MINNEHAHA CREEK WATERSHED DISTRICT

QUALITY OF WATER QUALITY OF LIFE

Land & Water Partnership Program

Partner Guidance

Contents

Program Purpose

A partnership and integrated planning approach

The lakes, streams, and wetlands that make up our landscape create a sense of place that provides a local identity, adds economic value, and increases well-being. The Minnehaha Creek Watershed District (MCWD) recognizes that protection and improvement of these water resources is best achieved through close coordination and partnership with its public and private partners acting on the landscape.

As a regional agency, the MCWD's strategy is focused on delivering impactful projects that provide regional benefit. Throughout the watershed, land use changes such as private development or public infrastructure projects create a window of opportunity for water resource improvements that may not reoccur for many years. The Land and Water Partnership (LWP) program is designed to identify these opportunities for integrated planning and develop collaborative projects that provide greater water resource and community benefit.

The LWP program provides technical and financial support for partner-led projects that provide significant water resource benefits. The program goals are to:

- Increase early coordination and integration of land use and water planning
- Leverage opportunities created through land use change to improve water resources
- Provide service and value to communities across the watershed

The LWP program, unlike a typical cost-share or grant program, is designed to promote early coordination and collaborative project development. Through this approach, the MCWD and its partners can align goals and priorities and identify opportunities for shared investment to provide greater benefit to the region.

Eligibility

The LWP program is designed to support partner-led projects that provide significant, regional water resource benefits. For the purposes of this program, a "significant" benefit is one that makes measurable and meaningful progress toward a water resource goal, and a "regional" benefit is one that extends beyond a project site to provide broader community value. The program has no defined cutoff for what is considered "significant" or "regional", but rather, MCWD will factor in the scale of benefit through the program's evaluation process.

Eligible activities: Capital projects with an extended, durable lifetime that will produce measurable outcomes toward identified MCWD water resource goals.

- Water quality example: A project that reduces pollutant loading (e.g., phosphorus) to a downstream waterbody, particularly an impaired or nearly impaired waterbody.
- Water quantity example: A project that reduces the volume and/or rate of stormwater runoff, thereby decreasing downstream flood risk, particularly in areas with known flooding issues and/or volume reduction targets.

Eligible partners: A state, regional, or local agency (e.g., municipality) or a large-scale private developer or landowner with the capacity to lead project implementation.

- For non-public partners, the program seeks active city sponsorship or support, to ensure both that the project aligns with local priorities and that there is partner capacity to implement it.

Technical and Financial Assistance

To promote early coordination and integration of land use and water planning, the LWP program provides technical and financial support from concept development through construction.

Project Concept:

- *Technical advisory support* and/or *funding up to 75%* for studies or preliminary engineering work (e.g., concept development, subwatershed assessment).

Project Feasibility:

- *Technical advisory support* (e.g., feasibility study scoping, regulatory screening, grant strategy) and/or *funding up to 75%* for feasibility work related to water resource improvements.

Project Implementation (Design and Construction):

- *Funding up to 75%* for project elements focused on water resource benefit in excess of regulatory requirements. MCWD may also provide ongoing *technical advisory support***,** as identified in project agreements.

The LWP program provides an orderly process for partner-led projects to coordinate early and be integrated into MCWD's budgeting process and Capital Improvement Plan (CIP). The percentage of funding for a given project is based on project scoring through the evaluation criteria process, annual funds available, and other MCWD or partner-led projects under consideration. The program does not have a set funding cap and instead evaluates opportunities as part of the MCWD's annual budget and CIP development process (See Evaluation Criteria section). MCWD's annual CIP budget typically ranges from $3-6 million. The program's schedule also allows for the MCWD to pursue outside grants to support additional projects if partners coordinate early.

Process and Schedule

Process

MCWD highly recommends engaging MCWD during the concept stage to identify and develop projects collaboratively. This allows individual and shared goals between MCWD and the partner to be achieved within a single project effort and is more likely to provide the largest return on investment for both the partners.

MCWD encourages municipal partners to use existing coordination plans to support MCWD and city staff communication and coordination with respect to land use, infrastructure, park and recreation, and capital improvement planning, as well as prospective private development within the city. The LWP program is not intended as a potential source of funding for projects that already have been designed. Therefore, a project must be identified early when MCWD and partner goals still can be fully realized within a collaborative framework.

As outlined below, the LWP program is designed to support partner projects from the initial concept development to construction.

- **Project Concept (Year 1):** Partner engages early with MCWD for opportunity identification and concept development. MCWD evaluates partner request for technical and/or financial support for feasibility work.
- **Project Feasibility (Year 2):** The partner and MCWD determine if a project is viable (e.g., technical feasibility, regulatory screening, land rights) and has reliable benefits and costs. MCWD evaluates partner request for financial support for project implementation and integrates approved projects into MCWD CIP and budget.
- **Project Implementation (Year 3+):** During design and construction, the partner and MCWD will address due diligence, permit approvals, and final construction documentation. MCWD reimburses project costs as outlined in funding agreement after project completion.

Schedule

The LWP program has two proposed key milestones to ensure a transparent and orderly evaluation process for all projects requesting financial and technical support (see Figure 1). This allows for early coordination to provide technical support and integration into MCWD's CIP for financial support. Potential projects will be evaluated annually following the submittal deadlines.

At each milestone, a partner will need to submit a "Notice of Interest" to MCWD program staff. Refer to the Requirements section for a complete list of the Notice of Interest's submittal requirements for Project Concept and Feasibility milestones. More points are awarded to projects that emerged from early and effective coordination during the Project Concept;

however, partners can submit a Notice of Interest for technical and/or financial support during Project Concept and/or Project Feasibility milestones (See Evaluation Criteria section).

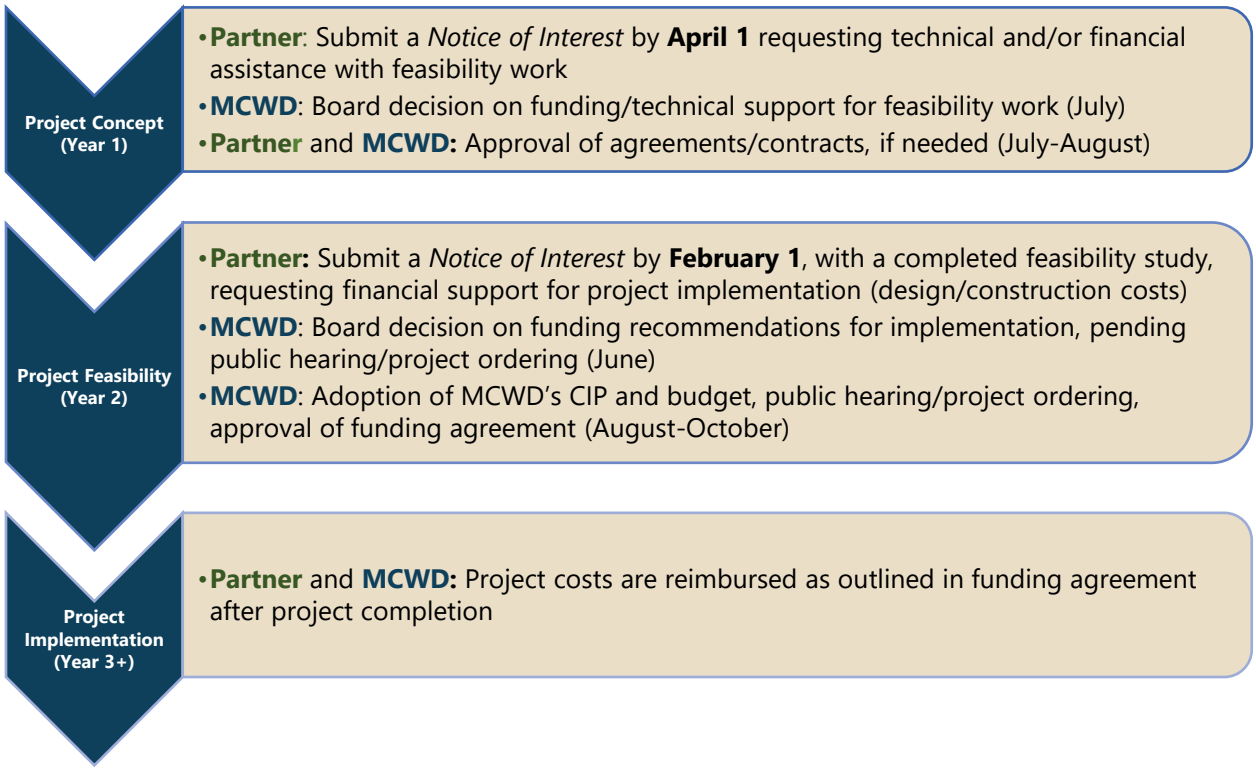

Figure 1. LWP Program Schedule and Key Milestones

Evaluation Criteria

The program uses a set of criteria to evaluate projects and inform MCWD decisions on level of funding and technical support. These criteria and scoring approach are intended to serve as guidance and allow for meaningful comparison between project opportunities while preserving room for judgement by the MCWD staff and Board of Managers. The criteria are also intended to provide transparency, so MCWD's prospective partners understand the considerations and priorities of MCWD.

To support the program's purpose and goals, the criteria are designed to promote early coordination and integration of land use and water planning, and the implementation of projects that provide significant, regional water quality and quantity benefits within the watershed. The LWP program evaluates eligible projects by four categories summarized below:

- Section A: Water Resource Priority (20 point)
- Section B: Project Benefits (40 points)
- Section C: Effectiveness (25 points)
- Section D: Partner Capacity & Coordination (15 points)

The LWP program does not utilize a minimum number of points or threshold score to receive assistance. Instead, the submitted requests are evaluated on their own merit, as well as against each other and against MCWD-led projects that are already in the CIP, to determine how many projects can be funded, and at what level. Potential projects will be scored annually at each submittal deadline (April 1 and February 1). Since benefit and cost estimates may not yet be available at the concept deadline, scoring for projects in these early stages will be based on available information and MCWD's assessment of project potential.

Through early coordination, MCWD program staff will work with partners to guide concept development and be able to provide a sense of the potential for MCWD support ahead of the formal submittal and scoring. This approach of collaborative project development provides applicants with greater certainty on the anticipated level of support and is why MCWD strongly recommends meeting early with LWP program staff prior to each submittal deadline.

Table 1 summarizes total points by criteria and considerations that inform scoring. Attachment A provides additional details on scoring approach and considerations used to select the level of technical and/or financial support.

Table 1. Evaluation Criteria Summary		
Evaluation Criteria	**Possible Points**	**Scoring Considerations**
A: Water Resource Priority		

A.1	20	**Water resource priority**
		• Water quality projects
		  ○ Nutrient impairments and TMDLs, water quality trends, public value of the resource, prioritization in plans
		• Water quantity projects
		  ○ Scale and severity of flood risk, known flooding issues, public value, prioritization in plans

Total	*20*	
B: Project Benefits		
B.1	20	**Primary benefits: water quality** • Scale of total phosphorus (TP) reduction, progress toward TMDL goals, confidence in data/benefits
B.2	10	**Primary benefits: water quantity** • Scale of runoff volume reduction/flood storage, scale of benefit (neighborhood, community, inter-community), confidence in data/benefits
B.3	10	**Secondary benefits** • Improvements to habitat and ecological health, water quality beyond nutrients (e.g., chloride, E. coli), and community benefits
Total	*40*	
C: Effectiveness		
C.1	15	**Cost effectiveness** • Cost-effectiveness (based on 25-year lifecycle cost/benefit)
C.2	10	**Project effectiveness** • System understanding of issues and opportunities (e.g., diagnostic study, subwatershed assessment), and how directly the project will address the need
Total	*25*	
D: Partner Capacity & Coordination		
D.1	10	**Early and effective coordination** • Early and effective coordination that supports integration of goals, priorities, and plans (e.g. engagement at concept stage)

D.2	5	**Partner capacity and commitment to advance project**
		• Partner commitment to advance project:
		  ○ Capacity of staff and/or financial resources to deliver a successful project
		  ○ Project incorporated into a public partner's CIP
		• Management of project risks, including technical risks, permitting, land rights, and community support

Total	*15*	
Total Points	***100***	

Requirements

General requirements

- The public partner(s) must agree to enter into a funding agreement with MCWD for any financial support over $5,000. Agreements must be approved by public partner's council/board prior to MCWD approval.
- Project must comply with MCWD regulatory requirements.

Notice of interest submittal

The purpose of the Notice of Interest submittal requirements is to support MCWD's evaluation by providing consistent documentation for each project request and increase MCWD's confidence in the estimated benefits. MCWD staff are available to schedule a meeting to provide guidance through the Notice of Interest submittal process and address any questions regarding the program. Table 2 provides a checklist of submittal requirements, and Attachment B provides details of how to prepare the Notice of Interest submittals.

Table 2. Notice of Interest Submittal Requirement Checklist				
Item #	**Submittal Requirements for Notice of Interest**	**Project Concept (Year 1)**	**Project Feasibility (Year 2)**	**Submittals for MCWD Permit Review [a]**
1	Statement of Intent: 1-page description of project and requested technical support and/or funding amount.	Required	Required	N/A
2	Site Description: Include a site map that must show parcels, land rights, storm sewer, contours, proposed improvement location	Required	Required	N/A
3	Drainage Map	Required	Required	N/A
4	Identification of proposed water resource improvement(s)	Required	Required	N/A
5	O&M Statement	Required	Required	N/A
6	Hydraulic & Hydrologic (H&H) modeling to confirm hydraulic feasibility of proposed project	As Available	Required	N/A
7	Water quality modeling to estimate TP load (influent and removals), and annual volume to be treated	As Available	Required	N/A
8	Quantification of volume abstraction, if proposed	As Available	As Available	Required
9	Soils information (groundwater, infiltration capacity, contamination)	As Available	Required	N/A
10	Wetland identification (desktop or delineation; delineation is preferred)	As Available	Required	N/A
11	Project schedule	As Available	Required	Required
12	Permitting Requirements and Status		Required	Required
13	O&M needs and costs		Required	Required
14	Cost analysis (capital cost, 25-year lifecycle cost, and lifecycle cost-benefit)		Required	Required
15	100-yr high water level (HWL) and ordinary high-water level (OHW) of any adjacent or on-site waterbodies, and preliminary modeling, as applicable, to show that the 100-yr HWL will not increase as a result of the project		As Available	Required
16	Identification of any utilities (including culverts and outlet structures) proposed to contact the bed or bank of a waterbody		As Available	Required
17	Anticipated changes to peak runoff rates and peak water levels of upstream and downstream waterbodies and wetlands during the 2-, 10-, and 100-year events		As Available	Required
18	Identification of site size, % of site to be disturbed, disturbance area, % increase or decrease in impervious area, existing impervious area, proposed impervious area		As Available	Required
19	Identification of if project will dredge in the beds, banks, or shores of any public water or public water wetland		As Available	Required
20	Identification of desired path forward through Wetland Conservation Act (WCA), as applicable		As Available	Required

[a] Notice of Interest submittal is not required for Year 3 (Implementation Phase); however, these permitting elements are required prior to funding agreement execution.

Contact Information

Please direct any LWP program inquiries, including requests to schedule a meeting with program staff, to Becky Christopher at bchristopher@minnehahacreek.org. It is strongly encouraged to schedule a meeting to explore potential projects prior to each submittal deadline.

Attachment A: Evaluation Criteria

This section outlines the evaluation criteria and considerations used to inform project scoring for the LWP program. The program will utilize criteria to evaluate eligible projects on a point-based system to allow for comparison across projects and inform the level of MCWD support. The intent is to provide clarity on the criteria being considered and the level of importance of each while retaining flexibility by avoiding being too prescriptive. The proposed criteria categories are:

- Section A: Water Resource Priority (20 point)
- Section B: Project Benefits (40 points)
- Section C: Effectiveness (25 points)
- Section D: Partner Capacity & Coordination (15 points)

Potential projects will be scored by the below criteria at each deadline (i.e., Project Concept and Project Feasibility) based on submitted information (See Attachment B).

Section A: Water Resource Priority (20 points)

The LWP program seeks to address priority water resource issues within the watershed, with particular focus on reducing stormwater runoff volume and pollutant loading to impaired waters and flood-prone areas.

A.1 Water resource priority *[20 Points]*

MCWD will consider the following to inform project scoring upon submittal of a Notice of Interest.

Water quality considerations:

- If the project's receiving water(s) has a nutrient impairment and/or Total Maximum Daily Load (TMDL).
- Any water quality trends for the receiving water(s), as available.
- Scale of public benefit and value of the receiving waterbody (e.g., equitable access, regional vs. local use).
- If the project addresses a water quality priority outlined in MCWD's Watershed Management Plan (WMP), Local Surface Water Management Plan, Met Council Priority Waters List, and/or other relevant plans or studies.

Water quantity considerations:

- Scale and severity of flood risk based on past flooding and modeling.
    - Note: MCWD is currently developing a 2-D model of the Minnehaha Creek Watershed. This system-scale planning tool will enhance understanding of flood risk and help MCWD and its partner identify opportunities and priorities for flood risk reduction. In the interim, MCWD will work with existing flood information and modeling.
- If the project addresses a water quantity priority outlined in MCWD's WMP, Local Surface Water Management Plan, and/or other existing studies.

Section A Supporting Resources:

- Impairments and TMDLs: A waterbody is on the State's Impaired Waters 303(d) List and/or has a TMDL for nutrients.
    - Points will also be provided for a water resource at high risk of crossing critical thresholds (e.g., water is likely to become listed on State's Impaired Waters 303(d) List for nutrients).

- Water Quality/Quantity Data: There are multiple resources for water quality trends and/or flooding data, including:
    - MCWD's monitoring data
    - MPCA Water Quality Portal
    - Met Council Flooding Tool

- Priority Identification: Projects that address priorities in existing plans, assessments, or studies will receive additional points, including:
    - *MCWD's 2017 Watershed Management Plan:*
        - Includes "opportunity-driven" nutrient and volume reduction projects aimed at addressing impairments in each subwatershed.
        - For a project opportunity that is not currently on MCWD's 10-year WMP Implementation Table, MCWD is required to seek a plan amendment prior to incorporating a project into its CIP.
    - *Local Surface Water Management Plans*
    - *Metropolitan Council's Priority Waters List:*
        - This Priority Waters List is intended to help sustainably manage Twin Cities metro area waterbodies, including the Minnehaha Creek Watershed.
        - Rivers, streams, and lakes included on the list provide significant use and benefit to the region based on seven categories: recreation and tourism, healthy habitat, drinking water protection, tranquil connection, equity, industry and utility, and science and education.
            - Equity Framework: MCWD is developing an equity framework for project prioritization and will use Met Council's equity data, including the Priority Waters List. Points will be provided for a water resource that is identified as a Priority Water and/or scored high for equity priority water resource.
    - *Other Studies and Plans:*
        - Studies, plans, or subwatershed assessments completed by MCWD or other public agencies.

Section B: Project Benefits (40 points)

The LWP program is seeking high-impact projects that provide regional water resource benefits, particularly in the areas of water quality and quantity (i.e. stormwater pollutant load and volume reduction).

B.1 Primary benefit: water quality [20 points]

At this time, the LWP program weighs more heavily towards water quality improvement projects to nutrient impaired waterbodies to address TMDLs. This will support partner efforts to address their wasteload allocations. MCWD will consider the following to inform project scoring:

- Project's estimated total phosphorus reduction benefit.
    - Water quality benefit must be estimated using industry-standard software or guidance. See Attachment B, Item 7 for water quality modeling submittal requirements.
    - Considers only phosphorus reduction beyond regulatory requirements (see MCWD Stormwater Management Rule).
- Project's estimated progress towards TMDL goal, if applicable.
- Confidence in water quality data and estimated benefits.

B.2 Primary benefit: water quantity [10 points]

The MCWD is building a 2-D watershed model which will support the development of volume reduction goals and priority areas in the future. In the interim, the LWP program seeks to promote stormwater volume reduction and the creation of new regional flood storage to support watershed resiliency. MCWD will consider the following to inform project scoring:

- Scale of runoff volume reduction and/or flood storage capacity.
    - Considers only volume reduction and storage beyond regulatory requirements (see MCWD Stormwater Management Rule).
- Scale of benefit/flood risk reduction (neighborhood, community, inter-community).
    - Project must not transfer flood risk to other properties.
    - More points are awarded for projects that address a regional/system-scale flooding issue.
- Confidence in data and benefits, including no transfer of risk downstream.

B.3 Secondary benefit [10 points]

MCWD has four strategic goals of improving and preserving water quality, water quantity, ecological integrity, and thriving communities. In addition to the primary water quality and water quantity benefits described above, points will be awarded for projects that achieve the following benefits:

- Water quality benefits (non-nutrient):
    - Addresses other water quality impairments (e.g., chloride, *E. coli*).

- Habitat and ecological health benefits:
    - Improves watershed health with ecological and/or habitat improvements, such as wetland, riparian, and in-stream improvements.
- Community benefits:
    - Supports community recreation, public access, resiliency, place-making, and education.

Section C: Effectiveness (25 points)

The program aims to support projects that are cost-effective and informed by a system-scale understanding of issues and opportunities to ensure that public dollars are put to effective use. MCWD will consider the following to inform project scoring upon submittal of a Notice of Interest.

C.1 Cost Effectiveness [15 Points]

MCWD staff will assess if the project is cost effective with an extended, durable lifetime that will produce measurable outcomes toward identified MCWD water resource goals. Refer to Attachment B, Item 14, for the program's Notice of Interest submittal requirements regarding cost effectiveness.

For water quality projects, MCWD uses a target **cost-benefit range of $500-2,000 per pound (lb) of TP removed annually.** MCWD recognizes that costs vary by project type and location, so this range is only a guiding consideration. Below is a summary of commonly evaluated water resource improvements and anticipated cost-benefit ranges ($ per lb TP removed over 25-year lifecycle):

- Infiltration (surface or subsurface): $1,000 - $2,400/ lb TP
- Filtration (sand, iron-enhanced, or other media): $500 - $2,100/ lb TP
- Manufactured Treatment Device or other proprietary filtration device: $450 - $4,700/lb TP
- Stormwater reuse via irrigation: $1,300 - $7,300/ lb TP
- Wet Pond (expansion, creation, or outlet modifications): $200 - $1,700/lb TP
- Non-structural and/ or restoration practices: Considered on an individual basis

C.2. Project Effectiveness [10 points]

MCWD encourages, and the program can be used to support, the development of a system-scale understanding of what is driving a particular issue (e.g. impairment, flooding) and the potential strategies and opportunities to address it. This approach ensures that the selected solution will be effective. During the evaluation and scoring process, MCWD will consider the following:

- Understanding of issues, drivers, strategies, and opportunities at a system scale (e.g. subwatershed assessment, diagnostic study).
- Project effectiveness at addressing the water resource issue (e.g. proximity to target waterbody, comparison to alternatives).

Section D: Partner Capacity and Coordination (15 points)

For the LWP program to achieve the goals of integrating land use and water planning for significant regional benefit, early coordination and commitment to partnership are essential. MCWD will consider the following to inform project scoring upon submittal of a Notice of Interest.

D.1: Early and effective coordination (10 points)

- More points will be awarded for effective and early coordination to integrate MCWD goals, plans, and input.
    - Early collaboration (e.g., meeting) to explore project opportunities and work with MCWD in preparation for submittal.
    - Partner engagement of MCWD during concept phase.

D.2: Partner capacity and commitment to advance project (5 points)

- Partner is committed to advance project by:
    - Partner has capacity of own staff and/or financial resources to deliver a successful project.
        - Previous history of projects between partner and MCWD.
    - Project incorporated into a public partner's CIP.
    - Partner has funding source(s) and percent of project funding currently secured for project.
- Project risks are being managed, including technical risks, permitting, land rights, and community support.
    - Considers partner's community-based support and/or process for developing project in coordination with community stakeholders is incorporated into project planning.

Attachment B: Submittal Requirements

The LWP program has two proposed key milestones to support the evaluation process for all projects requesting financial and technical support.

- Project Concept (Year 1)
    - Submit Notice of Interest requesting technical and/or financial feasibility assistance
    - **Deadline April 1**
- Project Feasibility (Year 2)
    - Submit Notice of Interest, with a completed feasibility study, requesting financial support for project design/construction costs
    - **Deadline February 1**

This allows for early coordination to provide technical support and integration into MCWD's CIP for financial support. Potential projects will be evaluated annually following the submittal deadlines. Below are the submittal requirements for Project Concept (Year 1) and Project Feasibility (Year 2).

Project Concept (Year 1) Requirements

The following items should be submitted to allow for MCWD evaluation of interest in partnering.

Item 1. Statement of Intent

- Provide a one-page summary outlining the proposed project, including:
    - type of technical and/ or amount of financial assistance requested for project;
    - background information for any project(s) that will be completed in parallel with the regional water resource improvement project (if applicable); and
    - project goals, as they relate to water resources.

Item 2. Site Description

- Identification of the site, including a map that shows parcel lines, easements and ownership, adjacent storm sewer infrastructure, 2-ft contours, and proposed water resource improvement location(s).
    - Statement describing how any land rights are anticipated to change to facilitate the project, as applicable.

Item 3. Drainage Description

- Identification of contributing drainage area, including a drainage map.

Item 4. Water Resource Improvement(s)

- Identification of proposed water resource improvement(s) and brief explanation of why the improvement type(s) were selected. Include any concept-level plans or schematics that are available. Provide a written description of technical considerations and key design elements.
    - MCWD does not intend to fund efforts that would typically be expected to be completed as maintenance by cities, such as routine stormwater pond cleanout and/or dredging, stabilization of eroded streambanks caused by storm sewer inputs, cleanout of sediment from streambanks caused by storm sewer inputs, etc. While these projects may happen in conjunction with a regional water resource improvement project eligible under the LWP program, the costs associated with these types of maintenance activities will be excluded from consideration.

Item 5. O&M Statement

- High-level description of partner's ability and willingness to provide long term operations and maintenance (O&M) activities for the project. The LWP program is not intended to provide assistance towards O&M related activities.

Items 6 -11 (As Available)

- These items are not required during Project Concept; however, please provide if available.
    - Under Item 6, H&H modeling can be provided at a concept-level. The intent is to show that the hydraulic constraints on-site are navigable, and the proposed project is feasible.
    - For Item 7, a concept-level phosphorus load reduction estimate can be presented as a range. This estimate is intended to convey an order of magnitude of removals that may be achieved.

Project Feasibility (Year 2) Requirements

Under the LWP program, either (1) a feasibility study can be developed with technical and/or financial support from the program during Project Concept; or (2) a partner can develop and submit its own feasibility study. In both cases, the following must be included in the Feasibility Study in order to be evaluated for financial support for project design/construction.

Item 1. Statement of Intent

- Provide a one-page summary outlining the proposed project, including:
    - amount of financial assistance requested;
    - project background information for any project(s) that will be completed in parallel with the regional water resource improvement project (if applicable); and
    - project goals, as they relate to water resources.

Item 2. Site Description

- Identification of the site, including a map that shows parcel lines, easements and ownership, adjacent storm sewer infrastructure, 2-ft contours, and proposed water resource improvement location(s).
    - Statement describing how any land rights are anticipated to change to facilitate the project, as applicable.

Item 3. Drainage Description

- Identification of contributing drainage area, including a drainage map.

Item 4. Water Resource Improvement(s)

- Identification of proposed water resource improvement(s) and brief explanation of why the improvement type(s) were selected. Include any concept-level plans that are available. Provide a written description of technical considerations and key design elements.
    - Note: MCWD does not fund efforts that would typically be expected to be completed as maintenance, such as routine stormwater pond cleanout / dredging, stabilization of eroded streambanks caused by storm sewer inputs, cleanout of sediment from streambanks caused by storm sewer inputs, etc. While these projects may happen in conjunction with a regional water resource improvement project eligible under the LWP program, the costs associated with these types of maintenance activities will be excluded from cost-share consideration.

Item 5. O&M Statement

- High-level description of partner's ability and willingness to provide long term operations and maintenance (O&M) activities for the project. MCWD does not intend to provide assistance towards O&M related activities. Refer to Item 13 for additional O&M cost and need submittal requirements.

Item 6. H&H Modeling

- Hydraulic and Hydrologic (H&H) modeling outputs that confirm hydraulic feasibility of the proposed water resource improvement.
    - Acceptable modeling programs include, but are not limited to, HydroCAD, SWMM-Based programs (XP-SWMM, PC-SWMM, EPA-SMWM), and AutoDesk Civil 3D.
    - The MPCA MSM provides guidance (link here) for selecting appropriate modeling software.

Item 7. Water Quality Modeling

- Water quality modeling that estimates and summarizes the following:
    - Estimation of influent annual total phosphorus (TP), with TP itemized to estimate the dissolved and particulate phosphorus fractions.
    - Estimation of annual total phosphorus (TP) load removal, with TP itemized to estimate the dissolved and particulate phosphorus fractions.
    - Estimation of annual volume treated by proposed water resource improvement, and annual volume bypassing proposed improvement.
    - If the regional water resource improvement is proposed in parallel with activities requiring phosphorus control per the MCWD Stormwater Management Rule, feasibility study should itemize the quantity of phosphorus control proposed to satisfy MCWD regulatory requirements and the quantity of phosphorus control proposed beyond MCWD regulatory requirements. This will provide confirmation that the proposed work sufficiently seeks to exceed regulatory requirements.
- Water quality modeling should be completed with industry-standard software or guidance, such as P8, WinSLAMM, MIDS Calculator, or recommended removal rates from the Minnesota Pollution Control Agency's Minnesota Stormwater Manual (MPCA MSM).
    - The MPCA MSM provides guidance (link here) for selecting appropriate modeling software.
        - Note that some models are intended for sizing site-specific practices, and others are capable of modeling regional practices. Not all models

are well suited to model each improvement type and/or site that may be considered under the LWP program.

- Model submittals should be accompanied by a brief statement justifying the use of the selected model and identifying any key shortcomings of the selected model.

Item 8. Volume Abstraction

- Estimation of proposed volume abstraction (cubic feet or acre-feet)
    - If the regional water resource improvement is proposed in parallel with activities requiring volume abstraction per the MCWD Stormwater Management Rule, feasibility study should itemize the quantity of volume abstraction proposed to satisfy MCWD regulatory requirements and the quantity of volume abstraction proposed beyond MCWD regulatory requirements. This will provide confirmation that the proposed work seeks to sufficiently exceed regulatory requirements.
    - Volume abstraction should be quantified, to the extent practical, per the MCWD Stormwater Management Rule's Volume Abstraction Credit Schedule (Appendix A of the Rule). Note that Appendix A does not necessarily contain a comprehensive list of water resource improvements that may be considered under the LWP program.

Item 9. Soils

- If filtration or infiltration basins or other systems that will interface with site soils are proposed, provide soils data to confirm adequate separation from seasonally high groundwater, adequate native receiving soils, and commentary on any potential soil or groundwater contamination on-site.

Item 10. Wetland Identification

- Desktop assessment or wetland delineation to identify wetlands at the project site.
    - Depending on wetland type(s), and extent of proposed impacts to wetlands, MCWD may request additional information prior to making a funding decision.

Item 11. Project Schedule

- Outline of project schedule, including any key constraints.

Item 12. Permitting Requirements and Status

- Identification of required permits, and indication of the status of each.

Item 13. O&M Needs and Cost

- Identification of key operation & maintenance (O&M) needs and costs, including annual maintenance and less-frequent major maintenance.
    - Provide a statement on the stakeholder's willingness and ability to perform the required O&M.

Item 14. Cost Analysis

- For estimated capital costs, provide an Opinion of Probable Cost (OPC) with major project components identified. Include estimated quantities, unit costs, and line-item costs.
    - See the MPCA MSM page of cost-benefit considerations (link here) for recommended items to include in preliminary cost estimates, by improvement type.
        - Itemize, or exclude, any construction costs not directly related to or required to successfully implement the regional water resource improvement (i.e., any adjacent activities, such as MS4 maintenance activities, or development activities).
    - Construction contingency: Include a construction contingency of 30%.
    - Indirect costs: Include indirect costs of 10% for permitting and legal and 30% for design and construction engineering/administration.
- For estimated lifecycle costs, include the above capital costs and assume a maximum project lifespan of 25 years. MCWD has selected 25 years to align with BWSR grant application requirements.
    - Assume 2.3% annual inflation and 3.5% annual discount rate.
    - Estimate O&M costs, including annual and less frequent major maintenance:
        - These can be assumed as a percentage of capital cost.
        - The MPCA MSM (link here), identifies a range of annual maintenance costs, as a percent of capital cost.
        - MCWD recommends assuming annual maintenance costs are the midpoint of the range identified by Weiss et al. (2005), compiled in the table below. Major maintenance costs, as a percentage of construction cost, as well as frequency of major maintenance, are to be left up to the designer, as MCWD understands there can be significant variability between systems.

Water Resource Improvement	Weiss et al. (2005) annual maintenance cost, as a percent of construction cost	
	Range	Midpoint of range
Constructed Wetlands	4% - 14.2%	9.1%
Wet Detention Basins	1.9% - 10.2%	6.1%
Infiltration Trenches	5.1% - 12.6%	8.9%
Bioretention Basins	5% - 7%	6.0%
Infiltration Basins	1% - 10%	5.5%
Dry Ponds	1.8% - 2.5%	2.2%
Sand Filters	0.9% - 9.5%	5.2%

Item 15 – Item 20. Permitting Considerations

The following submittal items are not required for project evaluation under the LWP program; however, they may be required for MCWD permit review. Applicants are encouraged to provide these items along with their feasibility study, where possible, to allow for early identification of any permitting challenges that may need to be addressed.

- **Item 15**: 100-yr high water level (HWL) and ordinary high-water level (OHW) of any adjacent or on-site waterbodies, and preliminary modeling, as applicable, to show that the 100-yr HWL will not increase as a result of the project.
- **Item 16:** Identification of any utilities (including culverts and outlet structures) proposed to contact the bed or bank of a waterbody.
- **Item 17:** Anticipated changes to peak runoff rates and peak water levels of upstream and downstream waterbodies & wetlands during the 2-, 10-, and 100-year events.
- **Item 18**: Identification of site size, % of site to be disturbed, disturbance area, % increase or decrease in impervious area, existing impervious area, proposed impervious area.
- **Item 19**: Identification of if project will dredge in the beds, banks, or shores of any public water or public water wetland.
- **Item 20**: Identification of desired path forward through Wetland Conservation Act (WCA), as applicable.