
SOUTHERN REGIONAL TREATMENT SYSTEM AGREEMENT

between

MISSISSIPPI WATERSHED MANAGEMENT ORGANIZATION,

and

CITY OF MINNEAPOLIS

Dated _____, 2024

This document was drafted by:
Kennedy & Graven, Chartered (TJG)
150 South Fifth Street, Suite 700
Minneapolis, Minnesota 55402-1299
Telephone: 612-337-9300

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**UPPER HARBOR
SOUTHERN REGIONAL TREATMENT SYSTEM AGREEMENT**

This Southern Regional Treatment System Agreement (“**Southern Regional Treatment System Agreement**” or this “**Agreement**”) is made and entered into this ___ day of _____ 2024, between the Mississippi Watershed Management Organization, a joint powers watershed pursuant to Minnesota Statutes, Sections 103B.201-103B.251, and organized under the laws of the State of Minnesota (“**MWMO**”) and City of Minneapolis, a municipal corporation, home rule city, and political subdivision of the State of Minnesota (“**City**”). MWMO and City are herein referred to as a “Party” and collectively referred to as the “Parties.”

RECITALS

- A. MWMO, City, and City of Minneapolis acting by and through its Park and Recreation Board previously entered into a Reciprocal Easement and Operating Agreement dated September 7, 2023, pursuant to which MWMO agreed to provide financial and technical assistance in the design and construction of a shared public and private District System (as defined herein).
- B. MWMO has agreed to assist with funding and constructing of the Southern Regional Treatment System and the Reuse Tank Component (as defined herein), with the intent that the treated stormwater runoff will be a source of reuse water for the District System.

AGREEMENT

In consideration of the foregoing recitals and the mutual covenants and promises hereinafter set forth, the Parties hereby agree to the following:

SECTION 1. DEFINITIONS

For the purposes of this Southern Regional Treatment System Agreement, the following terms shall have the meaning given them in this section. Capitalized terms not defined herein shall have the meanings ascribed to them in the REOA.

- 1.1 “Access Agreement” means that certain Perpetual Property Access Agreement dated June 1, 2023, recorded with the Hennepin County Registrar of Titles’ Office on September 14, 2023 as Document # 6035845.
- 1.2 “City” means City of Minneapolis, a municipal corporation, home rule city, and political subdivision of the State of Minnesota.
- 1.3 “Design Modifications” mean the changes made to the Southern Regional Treatment System by mutual agreement of the Parties as a result of the Parties determining the Southern Regional Treatment System is not performing in some respect as set out in the Performance Expectations.
- 1.4 “District System” has the same meaning given the term in the REOA.
- 1.5 “Engineer” means Barr Engineering Co.
- 1.6 “Final Designs” means the 100% design of the Southern Regional Treatment System and the Reuse Tank Component? prepared by the Engineer dated _____, 2024 as more fully described in Exhibit B that have been approved by City.

- 1.7 “MWMO” means the Mississippi Watershed Management Organization, a joint powers watershed pursuant to Minnesota Statutes, Sections 103B.201-103B.251, and organized under the laws of the State of Minnesota.
- 1.8 “Party” or “Parties” means one or more of the parties to this Southern Regional Treatment System Agreement named in the first paragraph of this Agreement, and their successors or assigns.
- 1.9 “Performance Expectations” means the expectations of the Parties with respect to the functionality and costs related to the Southern Regional Treatment System as outlined in Exhibit C.
- 1.10 “Property” means Lot 3, Block 3 according to the plat of Upper Harbor Development, Hennepin County, Minnesota.
- 1.11 “REOA” means the Upper Harbor Reciprocal Easement and Operating Agreement, dated September 7, 2023, between the MWMO, the City, and the City of Minneapolis Acting by and through its Park and Recreation Board recorded on September 12, 2023 as Document No. T6035280 as amended from time to time, pursuant to which, certain easements were dedicated for the purposes of constructing, operating and maintaining the District System and the Southern Regional Treatment System (the “Easement Area”).
- 1.12 “Reuse Tank Component” means the reuse tank, the force main connected to it, and all other piping and wiring installed as part of the project to support the function of the reuse tank. The Reuse Tank Component encompasses those improvements NOT shown in blue on the drawing attached hereto as Exhibit A.
- 1.13 “Southern Regional Treatment System” means the improvements related to an underground filtration water quality best management practice and storage system (to be located exclusively on Parcel 5 as reflected in blue on the Final Designs to be owned and operated by City. The Southern Regional Treatment System will include any pretreatment required for the filtration system as well as the connections to the City’s existing stormwater infrastructure. The Southern Regional Treatment System encompasses those improvements shown in blue on the drawing attached hereto as Exhibit A and does not include the Reuse Tank Component.
- 1.14 “Southern Regional Treatment System Agreement” (or “this Agreement”) means this Southern Regional Treatment System Agreement to provide for the construction and on-going operation and maintenance of the Southern Regional Treatment System and the Reuse Tank Component.

SECTION 2. SOUTHERN REGIONAL TREATMENT SYSTEM

- 2.1 MWMO Obligations. Pursuant to this Agreement, subject to the terms herein, MWMO has agreed to do the following:
- Work cooperatively with City and other parties and Consulting Parties to the REOA to amend the REOA to provide for the construction of the Southern Regional Treatment System and the Reuse Tank Component in 2024;
 - Pay the costs of the Engineer to design the Southern Regional Treatment System and the Reuse Tank Component;

- Pay for the capital costs of constructing the Southern Regional Treatment System and the Reuse Tank Component;
- Let the contract and pay for the construction of the Southern Regional Treatment System and Reuse Tank Component, including construction oversight;
- Provide a project manager for oversight of the construction and inspections of the Southern Regional Treatment System and the Reuse Tank Component;
- If the Southern Regional Treatment System does not perform in some respect as provided in the Performance Expectations, work cooperatively with City to develop and install, at MWMO's expense, Design Modifications to the Southern Regional Treatment System or the Reuse Tank Component; and
- Pay any operation and maintenance costs on the Southern Regional Treatment System in any year that City's costs to operate and maintain the Southern Regional Treatment System exceed City's annual \$120,000 cap as adjusted in Section 7.3 below.

2.2 City Obligations. Pursuant to this Agreement, subject to the terms herein, City has agreed to do the following:

- Work cooperatively with MWMO and other parties and Consulting Parties to the REOA to amend the REOA to provide for the construction of the Southern Regional Treatment System in 2024;
- Accept ownership of the Southern Regional Treatment System once it is constructed pursuant to the system inspection and commissioning process in Section 5.6. below;
- Operate and maintain the Southern Regional Treatment System consistent with Section 7 of this Agreement through 2044;
- If the Southern Regional Treatment System does not perform in some respect as provided in the Performance Expectations, work cooperatively with MWMO to develop Design Modifications to the Southern Regional Treatment System provided the City shall not be required to incur any additional capital, operations or maintenance costs; and
- Accept sole responsibility to operate and maintain the Southern Regional Treatment System at City's own costs, as it determines is needed, as of January 1, 2045. at which point, this agreement terminates unless otherwise extended by agreement of the parties.

2.3 Separation of Project Components. This Agreement provides for the installation of the Southern Regional Treatment System and the Reuse Tank Component as part of the same project, but the ownership and responsibility to provide for the on-going maintenance and operation of each component part are separate. The City will own and provide for the on-going operation, maintenance and replacement of the Southern Regional Treatment System, while the Reuse Tank Component will become part of the District System and will be owned, operated, maintained and replaced as part of that system, all in accordance with the terms and conditions of this Agreement and, with respect to the District System, in accordance with the REOA.

2.4 Additional Information. For additional information regarding the Southern Regional Treatment System, refer to Sections 3.3, 3.4, 4.8, 5.2, 5.3, 7.1, 9.6, 15.1 through 15.10, and 17.3 of the REOA.

2.5 Term. Unless terminated early pursuant to Section 5.1 below or extended by agreement of the parties, this Agreement shall terminate on January 1, 2045, at which time, MWMO shall no longer have any obligation to contribute to the costs of the Southern Regional Treatment System and the City may, in its sole discretion, make decisions on how to operate, maintain or replace the Southern Regional Treatment System.

SECTION 3. MWMO AND CITY GOALS FOR SOUTHERN REGIONAL TREATMENT SYSTEM

- 3.1 City Goals. City's goals for the Southern Regional Treatment System are to provide a regional stormwater treatment system to effectively and efficiently improve water quality prior to discharge to the Mississippi River. City's goal is also to have a regional stormwater treatment system that is comparable to or more efficient on a cost per pound basis than City's other stormwater treatment facilities.
- 3.2 MWMO Goals. MWMO's goals for the Southern Regional Treatment System are to provide a primary source of treated water that will improve the quality, functionality, and performance of the Upper Harbor's District System, with an emphasis on the water volume, quality, flow rate, and temperature needed to establish and maintain the living Ephemeral Stream System's macroinvertebrates taxa including mayflies, dragonflies, and damselflies which will intermittently be discharged directly into the Mississippi River.

SECTION 4. DESIGN OF SOUTHERN REGIONAL TREATMENT SYSTEM

- 4.1 Engineer. MWMO has engaged the Engineer to lead the design of the Southern Regional Treatment System and the Reuse Tank Component up to the Final Designs.
- 4.2 Design and Construction Costs. MWMO has agreed to pay for the design and construction of the Southern Regional Treatment System and the Reuse Tank Component.
- 4.3 Design. MWMO and Engineer have coordinated with City on the design of the Southern Regional Treatment System.

SECTION 5. CONSTRUCTION OF SOUTHERN REGIONAL TREATMENT SYSTEM

- 5.1 Agreement Contingencies. This Agreement, and MWMO's obligation to construct the Southern Regional Treatment System, are contingent upon the following:
 - a. MWMO determining, in its sole discretion, that the costs to construct the Southern Regional Treatment System and the Reuse Tank Component, based on the bids it receives, is reasonably feasible on or before _____, 2024 and starting construction of the Southern Regional Treatment System by _____, 2024 ;
 - b. MWMO and City collaboratively obtaining an amendment to Section 5.2 of the REOA to allow MWMO the right to access the Easement Area of the REOA and proceed with building the Southern Regional Treatment System prior to June 1, 2025 on the Property pursuant to Section 17.3 of the REOA.

If the preceding conditions in this Section 5.1 are not met or waived by the parties by _____, 2024, this Agreement shall terminate automatically and neither party shall have any further obligations hereunder.

- 5.2 Initial Requirements. MWMO must work with the parcel developers impacted by the construction of the Southern Regional Treatment System and the Reuse Tank Component in order to minimize any issues caused by the construction of the Southern Regional Treatment System and the Reuse Tank Component.

- 5.3 Pre-Construction Responsibilities. MWMO agrees to obtain the permits necessary for constructing the Southern Regional Treatment System and the Reuse Tank Component, including, but not limited to, permits from the Minnesota Pollution Control Agency (including construction stormwater permit), the National Pollutant Discharge Elimination System permit, City soil erosion permit, and the construction permit.
- 5.4 Construction of Southern Regional Treatment System. MWMO will comply with applicable statutory municipal contracting procedures to advertise for bids, accept and review bids, and to award the contract, if the MWMO determines the project is financially feasible, to construct the Southern Regional Treatment System. MWMO will not award the contract unless this Agreement has been fully executed and the contingencies identified in Section 5.1 above have been satisfied.
- 5.5 Changes in the Work. MWMO shall not permit changes to the Final Plans without the City's prior written approval, which approval will not be unreasonably withheld.
- 5.6 System Inspection and Commissioning. The Southern Regional Treatment System will need to be inspected and tested by MWMO with the results forwarded to City for approval to confirm that the Southern Regional Treatment System meets or exceeds the Performance Specifications of the Southern Regional Treatment System stated in the corresponding approved Final Designs as a condition of the City accepting ownership of the Southern Regional Treatment System. Until such time as the City accepts ownership pursuant to Section 7 below, MWMO shall retain ownership and all financial responsibility for the Southern Regional Treatment System. City agrees it will not unreasonably delay the acceptance process or unreasonably refuse to accept financial responsibility for the Southern Regional Treatment System.
- 5.7 Repairs Required Due to Construction. Any repairs required due to the construction of the Southern Regional Treatment System or the Reuse Tank Component on the impacted parcels shall be addressed by MWMO in accordance with Section 4.9 of the REOA.
- 5.8 Failure to Meet Performance Expectations. If the Southern Regional Treatment System does not meet the Performance Expectations, MWMO will work with City to ensure that the Performance Expectations are being met or a Design Modification is installed as provided herein.

SECTION 6. MODIFICATIONS OF SOUTHERN REGIONAL TREATMENT SYSTEM

- 6.1 Performance Expectations. The Performance Expectations of the Parties associated with the Southern Regional Treatment System are set out in the memo attached hereto as Exhibit C, which were developed as part of the Engineer's Final Design. The Parties agree the Performance Expectations will be used to identify whether any Design Modifications are needed to the Southern Regional Treatment System because it is not performing in some respect as intended. Any such agreed upon Design Modifications will be made by MWMO at MWMO's expense. At no time is City required to agree to any Design Modification that in the City's reasonable determination imposes additional capital, operating or maintenance costs on the City.
- 6.2 Evaluation of Southern Regional Treatment System Performance. The Parties agree Exhibit C represents a modeled estimated benchmark of performance for the Southern Regional Treatment System. MWMO and City agree to work cooperatively to review the data developed from the monitoring provided for in Section 11 of this Agreement to develop an accurate trend line to help determine if the actual performance of the Southern Regional Treatment System is effectively meeting the goals of each Party or if Design Modifications are needed.

- 6.3 Design Modifications. City may transition to an alternate Southern Regional Treatment System design plan if the Southern Regional Treatment System is not performing as designed or in accordance with the Performance Expectations. City and MWMO will work together in good faith for a period not to exceed 12 months to identify and implement Design Modifications that meet both Parties goals. The Parties understand and agree the implementation of any agreed upon Design Modification may extend beyond the initial 12-month period. Possible Design Modifications may include decommissioning or replacing individual components of the Southern Regional Treatment System or the Southern Regional Treatment System altogether, in place of a treatment system that does more for lower costs and maintains MWMO's goal for the living ephemeral stream system's macroinvertebrates taxa. Notwithstanding the foregoing, however, if the Performance Expectations on Exhibit C are not being met and City and MWMO cannot agree upon such Design Modifications, or if MWMO is unwilling to continue to reimburse City for costs of maintenance over and above the maintenance cap in Section 7.3 below, City may make such modifications at its own cost and this Agreement shall terminate.

SECTION 7. OPERATIONS AND MAINTENANCE OF SOUTHERN REGIONAL TREATMENT SYSTEM

- 7.1 Ownership. Upon completion of the Southern Regional Treatment System construction, system inspection and testing in accordance with Section 5 of this Agreement and written acceptance by City's Director of Surface Water and Sewers, the Southern Regional Treatment System shall become City property and operated and maintained consistent with Public Works infrastructure policies.
- 7.2 Operations and Maintenance. Subject to adequate future appropriations from City budget process, City agrees to maintain and operate the Southern Regional Treatment System in a manner consistent with other stormwater management BMPs it is responsible for and in manner reasonable to help achieve the Performance Expectations. If City determines, for any reason, it is not possible to continue to maintain and operate the Southern Regional Treatment System to this degree, City shall consult in good faith with MWMO on potential Design Modifications to the system or its operations as provided in Section 6 of this Agreement.
- 7.3 Maintenance Cap. If City's costs to operate and maintain the Southern Regional Treatment System in any year through 2044 exceeds \$120,000 (annually adjusted as provided herein), MWMO agrees to pay the additional maintenance costs for such year. City shall notify MWMO if it anticipates its costs will exceed the amount of the maintenance cap in a year and shall work cooperatively with MWMO to identify the scope of the needed work that will exceed the above cap. The amount of the maintenance cap shall annually be adjusted by increasing it by 2% over the amount of the previous year's maintenance cap.
- 7.4 Continued Functionality. The City agrees it will not unreasonably divert water from the District System after this Agreement terminates to help ensure the continued flow of water volume into the District System provided that the City is under no obligation to ensure any continued flow of water volume into the District System by keeping the Southern Regional Treatment System in operation or by maintaining the Southern Regional Treatment System to any particular level.

SECTION 8. INTENTIONALLY LEFT BLANK

SECTION 9. TREATMENT LEVELS

City is not committing to providing any defined level of treatment for the Southern Regional Treatment System as it relates to anticipated reuse needs in the District System. City is making no assurances as to the quality, volume, flow rate, or temperature of the treated water from the Southern Regional Treatment System. However, City agrees to work cooperatively with MWMO to identify and consider changes that may improve the treated water to better support MWMO's goals for reuse of the water including, but not limited to, operational changes or Design Modifications as provided for herein so long as such changes or modifications shall not impose any additional capital, operating or maintenance costs on the City.

SECTION 10. EMERGENCY RESPONSE.

- 10.1 Preparation of Plan. MWMO has hired the Engineer to draft a Regional Emergency Response Plan for the Southern Regional Treatment System. City and MWMO, along with Engineer, will work together to review, revise, and approve the Emergency Response Plan. The manual will be completed as a part of the Southern Regional Treatment System construction documents.
- 10.2 Implementation. City will make reasonable attempts to follow the protocols in the Regional Emergency Response Manual in order to limit the impacts to Southern Regional Treatment System or the downstream District System.
- 10.3 Temporary Shutdown. If the Southern Regional Treatment System is being negatively impacted by stormwater entering the Southern Regional Treatment System, then City can temporarily shut down the Southern Regional Treatment System until the conditions negatively affecting the Southern Regional Treatment Systems have been remedied. If MWMO determines the Southern Regional Treatment System is being negatively impacted, it may request City to temporarily shut down the Southern Regional Treatment System. The City agrees to reasonably review such request and provided the City is in agreement, act as soon as is reasonably possible to shut down the Southern Regional Treatment System.

SECTION 11. MONITORING AND RESEARCH

- 11.1 Monitor Performance. MWMO will, at its option and expense, monitor performance of the Southern Regional Treatment System in accordance with the monitoring protocols established by the City and MWMO for the Southern Regional Treatment System during the term of this Agreement. The City may, at its discretion, additionally monitor the Southern Regional Treatment System on its own behalf or through another agent at the City's own cost.
- 11.2 Monitoring Protocols. MWMO and City will establish monitoring protocols before construction of the Southern Regional Treatment System is completed. These will include but are not limited to the following:
 - Identify the purpose of the monitoring defining the monitoring season;
 - Establish the procedures to be followed in order to access the Southern Regional Treatment System;
 - Setting water quality parameters to be monitored;
 - Gathering data needed for future loading calculations;
 - Setting an end date for regular seasonal monitoring;
 - Both parties agree to meet and discuss future monitoring needs and the roles each will take on;

- What entity will provide the resources, including equipment, staff, and transportation to carry out the monitoring; and
- What reporting may be required.

SECTION 12. STORMWATER CREDITS AND REUSE WATER

- 12.1 Stormwater Credits. To the extent any stormwater runoff volume or pollution reduction credits may be generated and assignable under applicable laws resulting from the installation and operation of the Southern Regional Treatment System or the Reuse Tank Component, those credits shall be assigned to the Parties as provided in this section. City shall receive any such credit attributable to the treatment provided by the Southern Regional Treatment System and MWMO shall receive any such credit attributable to the additional water volume that goes into the District System from the Southern Regional Treatment System. If a Party receives any credits, it may utilize the credits as it determines is appropriate.
- 12.2 Reuse Water. The parties agree MWMO will own the treated stormwater discharged from the Southern Regional Treatment System to the District System and MWMO will use such to support Habitat Restoration and the Ephemeral Stream consistent with Sections 15.9 and 16 of the REOA. If MWMO determines the amount of discharged water exceeds the amount needed to support Habitat Restoration and the Ephemeral Stream, it may transfer the excess capacity to others.

SECTION 13. INSURANCE

- 13.1 Construction Phase Insurance. MWMO will cause the contractor or contractors that constructs the Southern Regional Treatment System to obtain and maintain at all times during the process of constructing the Southern Regional Treatment System the following insurance policies:
- a. An All Risk Broad Form Basis Insurance Policy covering the following: builder's risk insurance, written on the so-called "Builder's Risk – Completed Value Basis," in an amount equal to one hundred percent (100%) of the insurable value of the Southern Regional Treatment System at the date of completion with a "no co-insurance" clause, and with coverage available in nonreporting form on the so-called "all risk" form of policy; the interest of City shall be protected as a loss-payee in accordance with a clause in form and content satisfactory to City; and
 - b. Comprehensive general liability insurance (including operations, contingent liability, operations of subcontractors, completed operations and contractual liability insurance) together with a Protective Liability Policy with limits against bodily injury and property damage of not less than \$2,000,000 for each occurrence (to accomplish the above-required limits, an umbrella excess liability policy may be used); City shall be listed as an additional insured on the policy; and
 - c. Workers' compensation insurance, with statutory coverage; and
 - d. Automobile liability coverage in an amount not less than \$1,000,000 (combined single limit) for owned, hired and non-owned automobiles; and
 - e. Payment and performance bonds as required by the Uniform Municipal Contracting Law, Minn. Stat. § 471.345.

- 13.2 City Provided Coverage. Pursuant to authority granted in Minn. Stat. §471.981, City of Minneapolis is a self-insured municipality. Minn. Stat. § 466.04 (2014) limits liability of a municipality on any claim within the scope of Minn. Stat. §§ 466.01 to 466.15 (2014) to \$500,000 to any claimant on or after July 1, 2009; and \$1,500,000 for all claims arising out of a single occurrence for claims arising on or after July 1, 2009. City also is self-insured under the State of Minnesota's workers compensation laws.
- 13.3 Insurance Policies. All insurance required in this Section 13 shall be taken out and maintained with responsible insurance companies which are authorized under the laws of the State of Minnesota to assume the risks covered thereby. If requested by any Party, the other Parties will provide evidence of insurance.
- 13.4 Waiver of Subrogation. MWMO hereby waives and releases the other parties to the REOA (the "Released Parties") from any liability for any loss or damage to all property within the Easement Area, which loss or damage is of the type covered by the insurance required to be maintained under Section 13.1, regardless either of any negligence (but not intentional acts) on the part of any Released Party, which may have contributed to or caused such loss, or of the amount of such insurance required or actually carried, including any deductible, retention or self-insurance reserve.

SECTION 14. LIABILITY; INDEMNIFICATION

- 14.1 Each Party Responsible for Own Acts. Except as provided below, each Party is responsible for its own acts and the results thereof to the extent authorized by law and a Party is not responsible for the acts of the other Party or the results thereof. Nothing in this Agreement shall constitute a waiver of any limits on or exclusions from liability available to City and MWMO under Minnesota Statutes, Chapter 466 or other laws. Furthermore, notwithstanding anything herein to the contrary, each Party shall only be liable for default of its obligations or violation of the terms of this Agreement. No Party shall be personally liable to any other Party or any person, or any successor in interest thereto, in the event of any default or breach under this Agreement or for any amount of money that may be due and payable hereunder.
- 14.2 Indemnification of other Party. Each Party shall indemnify, defend, and hold harmless the other Party from and against any and all liability, damage, expense, cause of action, suit, claim, or judgment (including without limitation reasonable attorneys' fees) arising from personal injury, death, or property damage if caused by the negligence or wrongful, fraudulent or criminal act or wrongful omission or act of the indemnifying owner, its employees, agents or contractors occurring during the term of this Agreement relating to any of the easements, breach of this Agreement, and/or the exercise of any rights under this Agreement, except to the extent occasioned by the indemnified Party, or its employee's, agent's or contractor's own negligent or wrongful, fraudulent or criminal act or wrongful omission to act.
- 14.3 Survival. The provisions of this Section 14 shall survive termination of this Agreement.

SECTION 15. EVENT OF DEFAULT

If any Party defaults under this Agreement (the "Defaulting Party"), and such default continues for thirty (30) days after written notice thereof in the event of a failure to pay money, or for sixty (60) days after written notice thereof in the event of a non-monetary default (provided that in the case of a non-monetary default, if the default cannot reasonably be cured within sixty (60) days, then such additional time as shall be reasonably necessary), then the non-defaulting Party giving notice of such default (the "Non-Defaulting

Party”) shall be entitled to seek, as its sole remedies, damages for non-performance or specific performance of this Agreement; provided, however, that after the time for curing of such default has expired, the Non-Defaulting Party may cure such default (but shall not be obligated to do so) and shall, to the extent permitted by law, have a claim against the Defaulting Party in the amount of any out-of-pocket costs and expenses incurred and damages suffered as a result of such default and the cure of such default, including any reasonable costs and expenses incurred and damage suffered as a result of maintenance and repair (in the event of a non-monetary default), and including any out-of-pocket costs and expenses of collection thereof (the “Cure Expenses

SECTION 16. NOTICES

Except as otherwise expressly provided in this Agreement, a notice, demand, or other communication under this Agreement by any Party will be sufficiently given or delivered if it is dispatched by delivery service (such as FedEx), registered or certified mail, postage prepaid, return receipt requested, or delivered personally to the corresponding Party at the following addresses or at such other address(es) with respect to any such Party as that Party may, from time to time, designate in writing and forward to the other, as provided in this Section 16:

For MWMO:

Executive Director
Mississippi Watershed Management Organization
2522 Marshall Street NE
Minneapolis, MN 55418
Telephone: 612-746-4971
Email: kreich@mwmo.org

For City:

Jeremy Strehlo
City of Minneapolis
Department of Public Works
Room 300, Public Service Center
Minneapolis, MN 55415

Email: jeremy.strehlo@minneapolismn.gov

A notice or other communication shall be deemed to have been given to a Party, and shall be effective, (i) if delivered by hand, when physically received by an officer of such Party, or other person authorized by the Party to receive notice, (ii) if delivered by an overnight delivery service, on the next business day following the business day such notice or other communication is timely delivered to the overnight service, or (iii) if delivered by mail, on the third business day following the date such notice or other communication is deposited in the U.S. mail postage prepaid addressed to the other Party, whichever occurs earliest.

Each Party shall promptly notify the other Party if they change their contact person.

SECTION 17. AMENDMENTS TO AGREEMENT

This Agreement may be amended only by written agreement of the Parties.

SECTION 18. MISCELLANEOUS

18.1 Nondiscrimination. The Parties agree to abide by the requirements and regulations of the Americans with Disabilities Act of 1990 (ADA), the Minnesota Human Rights Act (Minnesota Statutes, Chapter

363), and Title VII of the Civil Rights Act of 1964. These laws deal with discrimination based on race, gender, disability, and religion, and with sexual harassment.

- 18.2 Audit. All Parties agree that any Party, the Minnesota State Auditor, or any of their duly authorized representatives, at any time during normal business hours and as often as they may reasonably deem necessary, shall have access to and the right to examine, audit, excerpt and transcribe any books, documents, papers, and records that are relevant and involve transactions relating to this Agreement.
- 18.3 Applicable Law. The law of the State of Minnesota shall govern all interpretations of this Agreement, and the appropriate venue and jurisdiction for any litigation that may arise under this Agreement will be in and under those courts located within the County of Hennepin, State of Minnesota.
- 18.4 Attorney Fees and Expenses. All Parties shall pay their own attorney fees and expenses.
- 18.5 Waiver. Failure to enforce any provision of this Agreement upon a violation of it will not be deemed a waiver of the right to do so as to that or any subsequent violation.
- 18.6 Severability. If any provision of this Agreement is held invalid, illegal, or unenforceable, the remaining provisions will not be affected.
- 18.7 Counterparts and Signature Pages. This Agreement may be executed in any number of counterparts, each of which will constitute one and the same instrument. The signatures to this Agreement may be executed on separate pages, and when attached to this Agreement, shall constitute one complete document.
- 18.8 Entire Agreement. This Agreement, including the recitals and the exhibits, which are incorporated in and made part hereof, represent the entire agreement between the Parties concerning the subject matter hereof.

(The remainder of this page is intentionally left blank.)

IN WITNESS WHEREOF, the Parties to this Agreement have executed this Southern Regional Treatment System Agreement on the dates written below.

MISSISSIPPI WATERSHED
MANAGEMENT ORGANIZATION

By: _____
Stephen Eggert
Its: Chair

By: _____
Randy Stille
Its: Vice Chair

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me on _____, 2024, by Stephen Eggert, the Chair of the Mississippi Watershed Management Organization, a joint powers watershed pursuant to Minnesota Statutes, Sections 103B.201-103B.251, and organized under the laws of the State of Minnesota, on behalf of Mississippi Watershed Management Organization.

Notary Public

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me on _____, 2024, by Kevin Reich, the Executive Director of the Mississippi Watershed Management Organization, a joint powers watershed pursuant to Minnesota Statutes, Sections 103B.201-103B.251, and organized under the laws of the State of Minnesota, on behalf of Mississippi Watershed Management Organization.

Notary Public

CITY OF MINNEAPOLIS

By: _____

Dushani Dye

Its: Finance Officer

Responsible Department Head:

Angella M. Craft,
Director of Surface Water and Sewers
Approved as to Form:

By Assistant City Attorney

STATE OF MINNESOTA)
) SS.
COUNTY OF HENNEPIN)

The foregoing instrument was acknowledged before me on _____, 2024, by Dushani Dye, the Finance Officer of City of Minneapolis, a home rule charter city, on behalf of City of Minneapolis.

Notary Public

EXHIBIT A

PARTNERS' AND DISTRICT SYSTEM RESPONSIBILITIES SOUTHERN REGIONAL TREATMENT SYSTEM COMPONENTS

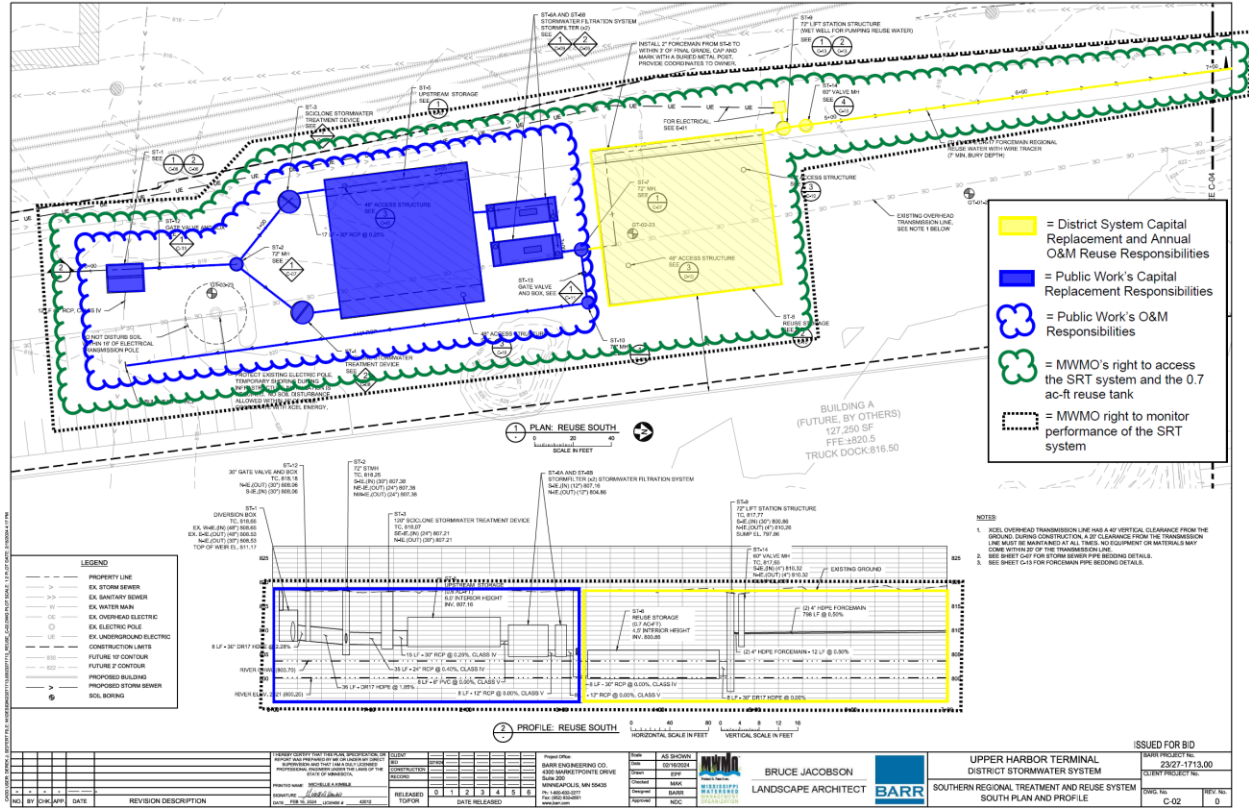


EXHIBIT B **FINAL DESIGN PACKAGE** **FOR THE SOUTHERN REGIONAL TREATMENT SYSTEM**

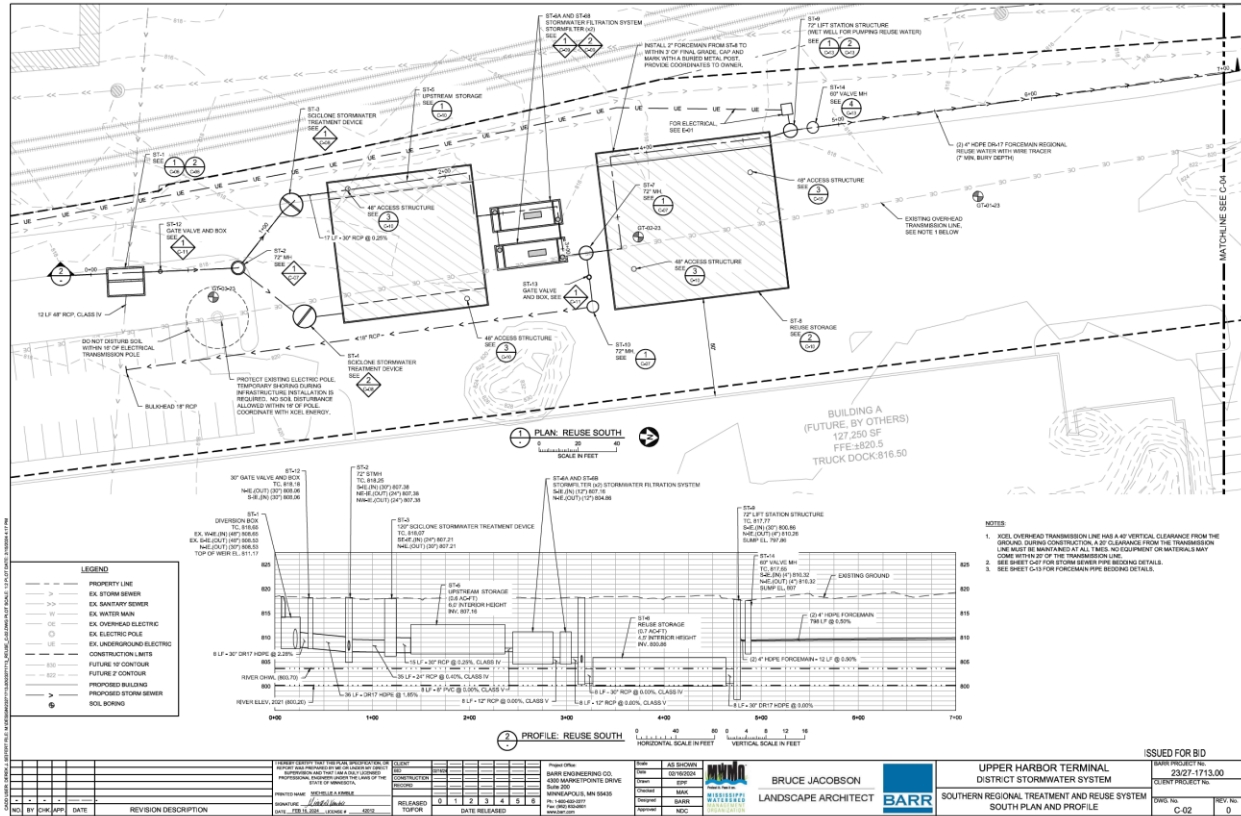


EXHIBIT C

ESTIMATED TREATMENT AND COST PERFORMANCE MEMO

resourceful. naturally.
engineering and environmental consultants



Technical Memorandum

To: Jeremy Strehlo, City of Minneapolis
From: Barr Engineering Co. and Mississippi Watershed Management Organization
Subject: UHT Southern Regional Treatment Performance
Date: January 5, 2024
Project: 23/27-1713

1 Introduction

This memorandum summarizes the water quality performance of the Upper Harbor Terminal (UHT) Southern Regional Treatment system (SRT) as it relates to the City of Minneapolis' (City) Chapter 54 stormwater regulations. Barr Engineering Co. (Barr) prepared this memo on behalf of the Mississippi Watershed Management Organization (MWMO). This memorandum also summarizes Barr's review of third party data regarding total suspended solids (TSS) removal efficiencies for Manufactured Treatment Devices, specifically the StormFilter system. Additionally, a comparison of the MWMO's St. Anthony Village Filter (SAVF) and SRT is included for the City's review.

2 Manufactured Treatment Device TSS Removal Efficiency

Barr reviewed industry documentation on Manufactured Treatment Devices (MTD), such as the StormFilter, to better understand the potential TSS removal efficiency of the SRT.

The primary source Barr reviewed was the MPCA's "TP and TSS credits and guidance for manufactured treatment devices" that was published by the MPCA based on research and technical review from stormwater professionals in Minnesota. The MPCA review covers a wide variety of MTDs, including the Contech StormFilter cartridges. To derive credits for the MTDs the MPCA reviewed, data were compiled from the Technical Evaluation Reports (TERs) for Washington State's Technology Assessment Program (TAPE). They analyzed data for all storm events for each device, and developed removal efficiencies from statistical analysis of the data. The MPCA also reviewed particle distributions of sediment across the different geographies where data is collected, and found that the reviewed data falls within an acceptable range for the Midwest. The median TSS removal efficiency for the StormFilter for runoff that flows through the cartridges is reported as 89%. The lower 95th percent confidence limit is reported as 85%, which is the maximum TSS credit that the MPCA gives for an MTD.

Barr also reviewed a technical summary published by the Capitol Region Watershed District (CRWD), where the watershed reviewed crediting for several MTDs to incorporate into its stormwater rules. The CRWD also reviewed the Washington TAPE data, as well as the New Jersey Corporation for Advanced Technology (NJCAT)'s review of filtration MTDs and pretreatment devices. Aside from the TAPE efficiencies mentioned above, the NJCAT credits hydrodynamic separators with a 50% TSS removal

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efficiency, and StormFilters with an 80% TSS removal efficiency. The CRWD accepts TSS credits from both TAPE and/or NJCAT.

For the subsequent sections, Barr assumed that the StormFilter removal efficiency for the SRT is 80%, which is the lowest removal efficiency published by the data reviewed.

3 SRT Design

3.1 Comparison of Filtration Technology

Barr conducted an analysis comparing two different filtration technologies for a regional stormwater treatment system to decide which would be most appropriate for the SRT. The sections below outline important components of both technologies, including size, maintenance, cost, and pollutant removals.

3.1.1 StormFilter

A StormFilter is a proprietary filtration vault manufactured by Contech Inc. The vault contains dozens of cartridges that utilize a proprietary filtration media. Below are the advantages and disadvantages of using a StormFilter for the regional water quality treatment:

Advantages:

- Small footprint: because of the proprietary technology, the StormFilter takes up a much smaller footprint than a traditional water quality BMP. This allows for more space onsite to add underground storage volume. One StormFilter vault size that holds 52 cartridges is 10 ft by 24 ft. The vaults come in larger sizes if more cartridges are needed.
- Treatment: the filtration media has a high removal efficiency for TSS. The media removes 80-85% of TSS, which is similar to a traditional sand filter (Minnesota Stormwater Manual). Additionally, because the StormFilter has a higher filtration rate than a sand filter, it can treat more runoff volume and remove more TSS load.

Disadvantages:

- Maintenance: the cartridges require annual to biannual maintenance including media replacement and removing accumulated debris and solids within the vault. Because of the size of the vault, accumulation rates may be faster than traditional BMPs that are larger in size and the vault may need to be maintained more frequently.
- Cost: the StormFilter capital cost is higher than a traditional water quality BMP like a sand filter.

3.1.2 Iron-Enhanced Sand Filter

A sand filter is a common water quality BMP used to filter runoff of particulates. When an amendment is added to the sand filter, such as iron filings, the dissolved phosphorus treatment increases. Below are the advantages and disadvantages of using an iron-enhanced sand filter for the regional water quality treatment:

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Advantages:

- Cost: the sand filter construction cost is less expensive than a proprietary device manufacturing cost
- Treatment: the iron-enhanced sand filter treatment is slightly lower than the StormFilter, but still removes a significant amount of pollutants

Disadvantages:

- Large footprint: a sand filter requires a larger footprint than a StormFilter due to its lower conductance (i.e., filtration rate to meet drawdown requirements).
- Potential reduced effectiveness: Recent research and monitoring of iron-enhanced sand filtration suggests that filters that are not exposed to direct sunlight may not fully dry out and can become anoxic, reducing the dissolved phosphorus-removal effectiveness of the filter and potentially releasing previously captured dissolved phosphorus.
- Maintenance: underground sand filters present several maintenance challenges, including allowing the sand bed to dry out completely, preventing clogging of the surface and easy access to clean out clogs.

3.1.3 Sand Filter

Like an iron-enhanced sand filter, a regular sand filter is a common water quality BMP used to filter particulates from runoff. However, a sand filter without a chemical amendment does not have the capability to remove dissolved phosphorus. The TSS removals for a sand filter are similar to that of an iron-enhanced sand filter. Below are the advantages and disadvantages of using a sand filter for the regional water quality treatment:

Advantages:

- Cost: the sand filter construction cost is less expensive than a proprietary device manufacturing cost

Disadvantages:

- Treatment: the sand filter treatment is less effective than an iron-enhanced sand filter and the StormFilter, due to its inability to remove dissolved phosphorus
- Large footprint: a sand filter requires a larger footprint than a StormFilter due to its lower conductance (i.e., filtration rate to meet drawdown requirements).
- Maintenance: underground sand filters present several maintenance challenges, including allowing the sand bed to dry out completely, preventing clogging of the surface and easy access to clean out clogs.

3.2 SRT Components

The SRT is a regional stormwater filtration and storage system that treats stormwater runoff from approximately 73 acres of primarily residential land use in the City. The proposed location of the SRT is on the southern end of the UHT site (west side of Parcel 5).

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The SRT consists of the following components that work to divert stormwater flow, treat the stormwater, and either store it or send it back to the Mississippi River:

- Diversion structure along 48-inch existing trunkline
- Two 10-foot diameter pretreatment CDS (hydrodynamic separator units) in parallel
- Rate control storage (0.6 acre-ft)
- StormFilter vaults (2) with a total of 203 filtration cartridges
- Reuse water storage (2.5 acre-ft)
- Overflow 18-inch pipe to 48-inch storm sewer (outlet at Mississippi River)

4 SRT Performance

The following subsections describe the performance of the SRT for both total suspended solids (TSS) removal and volume abstraction. The City's Chapter 54 stormwater ordinance requires that at least 70% of TSS be removed from stormwater runoff for a 1.25 inch event, which is equivalent to approximately 80–90% TSS removed on an annual basis. Additionally, the stormwater ordinance requires 0.55 to 1.1 inches of runoff be abstracted depending on the project type (i.e. linear projects require 0.55 inches of runoff abstraction). While the SRT does not trigger Chapter 54 requirements because its performance is not being used to meet development requirements, the City has expressed interest in quantifying the performance of the SRT for creation of stormwater credits to be used on future City projects.

4.1 Pretreatment Performance

The CDS units that are a part of the SRT design remove TSS and floatable pollutants from the stormwater inflow. Pretreatment is a critical component of any stormwater treatment as it provides a centralized mechanism for treatment of larger pollutants and can be maintained in a cost effective manner.

Barr worked with the manufacturer Contech Engineering Solutions (Contech) to design the CDS units for the SRT. The two 10-foot diameter CDS units will work in parallel to treat the diverted stormwater runoff before it enters the rate control storage.

Using the City's water quality (P8) model of the watershed (Barr, 2018), the total influent volume to the diversion structure of the SRT is approximately 35.5 acre-ft per year. The total influent TSS load to the diversion structure of the SRT is approximately 11,100 lbs/yr. Approximately 26.5 acre-ft/yr and 8,290 lbs/yr of TSS are diverted to the treatment system, while 9 acre-ft/yr and 2,811 lbs/yr of TSS bypasses the system in larger storm events as untreated to the Mississippi River.

There are two methods that were used to quantify the TSS removal efficiency of the pretreatment structures. One method was the SHSAM model that predicts removals for various pretreatment devices, including CDS units. The other method was a proprietary model that Contech developed for its products. SHSAM predicted approximately 25% removal of TSS between the two pretreatment structures (assuming NURP50 particle distribution), while Contech's model predicted approximately 50% removal of TSS using a particle distribution of $d_{50} = 75 \mu\text{m}$. Using these two methods, Barr estimates that the pretreatment will remove a range of 2,073 to 4,145 lbs/yr of TSS. These removals represent 18.7% to 37.3% of the total TSS

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loading from the drainage area. Using a wet unit weight of approximately 150 lbs per cubic foot, this equates to a volume of 13.8 to 27.6 cubic feet of TSS removed per year. Pretreatment does not abstract any water volume. These results are also summarized in Table 1.

Table 1. Pretreatment Performance Summary

Pollutant Mass Balance Component	Value
Total TSS Inflow to Diversion Structure (lbs/yr)	11,100
Total Volume Inflow to Diversion Structure (ac-ft/yr)	35.5
Total TSS Inflow to Pretreatment (lbs/yr)	8,290
Total Volume Inflow to Pretreatment (ac-ft/yr)	26.5
Pretreatment Removal Efficiency of Treated Volume	25 - 50%
Pretreatment TSS Removal (lbs/yr)	2,073 - 4,145
Pretreatment Removal Efficiency of Total Runoff from Drainage Area	18.7 - 37.3%
Remaining TSS Load to Filtration (lbs/yr)	4,145 - 6,217

4.2 Filtration Performance

The filtration component of the SRT is designed to provide additional removal of finer particulate pollutants that are not removed by the pretreatment. The StormFilter, designed by Contech, utilizes cartridges filled with filtration media to remove pollutants.

Based on the range of performance of the pretreatment devices, the total TSS load to the filtration system is approximately 4,145 lbs/yr to 6,217 lbs/yr.

From Contech's modeling and technical specifications, as well as the data reviewed in Section 2, the StormFilter cartridges have a total TSS removal efficiency of at least approximately 80%. On an annual basis, this equates to approximately 3,316 to 4,974 lbs of TSS removed. When aggregated with the pretreatment removals, the total TSS removed on an annual basis ranges from 7,047 to 7,461 lbs. Compared to the influent TSS load from the watershed, these removals equate to 63.5% to 67.2%, which is lower than the City's stormwater requirements. The removals equate to 85% to 90% removal of the diverted/treated flow. Results are summarized in Table 2.

The filtration cartridges have an approximate capacity of 36 lbs TSS per cartridge. For a system with 203 cartridges, the total capacity is 7,308 lbs. This capacity shows that annual replacement of the cartridges would not be needed, but rather every two to three years the cartridges would need to be replaced. Filtration does not abstract any water volume.

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Table 2. Filtration Performance Summary

Pollutant Mass Balance Component	Value
Total TSS Inflow to Filtration (lbs/yr)	4,145 - 6,217
Filtration Removal Efficiency	80%
TSS Removed by Filtration (lbs/yr)	3,316 - 4,974
Total TSS Removed Pretreatment+Filtration (lbs/yr)	7,047 - 7,461
Pretreatment+Filtration Removal Efficiency of Total Runoff from Drainage Area	63.5% - 67.2%
TSS Load to Storage/UV Treatment (lbs/yr)	829 - 1,243

4.3 Storage and Volume Abstraction

The final component of the SRT is a large underground storage chamber that will be used to hold water for reuse in the ephemeral streams on the UHT site. The total storage volume is 2.5 acre-feet. Using the MWMO's stormwater reuse calculator, Barr estimated that approximately 15.8 acre-ft per year will be pumped through the ephemeral stream system, which is approximately 60% of the annual volume treated. Results are summarized in Table 3.

Prior to being pumped to the ephemeral streams, the reuse water will be treated through a filter and UV treatment system to further clean the water. It is important that the majority of the TSS load be removed prior to this step in the reuse water treatment, as maintenance and replacement of the filter is expensive and would be more frequent than the pretreatment or StormFilter cartridges. Because the ephemeral stream system is vegetated and connected to bioinfiltration basins onsite, it is assumed that this volume would be abstracted through infiltration or evapotranspiration. If this volume is abstracted, 100% of the remaining TSS (and other pollutants such as phosphorus) of the reused stormwater would be removed.

Table 3. Storage/Reuse Performance Summary

Pollutant Mass Balance Component	Value
% Treated Water Reused	60%
Volume of Water Reused (ac-ft/yr)	15.8
TSS Load Removed by Reuse (lbs/yr)	497 - 746

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4.4 Overall Performance

The entire treatment system from pretreatment to filtration to stream reuse (Common Reuse) is expected to remove, on average, over 80% of the runoff volume, TSS, and phosphorus from the tributary 73-acre watershed. The overall performance of the SRT and stream reuse is summarized in Table 4.

Table 4. Overall Performance Summary

Pollutant Mass Balance Component	Value
Total TSS Inflow to Diversion Structure (lbs/yr)	11,100
Total Volume Inflow to Diversion Structure (ac-ft/yr)	35.5
Total TSS Inflow to Pretreatment (lbs/yr)	8,290
Total Volume Inflow to Pretreatment (ac-ft/yr)	26.5
Total Volume Abstracted (ac-ft/yr)	15.8
Total TP Removal (lbs/yr) ¹	27.2
Total TSS Removal (lbs/yr) ²	7,544 – 8,207

¹TP removal estimates are from P8 modeling of filtration system (17 lbs/yr) assuming no dissolved phosphorus removal and infiltration of remaining untreated TP (10.2 lbs/yr).

²Includes TSS removal via filtration/infiltration in the recirculating streams/basins in the park and on Parcel 5. See Table 2 for the total removals of the SRTS only.

4.5 Capital Cost, O&M Cost, and Cost-Benefit of SRT System

The total approximate capital cost of the SRT system based on Barr's 90% design plans dated December 2023 is outlined in Table 5 below.

Table 5. SRT Capital Cost

Component	Cost	% of Total Cost
Mobilization, Construction Layout/Staking, Erosion Control, Removals	\$342,000	10%
Pretreatment Capital Cost	\$375,000	11%
StormFilter Capital Cost	\$716,000	22%
Structures and Piping	\$273,000	8%
Upstream Storage Cost	\$629,000	19%
Reuse Storage Cost ¹	\$676,000	20%
Contingency (10%)	\$301,000	9%
Total (-10% to 20%)	\$3,312,000 (\$2,981,000 to \$3,975,000)	100%

¹Reuse storage cost is not part of the water quality treatment performance of the SRT

Additionally, the estimated annual operations and maintenance costs are listed below in Table 6 by activity for the SRT system based on Barr's 90% design plans dated December 2023.

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Table 6. SRT O&M Cost

O&M Activity	Cost
Filter Cartridge Replacement	\$71,450
Pretreatment Vacuuming and Cleaning	\$2,200
Inspection of System	\$1,200
Administrative and Contingency Cost	\$14,970
Total	\$89,820

To understand the water quality benefit for each component of the SRT, Barr calculated an approximate annualized cost for each component to calculate the annual cost per pound of TSS removed. The annualized costs were calculated using a lifecycle of 30 years and an interest rate of 4%. The results are listed in Table 7 for a range of removals outlined in Section 4. Overall, the cost benefit for the SRT system components ranges from \$6 to \$12 for pretreatment and \$23 to \$34 for the StormFilter. These ranges are typical for stormwater treatment practices.

Table 7. SRT Annualized Cost Benefit for TSS Removal

SRT System	Component	Value
Pretreatment System	<i>Capital Cost</i>	\$375,000
	<i>O&M Cost</i>	\$3,400
	<i>TSS Removal (lbs/yr)</i>	2,073 - 4,145
	<i>Cost Benefit (\$/lb TSS)</i>	\$6 - \$12
StormFilter System	<i>Capital Cost</i>	\$716,000
	<i>O&M Cost</i>	\$71,450
	<i>TSS Removal (lbs/yr)</i>	3,316 - 4,974
	<i>Cost Benefit (\$/lb TSS)</i>	\$23 - \$34

5 Comparison of SRT and SAVF

Barr used the St. Anthony Regional Stormwater Treatment and Research Facility Report provided by the MWMO to conduct a comparison between the SRT and SAVF to better understand how the two systems perform against each other. This comparison is helpful in the design stage of the SRT project to get a better understanding of how well the SRT will perform once constructed.

Overall, the SAVF treats a much larger watershed and the total inflow volume to the system is about 15 times greater than the inflow volume to the SRT. However, the way the SAVF is configured, only about 19% of the inflow volume is treated by the StormFilter cartridges, compared to 100% of the SRT inflow volume being treated by the StormFilter cartridges. Therefore, the total treatment volumes passing through the cartridges at both sites are closer – about 3 times more volume at the SAVF.

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Based on MWMO's monitoring report, the SAVF pretreatment swirl chamber achieves approximately 59% removal of TSS from the inflow volume and the StormFilter cartridges achieve approximately 55% removal of TSS of the inflow volume to the cartridges. In a recent meeting with MWMO, Barr, and Public Works, it was noted that the SAVF cartridges only removed 160 pounds of TSS; however, this number in the report represents the total amount of sediment that settled on the floor of the cartridge vault, not the amount of sediment captured by the cartridges themselves.

The MPCA and other sources credit approximately 80-85% removal of TSS using StormFilter cartridges based on monitoring data. Barr suspects that the SAVF treatment capacity is lower than the SRT, and is therefore not removing as much TSS. The treatment capacity of each cartridge is approximately 36 pounds of TSS per cartridge. The SAVF has 40 cartridges, giving it a capacity of 1,440 lbs TSS, whereas the SRT has 203 cartridges, with a total capacity of 7,308 lbs TSS. For similar inflow volumes, the SRT would be able to capture approximately 2.8 times more TSS load.

While the monitoring data reported in the SAVF report is not a direct comparison of the removals listed in Table 4 for the SRT, a high level comparison of the two systems show that the pretreatment systems may perform similarly, while the StormFilter cartridges may perform better at the SRT given the greater number of cartridges and lower treatment volume.