MN WRC.</p> <p>Key Milestones:</p> <ul style="list-style-type: none"> <li>-Public open house hosted by June 30, 2020</li> <li>-Project webpage created by June 30, 2020</li> <li>-Article published in City Newsletter by Oct 31, 2020</li> <li>-interpretive signage design completed by Mar 31, 2021</li> <li>-Project presented at WRC by Oct 31, 2021</li> </ul>		
<b>Category</b>	EDUCATION/INFORMATION		
<b>Start Date</b>	30-May-19	<b>End Date</b>	31-Dec-20
<b>Has Rates and Hours?</b>	Yes		

**Actual Results**

A dedicated webpage was created for the project and was updated regularly: [www.cooncreekwd.org/woodcrestfilter](http://www.cooncreekwd.org/woodcrestfilter). A public open house was hosted at Coon Rapids City hall on 5/30/2019. An article introducing the project was published in the Coon Rapids Public Works newsletter in December 2019 and a follow up article was published in the Coon Rapids Connection quarterly newsletter in Fall 2020. Interpretive sign content and design was developed in Summer 2020 with fabrication and installation of the permanent sign in November 2020 (see attached image file). The project and preliminary monitoring results were presented at the 2020 UMN Water Resources Conference by Justine Dauphinais and Chase Vanderbilt on 10/20/20. Coon Rapid's summer-in-the-city public meetings were canceled due to Covid-19, but CCWD hosted a socially-distant project tour on 9/9/20 that was attended by City, neighboring WMO, and MnDOT staff.

Activity Action - Public Open House			
Practice	104M - Workshop/Clinics	Count of Activities	1
Description	Neighborhood open house to introduce the project and gather feedback.		
Proposed Size / Units	1.00 COUNT	Lifespan	1 Year
Actual Size/Units	1.00 COUNT	Installed Date	30-May-19
Mapped Activities	No	Technical Assistance Provider	

Activity Action - WRC presentation			
Practice	100M - Presentations	Count of Activities	1
Description	Presentation of project and preliminary results at the 2020 Water Resources Conference		
Proposed Size / Units	1.00 COUNT	Lifespan	1 Year
Actual Size/Units	1.00 COUNT	Installed Date	20-Oct-20
Mapped Activities	No	Technical Assistance Provider	Other



## Grant Activity - Technical & Engineering Assistance

<b>Description</b>	<p>The District Engineer, Wenck, will provide technical and engineering assistance throughout the Project under the direction of CCWD staff. The Engineer will develop and complete design plans and specifications including any surveying and soil analysis, implement the bidding process, and provide construction oversight (supervision and inspections).</p> <p>Ed Matthiesen, P. E., a licensed professional, will be the lead Engineer and will adhere to recognized design standards for all constructed practices.</p> <p>This activity will be funded by the CCWD and counted as match.</p> <p>Key milestones:                      -Design finalized by June 30, 2020                      -project advertised for bidding by Oct 31, 2020                      -engineer sign off on as-built by Mar 31, 2021</p>		
<b>Category</b>	TECHNICAL/ENGINEERING ASSISTANCE		
<b>Start Date</b>	22-Mar-19	<b>End Date</b>	31-Dec-20
<b>Has Rates and Hours?</b>	No		
<b>Actual Results</b>	Wenck Associates successfully completed project design, bidding, and construction oversight services. Wenck signed off that the project was constructed in accordance with the approved plans and specifications as of 12-17-20 (see attached certificate), significantly ahead of schedule.		

## Grant Attachments

Document Name	Document Type	Description
<b>2019 Competitive Grant</b>	Grant Agreement	2019 Competitive Grant - Coon Creek WD
<b>2019 Competitive Grant EXECUTED</b>	Grant Agreement	2019 Competitive Grant - Coon Creek WD
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/19/2021
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 01/27/2020
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 03/20/2020
<b>All Details Report</b>	Workflow Generated	Workflow Generated - All Details Report - 03/20/2020
<b>Application</b>	Workflow Generated	Workflow Generated - Application - 08/31/2018

Document Name	Document Type	Description
Cash Match Documentation 2019	Progress	Progress Dated - 01/27/2020
Cash Match Documentation 2020	Progress	Progress Dated - 01/19/2021
Executed JPA with Landowner	Grant	Woodcrest Pond biochar- and iron-enhanced sand filter
Final Completion Form_Dec 2020	Progress	Progress Dated - 01/19/2021
Financial report_final_2020	Progress	Progress Dated - 01/19/2021
Grant Eligible Documentation_2019	Progress	Progress Dated - 01/27/2020
Grant Eligible Documentation_2020	Progress	Progress Dated - 01/19/2021
In kind match documentation_2019	Progress	Progress Dated - 01/27/2020
In kind match documentation_2020	Progress	Progress Dated - 01/19/2021
Interpretive Sign	Progress	Progress Dated - 01/19/2021
Master Budget Tracking Spreadsheet 1-15-21	Progress	Progress Dated - 01/19/2021
OM Plan	Grant	Woodcrest Pond biochar- and iron-enhanced sand filter
Substantial Completion Form_June2020	Progress	Progress Dated - 01/19/2021
WCIESF Master budget tracking	Progress	Progress Dated - 01/27/2020
Woodcrest Pond Filter Bench Retrofit Project Summary	Grant	Woodcrest Pond biochar- and iron-enhanced sand filter
Work Plan	Workflow Generated	Workflow Generated - Work Plan - 12/19/2018
Work Plan	Workflow Generated	Workflow Generated - Work Plan - 03/15/2019
year end financial report 2019	Grant	Woodcrest Pond biochar- and iron-enhanced sand filter