

Mississippi River – Brainerd One Watershed One Plan

Technical Advisory Committee Meeting Report November 22, 2022

Attendees

In Person: Bethany Chaplin (Crow Wing SWCD), Janet Smude (Aitkin SWCD), Kaysie Maleski (Aitkin SWCD), Shannon Wettstein (Morrison SWCD), Adam Ossefoort (Todd County/SWCD), Shelly Larson (Shoreline Consultant), Mitch Brinks (TSA 8), Jeff Hrubes (BWSR), Todd Holman (TNC), Rick Johnson (Todd Co landowner), Diane Jacobson (Crow Wing County), Tad Erickson (Region 5), Moriya Rufer (Houston Engineering)

Online: Amy Kowalzek (Morrison County), Bonnie Finnerty (MPCA), Tim Terrill (MHB), Jeff Wiess (DNR), Chris Pence (BWSR)

Meeting Purpose

The purpose of this Technical Advisory Committee (TAC) meeting was to work on measurable goals and finalize resource prioritization.

Timeline

This graphic is a simplified version of the overall timeline. This timeline is a general guide, and the process can be adapted to fit as we go.



Draft Goals

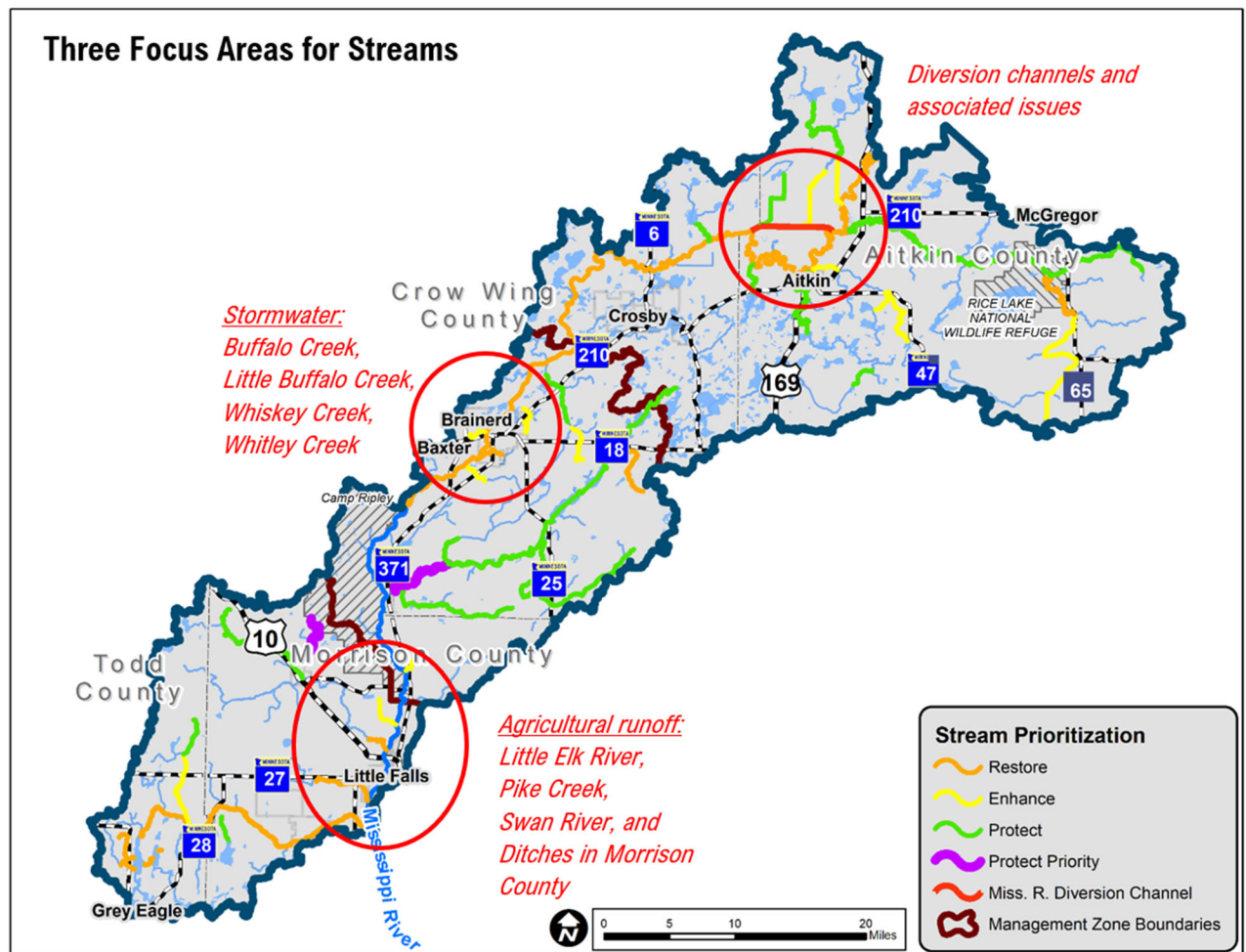
Draft goals were provided in a worksheet with ideas for metrics for measuring progress and suggested datasets to set goal numbers. In-person participants broke into two small groups and the online participants were their own group. The small groups reviewed the worksheets and recorded any questions or additional data sets that could help measure goals. The worksheet is provided at the end of this meeting report.

The next step in goal development is to hold subcommittee meetings to make sure all available data is gathered to make the goals measurable. The goal development subcommittee meetings will be scheduled for December. They will then report back to the Advisory Committee at their January meeting.

Resource Prioritization

The Policy Committee joined the Advisory Committee at 2:00 to review the Resource Prioritization together. The Steering Committee had made some revisions since the last Advisory Committee meeting. The streams were grouped into three priority areas:

- Aitkin: altered hydrology and diversion issues
- Brainerd/Baxter: stormwater issues
- Todd/Morrison County: agricultural runoff issues



Both Advisory and Policy committee members agreed with the revised prioritization and commended the Steering Committee's work.

Next Steps

All meetings are held at the Crow Wing County Land Services building.

- **December:** Goal subcommittee meetings
- **January 24: TAC Meeting**
 - Draft Goals
- **January 24: CAC Meeting**
 - Issue review
 - Develop plan actions
- **February 28: TAC Meeting**
 - Finalize Goals
- **February 28: PC Meeting**
 - Approve Goals



Goal Subcommittees

Goal subcommittees will meet virtually in December or January to determine what data to use to measure progress towards this goal and how much progress could be made in 10 years. The meeting will be 1 – 1.5 hours. At the November 22 TAC meeting we will assign subcommittee members and set meeting dates.

| Goal | Subcommittee Members | SC Lead | Meeting Date |
|---|---|----------------|---|
| Phosphorus Reduction: <i>reduce phosphorus (lbs) in priority lakes and streams</i> | <i>Not needed. Use Lakes of Phosphorus Sensitivity Significance data.</i> | - | - |
| Stormwater Management: <i>treating stormwater before it reaches the river</i> | Aitkin, Brainerd, Baxter, Little Falls, HR Green, MPCA, MS4 staff, SWCDs, Counties, County Highway Department, MNDOT, Key Townships | Melissa | <ul style="list-style-type: none"> • Pre-meeting December 14 • AC Review Jan 24 • Check with other entities listed |
| Forest Protection and Management: <i>adding acres of forest management and land protection</i> | <i>Not needed. Just use LSP. Capture what Camp Ripley does. MHB Habitat program. Use RAQ along the river.</i> | - | - |
| Riparian Stabilization: <i>feet and miles of streambank and lakeshore stabilization</i> - Will this reduce sediment (TSS)? | DNR (Carl Koller and Paul Radomski), MPCA (Stressor ID - Chuck), SWCDs, ACOE? (Tammy at Big Sandy), Mille Lacs Band? Mitch. | Janet, Bethany | December 19 |
| Agricultural Land Management: <i>acres of Ag BMPs (or other measures?)</i> - Will this reduce sediment (TSS)? | SWCDs, NRCS (Candi), MPCA, BWSR, Feedlot officers | Shannon | |
| Drinking Water Protection <i>wells sealed and DWSMA protection</i> | <i>Not needed.</i> | - | - |
| Water Retention: <i>acre-feet of water storage (ACOE, Big Sandy effects?), Dam managers (Blanchard, Little Falls)</i> | <i>Not needed. Is DNR hydrologic change study done?</i> | - | - |



Mississippi River – Brainerd 1W1P

Draft Goals:

- 1. **Phosphorus Reduction:** *reduce phosphorus (lbs) in priority lakes and streams*
- 2. **Stormwater Management:** *treating stormwater before it reaches the water bodies*
- 3. **Forest Protection and Management:** *adding acres of forest management and land protection*
- 4. **Riparian Stabilization:** *feet and miles of streambank and lakeshore stabilization*
- 5. **Agricultural Land Management:** *acres of Ag BMPs*
- 6. **Drinking Water Protection:** *wells sealed, DWSMA protection*
- 7. **Water Retention:** *acre-feet of water storage*

Directions:

Review draft goals and add notes about:

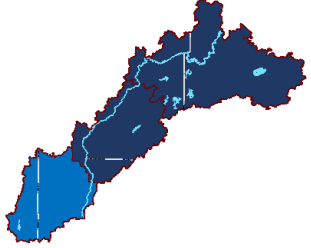
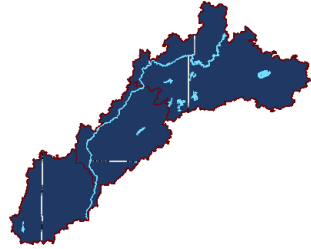
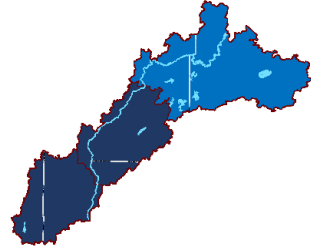
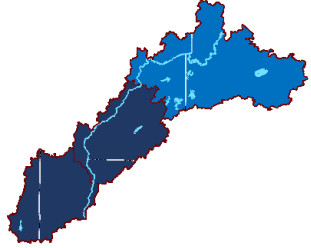
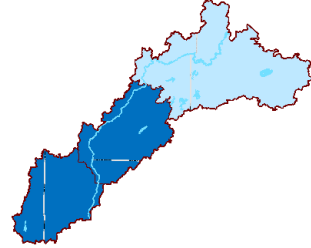
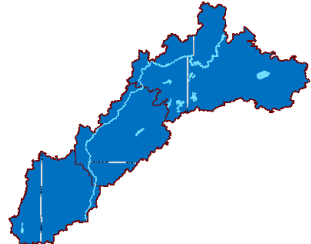
- How to measure progress
- Data available that would be helpful for measuring progress that we haven't noted
- Is anything missing?
- Whether you would like to be involved in a subcommittee for any specific goals
 - *Subcommittees will meet virtually in December*

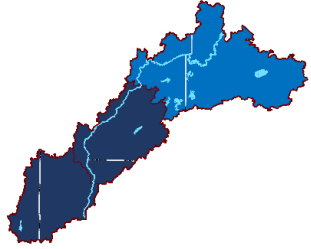
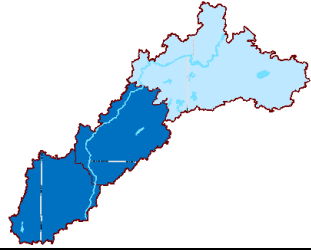
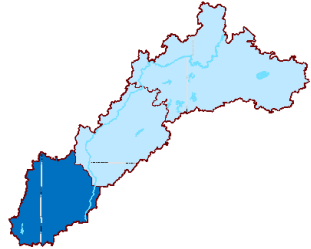
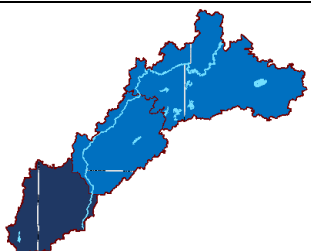
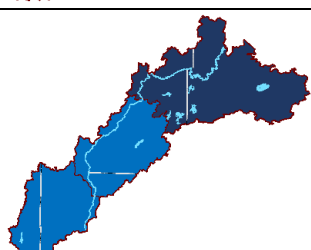
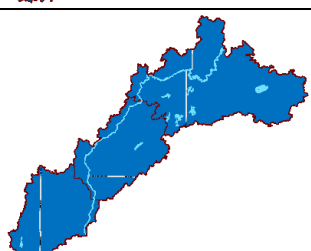
Goal Development related to Priority Issues

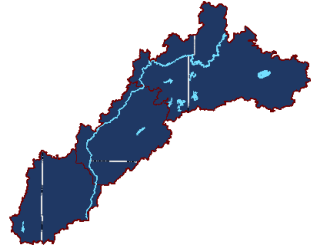
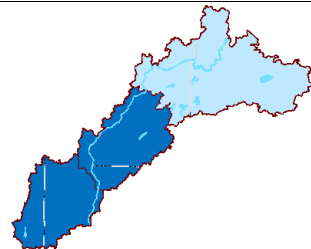
Management Zone Prioritization: High Medium As Opportunities Arise

| Resource Concern | Issues Statement | Management Zone Prioritization | Notes | Goal Theme | Metric, Data/Models |
|---|---|---|--|---|--|
| <i>Resource impacted by the issue</i> | <i>BWSR requires a “brief issue statement that describes the relevance of the issue for the planning area”. Below are draft issue statements with their main themes in bold.</i> | <i>On 7/27/2022 the Advisory Committee prioritized the issues by Management Zone.</i> | <i>This column lists notes about what is covered by this issue statement.</i> | <i>The name/theme of the goal. The goal language will be developed/reviewed at the next meeting.</i> | <i>The way the goal will be measured, and the data used for measuring.</i> |
| Surface water: Lakes, Streams | Nutrients from lakeshore development, internal loading, and land use changes contributes to algal growth, and recreational and biological impairments. | | TP lake impairments, internal loading, declining lake trends, wastewater discharge, septic systems, nutrient application. Identify tributaries/streams contributing nutrients. | Phosphorus Reduction Focus on priority “Enhance” and “Restore” Lakes; have a phosphorus goal for each lake | Metric: lbs phosphorus/yr Data: Lakes of Phosphorus Sensitivity Significance (LPSS) Model: HSPF SAM, LPSS |
| Surface water: Lakes, Streams, Wetlands, Mississippi River | Stormwater runoff contributes sediment, nutrients, and pollutants to water bodies. | | MRBW has 3 MS4s, Little Buffalo Creek is a priority stream impacted by high flow from stormwater, chloride is included in this issue statement. High = Brainerd/Baxter, Little Falls. Rain gardens in highly developed riparian areas. | Stormwater Management Additional treatment before stormwater reaches the river. Pollutant reductions Find out how many pipes are going to the river | Metric: lbs phosphorus/yr? % of pipes/sites treated? Reduce peak flows by X%? Data: HR Green stormwater analysis Baxter – know how many stormwater outlets and they are prioritized. Add Camp Ripley MS4 data Model: HSPF SAM Actions: Develop Stormwater Management Plans, Road salt policy |



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| Surface water: Lakes, Streams, Mississippi River | Sufficient protection is needed for outstanding resources and sensitive species to maintain water and habitat quality. |  | Landscape Stewardship Plan, wild rice, cisco, Nokasippi River, outstanding biological significance, priority shallow lakes. Wild rice is a high priority for the Mille Lacs Band. Mining issues, trout creeks, trout lake in Morrison Co. | Forest Protection & Management | Metric: acres Data: Landscape Stewardship Plan |
| Habitat: Riparian, Aquatic | Riparian and in-lake alteration from development impacts water quality, lake health, and fish communities. |  | Development pressure, shoreline ordinances, impervious surface, clearing shoreline and in-lake vegetation. No wake zones. Identify where there are lake associations. Explain in-lake alteration in the text. | Forest Protection & Management Riparian Stabilization | Metric: acres, wells sealed Metric: Feet/miles of riparian/shoreline stabilization Data: Local, Stressor ID, DNR geomorphology, DNR Sensitive Shoreline |
| Habitat: Uplands | Forest fragmentation due to urban and agricultural land use changes impacts water quality, infiltration, and habitat. |  | 50% of the watershed is forested, specifically protect the Mississippi River Corridor, conversion of forest to ag land, forest management, Landscape Stewardship Plan priorities Private forest management, Reforestation. | Forest Protection & Management | Metric: acres Data: Landscape Stewardship Plan |
| Habitat: Uplands | Forest health is vulnerable to climate change, pests, and invasive species, which can affect species composition and forest productivity. |  | Actions: Forest Stewardship Planning, Oak Wilt, Forest management, species migration for climate change, reclaiming forest land, prescribed burning, forest stand improvement | Forest Protection & Management | Metric: acres Data: Landscape Stewardship Plan |
| Surface water: Streams, Mississippi River | Eroding streambanks contribute to turbidity impairments and reduced habitat quality. |  | Mississippi River TMDL, Aitkin Diversion Channel, Riparian Buffers, stream channel. Focus on smaller streams: Little Buffalo Creek, Fletcher Creek. | Riparian Stabilization | Metric: Feet/miles of riparian/shoreline stabilization Data: Local, Stressor ID, DNR geomorphology |
| Surface water: Wetlands | Wetland restoration and protection is necessary to store water, provide habitat, and improve downstream water quality. |  | RIM, ditch restoration | Forest Protection & Management Water Retention | Metric: acres Metric: acre-feet Data: Compensation Framework? |

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| Groundwater: Quality | Groundwater quality is vulnerable to contamination. |  | Nitrates, Surficial Sand Aquifer, protect DWSMA, high water table, arsenic, chloride, wellhead protection, pipelines, manure stockpiles, land application. | Forest Protection & Management Agricultural Land Management Drinking Water Protection | Metric: acres of Ag BMPs (nutrient management), wells sealed, DWSMA protection (acres of RIM or nutrient management) Data: Landscape Stewardship Plan, Groundwater Recharge, Nitrogen Infiltration |
| Surface water: Lakes, Streams, Wetlands, Mississippi River | Soil health is important for agricultural productivity, water quality, and climate change resilience. |  | Buffers, cover crops, not till | Agricultural Land Management | Metric: acres of soil health practices Model: HSPF SAM Southern zone: WASCOBs and Cover Crops |
| Groundwater: Quantity | Groundwater sustainability is vulnerable to overuse and loss of recharge. |  | | Agricultural Land Management | Metric: acres of nutrient management and irrigation water management Model: HSPF SAM |
| Surface water: Lakes, Streams, Wetlands, Mississippi River | Bacteria can cause aquatic recreation and aquatic life impairments. |  | Bacteria impairments, cattle exclusions. Feedlots in the south, pasture management in central and north. Septic systems. | Agricultural Land Management? | Metric: acres or number of practices? Model: HSPF SAM Acres: manure management, nutrient management |
| Surface water: Lakes, Streams, Wetlands, Mississippi River | Altered hydrology (channelized streams and ditch systems) increases peak flows and erosion and has led to biologically impaired streams. |  | Dams, culverts, fish passage, Aitkin Diversion Channel, Brainerd Dam, Ditches, Need to reconnect streams to the floodplain, and identify areas to reduce runoff/peak flows to improve habitat and nutrient attenuation. Schwanke Creek in the south. | Water Retention Riparian Stabilization | Metric: acre feet of water retention Metric: Feet/miles of ditch or stream stabilization Data: Historic gage data |
| Habitat: Aquatic | Aquatic invasive species decrease biodiversity and impact recreation. |  | | <i>Need Goal? Actions to implement current AIS plans.</i> | |

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| Surface water: Streams, Mississippi River | Eroding streambanks contribute to turbidity impairments and reduced habitat quality. |  | Mississippi River TMDL, Aitkin Diversion Channel, Riparian Buffers, stream channel. Focus on smaller streams: Little Buffalo Creek, Fletcher Creek. | Riparian Stabilization <ul style="list-style-type: none"> • Little Buffalo Creek – streambank erosion (fairgrounds to Mississippi) (cold water potential) • Sissabagamah Creek – glacial soils, ditches and altered hydrology • Culvert under airport runway (also blocks fish movement during high flows) • DO issues by Rabbit Lake • Lot of the tributaries to the Mississippi have some sort of grade control from Brainerd down (added after a significant flood event in 1965) • Schwanke Creek • Unnamed Creek to Long Lake in Todd County | Metric: Feet/miles of riparian/shoreline stabilization Data: Local, Stressor ID, DNR geomorphology (Carl Kohler) Geomorphology study on the Mississippi from Grand Rapids to Little Falls. One report for each fisheries area. Rick can send the Aitkin area report. |