# 2021 WBIF – Lower St. Croix Watershed Partners Annual Grant Report

Reporting Period: January 1, 2022-December 31, 2022 Grant ID: C21-4732 | Grant Expiration: December 31, 2023 Due to BWSR by February 1, 2023

### eLINK Actual Results

This section contains the text to be pasted into the eLINK "Actual Results" reporting boxes for each work plan activity. The sections following this one will not be pasted directly into eLINK, but this document can be saved and uploaded to eLINK attachments.

For each activity, report the following:

- **Description of work:** Provide a narrative of work that occurred under this activity during the reporting period. This should align with what was billed under the financial section.
- **Outputs achieved:** List what was produced or done by the organization. Outputs help tell the story of how the organization works toward outcomes. Examples may include number of landowners contacted, number of outreach materials produced, number of BMPs implemented. See Attachments A and B to the Detail Work Plan Text for a list of outputs for Activity 1 Basin Ag Outreach Program and Activity 3 Shared Services Educator, respectively.
- Outcomes achieved [if applicable]: Generally put, outcomes are the level of performance or achievement that occurred. Outcomes differ from outputs in that they are what is ultimately desired, rather than an interim step. For example, number of best management practices installed is an output, while nutrient load reduction at a target waterbody is the outcome. The two main outcomes to be reported are total phosphorus and total suspended solids loads reduced at target waterbodies. Priority target waterbodies and associated phosphorus reduction goals are listed in tables 5-2 and 5-3 of the LSC CWMP. Reporting tables based on tables 5-2 and 5-3 are included in this reporting template. Measurable outcomes will be reported for implementation activities (i.e., activities where on-the-ground project implementation occurs). For all other activities, only outputs will be reported.

### Activity 1: Basin Ag Outreach Program

Actual Results – December 31, 2022 Update:

- Description of Work: Agronomy Outreach Specialist, Jennifer Hahn, was hired through University of MN Extension and began work in February 2022.
- Outputs Achieved:
  - Conducted outreach to 122 producers at field days, 14 at the workshop, completed mailings to 351, and emailing 154 producers promoting events, BMPs, and programs available, total of 617 large and small farms reached
  - Developed and held 3 field days, total of 98 attendees
  - Oversaw installation of 335.7 acres of non-structural ag BMPs see Activity 4 for measurable project outcomes

### Activity 2: Structural Ag BMP Implementation

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work: Approved projects include:
  - McQuade Ravine Stabilization (SWWD), completed in 2021
  - Hinze Cattle Exclusion (Pine SWCD), completed in 2021
  - Hinze WASCOB (Pine SWCD), construction not completed in 2022 due to weather conditions; postponed until spring 2023
- 2022 Outputs Achieved:
- 2022 Outcomes Achieved: Implemented one project using WBIF funds: Hinze WASCOB (20 lb/yr phosphorus reduction)

### Activity 3: Shared Services Educator

Actual Results -- December 31, 2022 Update:

- Description of work: Barbara Heitkamp, the shared services educator, has worked closely with Angie Hong (coordinator for the East Metro Water Resource Education Program), Jennifer Hahn (University of Minnesota Extension agronomy outreach specialist), and Lower St. Croix Watershed Partnership partners to provide educational services through community events, workshops, project tours, newsletters, social media, and public engagement.
- Abbreviated outputs achieved by BBH:
  - Started building relationships and trust with local-decision makers, including coordinating a workshop at a local winery that introduced water protection policies and practices (43 attendees)
  - Presented at 5 local lake association meetings and multiple community events to promote lakeshore buffers, utilized newspaper articles, blog posts, videos, and social media campaigns that resulted in upwards of 20 shoreline projects installed in priority areas (Chisago Lakes).
  - Helped the Chisago SWCD enter the Adopt a Drain program and led efforts to get 59 drains adopted over the past six months in Chisago County and helped promote drain adoption across Anoka and Washington county communities
  - Helped cover over 30 community events promoting native plantings, adopt a drain, water conservation, lakeshore buffers, Created a blog (Knickpoints.org) and has written 28 blog posts with over 2000 views and helped generate social media campaigns that with partner contributions has reached over 4.1 million people.
  - Provided outreach support via blog and social media to basinwide agronomist on promoting and executing three field days for production ag farmers (98 attendees) and one small acreage workshop (14 attendees).
  - Created ag-centric video series on YouTube that has over 2K views.

### Activity 4: Non-Structural Ag/Urban Implementation

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work: All completed projects were cover crops which were installed for the first year in 2022, and all will be installed annually for 3 years.
  - Pine County: Stevens Cover Crop

- Chisago County: Cramaur Cover Crop and May Cover Crop
- Washington County: Keene, G. Swanson, and T. Swanson cover crops
- Isanti County: Three landowners interested in cover crops for 2023, but none spent in 2022.
- Anoka County: No funds encumbered. May not be able to spend funds. May transfer funds to other partners (within Activity 4) if needed.
- 2022 Outputs Achieved: Non-structural BMP policy completed and approved in 2022. Installed 335.7 acres of non-structural ag BMPs.
- 2022 Outcomes Achieved:
  - Reduced TP by 682.71 lbs (reductions by priority area: Sensitive Groundwater TP Reduction: 389.09lbs, 133.4 ac; Regionally Significant Rivers and Streams: 682.71lbs TP Reduction, 335.7 ac; Regionally Significant Lakes: 140.63 TP Reduction, 66.7 ac)
  - Reduced TSS by 631.8 tons/yr (Regionally Significant Lakes: 130 tons/yr TSS; Regionally Significant Rivers and Streams: 631.8 tons/yr)
  - Reduced erosion by 865.1 tons/yr (Regionally Significant Lakes: 166.7 tons/yr; Regionally Significant Rivers and Streams: 865.1 tons/yr)

### Activity 5: Structural Urban BMP Implementation

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work: Two projects approved for funding:
  - Big Marine Boat Launch Stormwater Retrofit (CMSCWD), going out to bid in 2023
  - Trout Brook Project (SWWD), originally indicated needed to begin construction work in fall 2022 due to wildlife requirements and was prioritized for 2021 funding as such, however SWWD now plans to complete all construction activities in 2023 after ski season has ended at Afton Alps resort. Project is out for bid. No construction occurred in 2022.
- 2022 Outputs Achieved: Completed 1 urban BMP
- 2022 Outcomes Achieved: 1.1 lb/yr phosphorus reduction achieved in 2022

#### Activity 6: Wetland Restoration Implementation

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work: Projects approved for funding:
  - Jones Wetland Restoration (Pine SWCD), completed in 2022
  - Jahnz Wetland Restoration (Pine SWCD), completed in 2022
  - Goose Lake Wetland Restoration (CMSCWD), completed wetland excavation in 2022 and will complete planting in 2023.
- 2022 Outputs Achieved: 3 wetland restorations completed (2 will result in nutrient reductions for priority waterbodies)
- 2022 Outcomes Achieved: 11.8 lb/yr phosphorus reduction for priority waterbodies

### Activity 7: Internal Analyses

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work: After releasing a request for proposals and reviewing responses, the A7 subcommittee ultimately decided to approve funding for one internal analysis study Forest Lake (CLFLWD).
- 2022 Outputs Achieved: CLFLWD completed the Forest Lake Internal Load Analysis in 2022, and the report is available on the LSC website.

#### Activity 8: Targeting Analyses

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work and Outputs Achieved: Funding approved for the following initiatives:
  - Tree Canopy Assessment Protocols for Enhanced Street Sweeping, completed in 2022
  - Prioritization and Targeting Protocols, to be completed in early 2023; the sequential diagnostic monitoring protocols drafted by CLFLWD took longer than anticipated to complete and go through final internal review process. The SDM protocols were presented in early December 2022 and will be incorporated into the larger Prioritization and Targeting Protocols document in combination with portions completed by WCD.
  - Rock Lake SWA (Pine County): Pine Co work is done, and Pine SWCD work is in progress (expected to be completed by spring 2023).
  - Sunrise River Priority Drainage Areas (PDA): current status: 75-80% complete; goal to be done by end of February 2023
  - Northeastern Washington County St. Croix and Spring Streams SWA (CMSCWD): started in the fall. On track to be done by mid-summer 2023.
  - Tree Canopy Assessments and Enhanced Street Sweeping Studies:
    - Linwood Twp, Anoka SWCD: 98% completed in 2022
    - Afton, WCD: In progress
    - Lake Elmo, WCD: In progress
    - MSCWMO Cities, WCD: In progress
    - Wyoming, CLFLWD: In progress
    - Marine on St. Croix, CMSCWD/WCD: In progress (work is being done by WCD)
    - Scandia, CMSCWD/WCD: In progress (work is being done by WCD)
    - North Branch, Chisago SWCD: In progress
    - Rush City, Chisago SWCD: In progress

#### Activity 9: Technical/Engineering

Actual Results -- December 31, 2022 Update:

• 2022 Description of Work: Partners paid for all project technical/engineering locally, or worked with LSC Agronomy Outreach Specialist for technical assistance. As such, no grant funds were utilized under this activity. Funding was removed from this activity in the most recent grant amendment.

### Activity 10: Administration/Coordination

Actual Results -- December 31, 2022 Update:

- 2022 Description of Work and Outputs Achieved:
  - Chisago SWCD: Performed fiscal agent duties including execution of partner subagreements, payment of invoices, and eLINK financial reporting. Worked with CLFLWD to establish reporting forms and invoicing templates that align with reporting requirements to ensure all activities receiving WBIF grant funds are in alignment with work plan and reporting criteria. Worked with CLFLWD and BWSR staff to complete FY21 WBIF grant amendment and associated work plan revisions.
  - WCD: Performed hiring and payroll administration for Agronomy Outreach Specialist and Shared Services Educator.
  - WCD/EMWREP: Kept the LSC website up to date with meeting information and other updates. Coordinated/facilitated/took minutes for meetings of the Policy Committee, Steering Committee, Advisory Committee, and Planning Team.
  - CLFLWD: Coordinated revisions and refinement of Project Request Packet including cover memo, attachments associated with each work plan activity, and informational attachments such as maps and the project request process flow chart. Worked with Chisago SWCD to update reporting forms and invoicing templates as needed. Worked with Chisago SWCD and BWSR staff to complete FY21 WBIF grant amendment and associated work plan revisions.

### Implementation Category Budget Breakdown

The following text appears on <u>page 16</u> of the Lower St. Croix Comprehensive Watershed Management Plan:

In general, WBIFs are expected to be allocated across program areas with a distribution similar to:

- 70% Implementation (approximately 25% shared services + 45% BMPs & restoration/protection activities)
- 25% Prioritization and Analysis
- 5% Administration

The following tables summarize how the WBIF work plan compares to the estimated percentages in the CWMP and how actual spending compares to both.

| Activity<br># | Grant Activity                            | eLINK Activity Category                | Grant<br>Budget (as<br>revised) | Match<br>Budget | Grant<br>Spend | Match<br>Spend | Total Spend |
|---------------|---|--|---------------------------------|-----------------|----------------|----------------|-------------|
| 1             | Basin Ag Outreach Program                 | Project Development                    | \$200,000                       | \$0             | \$81,032       | \$0            | \$81,032    |
| 2             | Structural Ag BMP<br>Implementation       | Agricultural Practices                 | \$107,174                       | \$75,000        | \$97,985       | \$80,685       | \$178,671   |
| 3             | Shared Services Educator                  | Education/Information                  | \$125,000                       | \$4,800         | \$103,912      | \$52,587       | \$156,499   |
| 4             | Non-Structural Ag/Urban<br>Implementation | Non-Structural Management<br>Practices | \$100,000                       | \$0             | \$44,000       | \$0            | \$44,000    |
| 5             | Structural Urban BMP<br>Implementation    | Urban Stormwater Practices             | \$360,000                       | \$50,000        | \$0            | \$0            | \$0         |
| 6             | Wetland Restoration<br>Implementation     | Wetland<br>Restoration/Creation        | \$105,857                       | \$0             | \$25,394       | \$0            | \$25,394    |
| 7             | Internal Analyses                         | Planning and Assessment                | \$16,500                        | \$0             | \$16,500       | \$8,073        | \$24,573    |
| 8             | Targeting Analyses                        | Planning and Assessment                | \$150,000                       | \$0             | \$69,400       | \$672          | \$70,071    |
| 9             | Technical/Engineering                     | Technical/Engineering<br>Assistance    | \$0                             | \$0             | \$0            | \$0            | \$0         |
| 10            | Administration/Coordination               | Administration/Coordination            | \$100,000                       | \$0             | \$72,268       | \$712          | \$72,980    |
| TOTAL         |   |  | \$1,264,531                     | \$129,800       | \$510,491      | \$142,730      | \$653,221   |

| Implementation Category                       | LSC CWMP<br>(Page 16) | Work Plan<br>(Grant Funds) | Actual Grant<br>Spend | Actual Grant<br>Spend % of Total |
|---|-----------------------|----------------------------|-----------------------|----------------------------------|
| Implementation - BMPs/Restoration Activities* | 45%                   | 47%                        | \$167,379             | 33%                              |
| Implementation - Shared Services              | 25%                   | 29%                        | \$184,944             | 36%                              |
| Prioritization & Analysis                     | 25%                   | 16%                        | \$85,900              | 17%                              |
| Administration                                | 5%                    | 8%                         | \$72,268              | 14%                              |
|   | 100%                  | 100%                       | \$510,491             | 100%                             |

\*Expenses billed to implementation (blue) line items are for implementation only and do not include staff time. Staff time for project coordination/design/oversight etc. is covered by the remaining three categories (green, orange, yellow).

## Measurable Outcomes/Outputs and Milestones

| Acti<br>vity<br># | Grant<br>Activity               | Overall Measurable<br>Outcome/Output  | Year 1 (2021)<br>Milestones                 | Year 1 (2021)<br>Actual<br>Milestones   | Year 2 (2022)<br>Milestones   | Year 2 (2022)<br>Actual<br>Milestones  | Year 3 (2023)<br>Actual<br>Milestones |
|-------------------|---------------------------------|---|---|---|---|--|---------------------------------------|
| 1                 | Basin Ag<br>Outreach<br>Program | Output: Engage agricultural<br>landowners (of both large and<br>small operations) with a<br>cumulative total of at least 3,000<br>acres of land to implement<br>structural and nonstructural<br>BMPs as outlined in other<br>Activities<br>See Attachment A – Agronomy<br>Outreach Specialist Details &<br>Milestones | Agronomy<br>outreach<br>specialist<br>hired | Agronomy<br>outreach<br>specialist finalist<br>selected   |   | Agronomy<br>outreach<br>specialist<br>hired.   |                                       |
| 2                 | Structural<br>Ag BMP<br>Impl.   | Outcome: reduce phosphorus<br>loading to target waterbodies by<br>300 lb/yr   |   | Implemented 2<br>BMPs to achieve<br>223 lb/yr<br>phosphorus<br>reduction and<br>252 tons/yr TSS | Implement 20<br>best<br>management<br>practices, or<br>enough to<br>achieve a 300<br>lb/yr<br>phosphorus<br>reduction | No new<br>projects<br>implemented<br>in 2022. One<br>project slated<br>for spring<br>2023<br>construction. |                                       |

| Acti<br>vity<br># | Grant<br>Activity | Overall Measurable<br>Outcome/Output | Year 1 (2021)<br>Milestones | Year 1 (2021)<br>Actual<br>Milestones | Year 2 (2022)<br>Milestones | Year 2 (2022)<br>Actual<br>Milestones | Year 3 (2023)<br>Actual<br>Milestones |
|-------------------|-------------------|--------------------------------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|---------------------------------------|
| 3                 | Shared            | Output: 0.5 FTE                      | New                         | New education                         | Implement                   | Implemented                           |                                       |
|                   | Services          |                                      | education                   | staff hired,                          | basin-wide                  | basin-wide                            |                                       |
|                   | Educator          | See Attachment B – Education         | staff hired,                | developed                             | outreach plan               | outreach plan.                        |                                       |
|                   |                   | Details & Milestones                 | develop basin-              | basin-wide                            |                             |                                       |                                       |
|                   |                   |                                      | wide outreach               | outreach plan                         |                             |                                       |                                       |
|                   |                   |                                      | plan for 2021-<br>22        | for 2021-22                           |                             |                                       |                                       |
| 4                 | Non-              | Outcomes: reduce phosphorus          |                             | None                                  | Implement                   | Implemented                           |                                       |
|                   | Structural        | loading to target waterbodies by     |                             | implemented                           | 2,000 acres of              | 355.7 acres of                        |                                       |
|                   | Ag/Urban          | 400 lb/yr                            |                             | with WBIF yet                         | non-structural              | non-structural                        |                                       |
|                   | Impl.             |                                      |                             |                                       | best                        | BMPs (all                             |                                       |
|                   |                   |                                      |                             |                                       | management                  | cover crops),                         |                                       |
|                   |                   |                                      |                             |                                       | practices, or               | which                                 |                                       |
|                   |                   |                                      |                             |                                       | enough to                   | achieved                              |                                       |
|                   |                   |                                      |                             |                                       | achieve a 400               | 682.7 lbs/yr                          |                                       |
|                   |                   |                                      |                             |                                       | lb/yr                       | phosphorus                            |                                       |
|                   |                   |                                      |                             |                                       | phosphorus                  | reduction for                         |                                       |
|                   |                   |                                      |                             |                                       | reduction                   | priority                              |                                       |
|                   |                   |                                      |                             |                                       |                             | waterbodies.                          |                                       |
| 5                 | Structural        | Outcomes: reduce phosphorus          |                             | None                                  | Implement 20                | Implemented                           |                                       |
|                   | Urban BMP         | loading to target waterbodies by     |                             | implemented                           | best                        | 1 BMP,                                |                                       |
|                   | Impl.             | 200 lb/yr                            |                             | with WBIF yet                         | management                  | enough to                             |                                       |
|                   |                   |                                      |                             |                                       | practices, or               | achieve 1.1                           |                                       |
|                   |                   |                                      |                             |                                       | enough to                   | lb/yr P                               |                                       |
|                   |                   |                                      |                             |                                       | achieve a 200               |                                       |                                       |
|                   |                   |                                      |                             |                                       | lb/yr                       |                                       |                                       |
|                   |                   |                                      |                             |                                       | phosphorus                  |                                       |                                       |
|                   |                   |                                      |                             |                                       | reduction                   |                                       |                                       |

| Acti<br>vity<br># | Grant<br>Activity | Overall Measurable<br>Outcome/Output | Year 1 (2021)<br>Milestones | Year 1 (2021)<br>Actual<br>Milestones | Year 2 (2022)<br>Milestones | Year 2 (2022)<br>Actual<br>Milestones | Year 3 (2023)<br>Actual<br>Milestones |
|-------------------|-------------------|--------------------------------------|-----------------------------|---------------------------------------|-----------------------------|---------------------------------------|---------------------------------------|
| 6                 | Wetland           | Outcomes: reduce phosphorus          |                             | None                                  | Wetland                     | Three wetland                         |                                       |
|                   | Restoration       | loading to target waterbodies by     |                             | implemented                           | restoration(s)              | restoration                           |                                       |
|                   | Impl.             | 15 lb/yr                             |                             | with WBIF yet                         | construction                | projects                              |                                       |
|                   |                   |                                      |                             |                                       |                             | constructed in                        |                                       |
|                   |                   |                                      |                             |                                       |                             | 2022, and one                         |                                       |
|                   |                   |                                      |                             |                                       |                             | slated for                            |                                       |
|                   |                   |                                      |                             |                                       |                             | early 2023                            |                                       |
|                   |                   |                                      |                             |                                       |                             | construction.                         |                                       |
|                   |                   |                                      |                             |                                       |                             | 11.8 lb/yr P                          |                                       |
|                   |                   |                                      |                             |                                       |                             | reduction for                         |                                       |
|                   |                   |                                      |                             |                                       |                             | priority                              |                                       |
|                   |                   |                                      |                             |                                       |                             | waterbodies                           |                                       |
|                   |                   |                                      |                             |                                       |                             | in 2022.                              |                                       |
| 7                 | Internal          | Outputs: Complete 2 internal         |                             | Completed                             | Complete 2                  | Completed                             |                                       |
|                   | Analyses          | loading analyses                     |                             | majority of                           | internal                    | one internal                          |                                       |
|                   |                   |                                      |                             | process to rank                       | loading                     | loading                               |                                       |
|                   |                   |                                      |                             | and select                            | analyses                    | analysis.                             |                                       |
|                   |                   |                                      |                             | internal                              |                             |                                       |                                       |
|                   |                   |                                      |                             | analyses to be                        |                             |                                       |                                       |
|                   |                   |                                      |                             | completed in                          |                             |                                       |                                       |
|                   |                   |                                      |                             | 2022                                  |                             |                                       |                                       |
| 8                 | Targeting         | Outputs: Complete the following      |                             | Began Enhanced                        |                             | Completed                             |                                       |
|                   | Analyses          | analyses (See Activity 8             |                             | Street Sweeping                       |                             | tree canopy                           |                                       |
|                   |                   | Description for further detail)      |                             | Study Protocols,                      |                             | assessment                            |                                       |
|                   |                   | Linwood Lake Anoka                   |                             | Prioritization                        |                             | protocols and                         |                                       |
|                   |                   | County                               |                             | and Targeting                         |                             | approved                              |                                       |
|                   |                   | St. Croix Direct                     |                             | Protocols, and                        |                             | several                               |                                       |
|                   |                   | Washington County                    |                             | Subcatchment                          |                             | partners to                           |                                       |
|                   |                   |                                      |                             | Prioritization                        |                             | perform                               |                                       |

| Acti<br>vity<br># | Grant<br>Activity         | Overall Measurable<br>Outcome/Output   | Year 1 (2021)<br>Milestones | Year 1 (2021)<br>Actual<br>Milestones  | Year 2 (2022)<br>Milestones | Year 2 (2022)<br>Actual<br>Milestones   | Year 3 (2023)<br>Actual<br>Milestones |
|-------------------|---------------------------|--|-----------------------------|--|-----------------------------|---|---------------------------------------|
|                   |                           | <ul> <li>Desktop Analysis and<br/>Prioritized Catchments of<br/>the Sunrise River<br/>Watershed Chisago</li> <li>Rock Lake Pine and St.<br/>Croix Direct Pine County</li> <li>SWA protocol<br/>refinements</li> <li>Enhanced street<br/>sweeping analyses for<br/>Rush City, Taylors Falls,<br/>Harris, North Branch,<br/>Marine on St. Croix,<br/>Stillwater, Bayport,<br/>Lakeland, Lake St. Croix<br/>Beach, and Afton</li> </ul> |                             |  |                             | street<br>sweeping<br>studies with<br>WBIF. Several<br>other<br>targeting<br>analyses<br>slated for<br>completion in<br>2023. |                                       |
| 9                 | Technical/<br>Engineering |  |                             | No WBIFs used<br>on this activity<br>yet   |                             | No WBIFs<br>used. Grant<br>funds shifted<br>to other<br>activities.   |                                       |
| 10                | Admin/<br>Coord           | Complete eLINK annual reporting as required  | Complete<br>annual report   | Completed<br>annual report,<br>established<br>several<br>processes for<br>WBIF usage | Complete<br>annual report   | Completed<br>annual report.<br>Continued to<br>refine<br>processes for<br>WBIF usage  |                                       |

| Acti<br>vity<br># | Grant<br>Activity | Overall Measurable<br>Outcome/Output         | Year 1 (2021)<br>Milestones | Year 1 (2021)<br>Actual<br>Milestones  | Year 2 (2022)<br>Milestones | Year 2 (2022)<br>Actual<br>Milestones                   | Year 3 (2023)<br>Actual<br>Milestones |
|-------------------|-------------------|--|-----------------------------|--|-----------------------------|---|---------------------------------------|
| Sum               | of outcomes:      | 915 lb/yr TP reduction at target waterbodies |                             | 254.5 lb/yr TP<br>reduction and<br>252 tons/yr TSS<br>at target<br>waterbodies |                             | 695.6 lb/yr TP<br>reduction at<br>target<br>waterbodies |                                       |

### Pollutant Reduction Goals and Progress

### Total Suspended Solids

| Total Suspended Solids Reductions Proposed in this Work Plan | 2-Year Proposed Reduction<br>(tons/yr) | Reduction Achieved as of<br>12/31/22 (tons/yr) |
|--|--|--|
| Activity 2: Structural Ag BMP Implementation                 | N/A                                    | 252  |
| Activity 4: Non-Structural Ag/Urban BMP Implementation       |  | 632  |
| Activity 5: Structural Urban BMP Implementation              |  | TBD  |
| Activity 6: Wetland Restoration Implementation               |  | TBD  |
| TOTAL  |  | 252  |

Total suspended solids reduction goals were not established for each activity but will be reported on.

### Phosphorus

#### Phosphorus Reduction Summary Table – Reductions by Work Plan Activity

| Phosphorus Reductions Proposed in this Work Plan       | 2-Year Proposed Reduction<br>(lb/yr) | Reduction Achieved as of 12/31/22 (lb/yr) |
|--|--------------------------------------|---|
| Activity 2: Structural Ag BMP Implementation           | 300                                  | 254.5                                     |
| Activity 4: Non-Structural Ag/Urban BMP Implementation | 400                                  | 682.7                                     |
| Activity 5: Structural Urban BMP Implementation        | 200                                  | 1.1                                       |
| Activity 6: Wetland Restoration Implementation         | 15                                   | 11.8                                      |
| TOTAL  | 915                                  | 950.1                                     |

Reductions reported are those estimated at target waterbodies. See Phosphorus Reduction Goals and Progress section in the Detail Work Plan Text for more information.

### Phosphorus Reduction Detail Tables – Reductions by Target Waterbody

(per Tables 5-2 and 5-3)

[fill out in Excel spreadsheets and copy results into the following tables]

### LSC CWMP Table 5-2: Regionally Significant Rivers and Streams for Pollutant Reductions

| Stream Name   | Lake St. Croix TMDL TP<br>Reduction Goal (lbs/yr) <sup>1</sup> | 10-year TP<br>Reduction Goal<br>(lbs/yr)² | Actual Reduction<br>Achieved by<br>12/31/22 with WBIF<br>(lbs/yr) | Comment                                  |
|---|--|---|---|--|
| St. Croix Direct  |  |   | 251   | McQuade Ravine Stabilization             |
| Sunrise River and Tributaries   | 18,306   | 2,256                                     |   |  |
| Lawrence Creek <sup>3</sup>   | 1,177  | 118                                       |   |  |
| Browns Creek <sup>4</sup>   | 848  | 85  |   |  |
| Trout Brook <sup>3</sup>  | 1,419  | 142                                       | 492   | G. Swanson and T. Swanson Cover<br>Crops |
| Small Streams Draining to St. Croix<br>River (south of Lawrence Cr &<br>north of Valley Br.)  | 6,450  | 645                                       | 141   | Keene Cover Crop                         |
| Rock Creek  | 3,512  | 351                                       |   |  |
| Rush Creek  | 2,451  | 245                                       | 13  | Cramaur and May Cover Crops              |
| Goose Creek   | 2,980  | 298                                       |   |  |
| TOTAL   | 37,143   | 4,140                                     | 897   |  |
| <ul> <li>(1) Table B-7, 2012 Lake St. Croix Total N</li> <li>(2) 10% per stream + 425 lbs for stream</li> <li>(3) According to Lake St. Croix TMDL: Ac</li> <li>Brook may be smaller than shown (possismaller drainage areas than those used</li> <li>(4) Browns Creek reduction goal based of</li> </ul> |  |   |   |  |

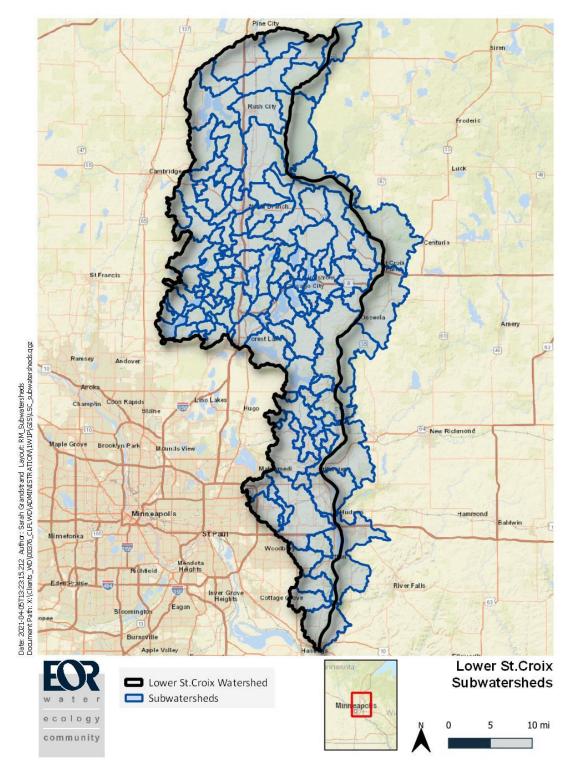
| Lake ID                | Name                     | County  | Overall TP Reduction<br>Goal lbs/yr** | 10-year TP<br>Reduction Goal<br>Ibs/yr<br>(5%/lake) | Actual<br>Reduction<br>Achieved by<br>12/31/22 with<br>WBIF (lbs/yr) | Comment |
|------------------------|--------------------------|---------|---------------------------------------|---|--|---------|
| 2002600                | Linwood                  | Anoka   | 341                                   | 17.05   |  |         |
| 2003400                | Martin                   | Anoka   | 2,973                                 | 148.65  |  |         |
| 13004200               | Birch                    | Chisago | N/A                                   | N/A   |  |         |
| 13000100               | Blooms*                  | Chisago | N/A                                   | N/A   |  |         |
| 1300120                | Chisago                  | Chisago | 143                                   | 7.15  |  |         |
| 13006800               | Fish*                    | Chisago | 8                                     | 0.40  |  |         |
| 13008301/<br>13008302  | Goose (North &<br>South) | Chisago | 4,935                                 | 246.75  |  |         |
| 13004102 /<br>13004101 | Green/<br>Little Green   | Chisago | 33                                    | 1.65  |  |         |
| 13003300               | Little                   | Chisago | 2,657                                 | 132.85  |  |         |
| 13003201               | North Center Lk          | Chisago | 1,108                                 | 55.40   |  |         |
| 13003500               | North Lindstrom          | Chisago | 59                                    | 2.95  |  |         |
| 13006901/<br>13006902  | Rush (East* & West)      | Chisago | 6,663                                 | 333.15  |  |         |
| 13002700               | South Center             | Chisago | 1,260                                 | 63.00   |  |         |
| 13002800               | South Lindstrom          | Chisago | 107                                   | 5.35  |  |         |
| 30000800               | Hoffman*                 | Isanti  | Protection Strategies<br>Only         |   |  |         |
| 30001200               | Horseleg*                | Isanti  | 1                                     | 0.05  |  |         |
| 30000300               | Horseshoe*               | Isanti  | Protection Strategies<br>Only         |   |  |         |
| 30000700               | Lower Birch*             | Isanti  | Protection Strategies<br>Only         |   |  |         |

### LSC CWMP Table 5-3: Regionally Significant Lakes for Pollutant Reductions and Protections

| 58011700 | Rock              | Pine       | 6,641                         | 332.05 | 51.88 | Hinze Cattle Exclusion,<br>Stevens Cover Crop,<br>Jones Wetland Resto,<br>Jahnz Wetland Resto |
|----------|-------------------|------------|-------------------------------|--------|-------|---|
| 82004900 | Big Carnelian     | Washington | 53                            | 2.65   |       |   |
| 82005204 | Big Marine*       | Washington | 35                            | 1.75   | 1.10  | Big Marine Boat<br>Launch   |
| 82004500 | Clear*            | Washington | Protection Strategies<br>Only |        |       |   |
| 82003400 | East Boot*        | Washington | Protection Strategies<br>Only |        |       |   |
| 82000400 | Edith             | Washington | 6                             | 0.30   |       |   |
| 82010600 | Elmo              | Washington | 56                            | 2.80   |       |   |
| 82015900 | Forest            | Washington | 72                            | 4.00   |       |   |
| 82010400 | Jane              | Washington | Protection Strategies<br>Only |        |       |   |
| 82001400 | Little Carnelian* | Washington | 29                            | 1.45   |       |   |
| 82002500 | Louise            | Washington | 58                            | 2.90   |       |   |
| 82003300 | Mays*             | Washington | Protection Strategies<br>Only |        |       |   |
| 82002000 | McKusick          | Washington | 5                             | 0.25   |       |   |
| 82004600 | Square            | Washington | 9                             | 0.45   |       |   |
| 82003100 | Terrapin*         | Washington | Protection Strategies<br>Only |        |       |   |
|          |                   |            | 27,252                        | 1,363  | 53    | 0   |

### Reporting by Subwatershed

Implementation subcommittees will prioritize projects by subwatershed. The following map shows DNR Level 08 subwatersheds within the LSC Basin. The LSC CWMP also contains several figures and tables describing priority implementation areas.



| WBIF<br>Activity |  | Target<br>Waterbody | Waterbody Priority (and<br>Tier if Applicable)<br>According to Work Plan<br>Description | Reported Phosphorus<br>Reduction (lb/yr)* | Grant Work Plan Milestones  | Actual Grant Milestones - as of 2022  |
|------------------|--|---------------------|---|---|---|---|
| A1               | Basin Ag Outreach Program  |                     |   |   | Agronomy outreach specialist hired  | Agronomy outreach specialist hired. See eLINK<br>attachments for description of progress toward<br>detailed goals and milstones.  |
| A2               | Structural Ag BMP Implementation Total                             |                     |   | 254.5                                     | Implement 20 BMPs, or enough to achieve a 300<br>Ib/yr phosphorus reduction                               | Implemented 3 BMPS, enough to achieve 274.5<br>Ib/yr phosphorus reduction   |
| A2               | McQuade Ravine Stabilization (completed in 2021)                   | Lake St. Croix      | Tier 1  | 251.0                                     |   |   |
| A2               | Hinze Cattle Exclusion (completed in 2021)                         | Rock Lake           | Tier 1  | 3.5                                       |   |   |
| A2               | Hinze WASCOB (to be completed in spring 2023)                      | Rock Lake           | Tier 1  | [20 lb/yr - 2023]                         |   |   |
| A3               | Shared Services Educator   |                     |   |   | New education staff hired, develop outreach plan,<br>implement outreach plan                              | New education staff hired, developed outreach<br>plan, implement outreach plan. See eLINK<br>attachments for description of progress toward<br>detailed goals and milestones. |
| A4               | Non-Structural BMP Implementation                                  |                     |   | 682.7                                     | Implement 2,000 acres of non-structural BMPs, or<br>enough to achieve a 400 lb/yr phosphorus<br>reduction | Implemented 355.7 acres of non-structural BMPs<br>(all cover crops), which achieved 682.7 lbs/yr<br>phosphorus reduction for priority waterbodies.                            |
| A4               | Pine SWCD - Stevens Cover Crop (completed 1st year in 2022)        |                     | Tier 1  | 36.5                                      |   | 55.6 acres of cover crop installed annually for 3   |
| A4               | Chisago SWCD - Cramaur Cover Crop (completed 1st year in 2022)     | Rush Creek          | Tier 2  | 11.8                                      |   | 40 acres of cover crop installed annually for 3 years   |
| A4               | Chisago SWCD - May Cover Crop (completed 1st year in 2022)         |                     | Tier 2  | 1.6                                       |   | 40 acres of cover crop installed annually for 3 years   |
| A4               | Washington CD - Keene Cover Crop (completed 1st year in 2022)      | Tributary to St. Cr |   | 140.6                                     |   | 66.7 acres of cover crop installed annually for 3 years   |
| A4               | Washington CD - G. Swanson Cover Crop (completed 1st year in 2022) | Trout Brook (Trib   |   | 248.5                                     |   | 66.7 acres of cover crop installed annually for 3 years   |
| A4               | Washington CD - T. Swanson Cover Crop (completed 1st year in 2022) | Trout Brook (Trib   | Tier 1  | 243.7                                     |   | 66.7 acres of cover crop installed annually for 3 years   |
| A5               | Structural Urban BMP Implementation                                |                     |   | 1.1                                       | Implement 20 BMPs, or enough to achieve a 200<br>Ib/yr phosphorus reduction                               | Implemented 1 BMP, enough to achieve 1.1 lb/yr P  |
| A5               | Big Marine Boat Launch Stormwater Retrofit (2023 construction)     | Big Marine Lake     | Priority area   | 1.1                                       |   |   |
| A5               | Trout Brook (2023 construction)                                    | Trout Brook         | Priority area   | [177 lb/yr slated for 2023]               |   |   |
| A6               | Wetland Restorations Total   |                     | Sum priority waterbodies<br>only  |   | Wetland restoration(s) construction to reduce<br>phosphorus loading to target waterbodies by 15<br>lb/yr  | Implemented 3 wetland restorations, enough to<br>achieve 11.8 lb/yr P reduction counted toward<br>FY21 grant and priority waterbodies from Table 5-2<br>or Table 5-3          |
| A6               | Goose Lake Wetland Restoration (completed in 2022)                 | Goose Lake          | Not priority waterbody  | [15 lb/yr - not priority]                 | Project request indicated 20 lb/yr P reduction.   | Final invoice indicates 15 lb/yr P reduction.   |
| A6               | Sunrise River-Hwy 61 Wetland Enhancement (2023 construction)       |                     | Priority area   | [89 lb/yr - count toward FY23]            |   |   |
| A6               | Jones Wetland Restoration (completed in 2022)                      |                     | Priority area   | 6.4                                       |   |   |
| A6               | Jahnz Wetland Restoration (completed in 2022)                      | Rock Lake           | Priority area   | 5.5                                       |   |   |
| A7               | Internal Analysis  |                     |   | N/A                                       | Complete 2 internal loading analyses  | Completed 1 internal loading analysis   |
| A7               | Forest Lake Internal Loading Analysis (completed in 2022)          | Forest Lake         | Priority B (but scored<br>highly b/c majority<br>watershed load                         | N/A                                       |   |   |

| A8    | Targeting Analysis  |               |  | N/A   | Complete the following analyses (See Activity 8<br>Description for further detail)<br>•Einwood Lake Anoka County<br>•St. Croix Direct Washington County<br>•Desktop Analysis and Prioritized Catchments of<br>the Sunrise River Watershed Chisago<br>•Bock Lake Pine and St. Croix Direct Pine County<br>•SWA protocol refinements<br>•Enhanced street sweeping analyses for Rush City,<br>Taylors Falls, Harris, North Branch, Marine on St.<br>Croix, Stillwater, Bayport, Lakeland, Lake St. Croix<br>Beach, and Afton | Complete the following<br>•Desktop Analysis and F<br>the Sunrise River Water<br>•Bock Lake SWA<br>•SWA protocol refineme<br>Targeting Protocols)<br>•Tree canopy assessmen<br>•Enhanced street sweep<br>communities, TBD in 20 |
|-------|---|---------------|--|-------|---|--|
| A8    | Desktop Analysis and Prioritized Catchments of the Sunrise River<br>Watershed Chisago | Sunrise River | Priority activity identified<br>in work plan | N/A   |   |  |
| A8    | Rock Lake SWA   | Rock Lake     | Priority activity identified<br>in work plan | N/A   |   |  |
| A8    | Prioritization and Targeting Protocols  | N/A           | Priority activity identified<br>in work plan | N/A   |   |  |
| A8    | Tree Canopy Assessment Protocols for Enhanced Street Sweeping                         | N/A           | Priority activity identified<br>in work plan | N/A   |   |  |
| A8    | Community Tree Canopy Assessments/Street Sweeping Plans (Multiple)                    | Multiple      | Priority activity identified<br>in work plan | N/A   |   | 1 enhanced street swee<br>(Linwood Twp)  |
| A9    | Technical/Engineering   |               |  | N/A   | N/A   | N/A  |
| A10   | Administration/Coordination   |               |  | N/A   | Complete eLINK annual reporting as required   | Complete eLINK annual  |
| TOTAL |   |               |  | 950.1 |   |  |

\*Some partners may have reported phosphorus reductions as measured at target waterbodies (i.e., comparable to goals), others may only measure at edge-of-field. As such, total phosphorus reductions are not necessarily comparable to the goals set forth in Table 5-2 and Table 5-3 from the LSC Comprehensive Watershed Management Plan.

| WBIF Goal:           | 915  |
|----------------------|------|
| Percentage Achieved: | 104% |

| ng analyses<br>I Prioritized Catchments of<br>ershed Chisago |
|--|
| ments (Prioritization and                                    |
| eent protocols<br>eping analyses for some<br>2023            |
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|  |
| eping plan completed in 2022                                 |
|  |
|  |
| al reporting as required                                     |
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