

Memorandum

Citizen Advisory Committee (CAC) Meeting

Vision Statement: *Collaborating to conserve, improve, and achieve measurable progress towards natural resource goals in our shared watershed.*

To: Mississippi River St. Cloud Watershed Citizen Advisory Committee

From: Jacob Rischmiller, Project Manager; Paul Marston, Environmental Scientist; Sarah Boser, Watershed Planner

Date: August 7th, 2023

Subject: Priority Resources; Measurable Goal and Targeting Framework

INTRODUCTION

The following memo includes an updated list of the priority resources and the draft measurable goal and targeting framework. The goal of the August CAC meeting is to review and discuss the measurable goal and targeting framework, which outlines what the planning group will be achieving through implementation efforts after the plan is complete and how the locations for those efforts will be selected. At this stage, not all the measurable goals contain numeric values. Numeric values will be added following the development of implementation actions and associated effort levels by the Steering and Technical Advisory Committees. The measurable goals allow the partners to track progress and report what has been accomplished. The goals should reflect the concerns and issues that have been identified previously in the planning process. Targeting criteria is going through the refinement process at the Steering and Technical Advisory Committee level. Feedback from this meeting will be provided to the other committees for their discussions.

KEY NOMENCLATURE FOR THIS MEETING

- **RESOURCE:** A natural, economic, educational, biotic, aesthetic or similar asset. Resources are generally considered something that can be 'managed' and are generally broad, such as surface water, groundwater, or education and outreach.
- **PRIORITY ISSUE:** The agreed upon issues that are identified as the focus of the Mississippi River St. Cloud 1W1P through a prioritization process.
- **MEASURABLE GOAL:** The Mississippi River St. Cloud 1W1P 10-year plan goal; the quantifiable change in resource condition expected after implementation of the 10-year plan. The measurable goal should relate to the Desired Future Conditions (DFC), and express what percent of progress toward the DFC is intended to be made during the plan period.
- **OUTCOME:** The specific result of an implementation activity. Collectively, the outcomes from plan activities should achieve the stated measurable goals. Outcomes may also express changes in knowledge or behavior which lead to actions that contribute to measurable goals.
- **OUTPUT:** Countable projects, activities, services, or products. These are often referred to as 'widgets' and are the countable items that are useful for tracking the steps towards achieving the goals. Outputs are not goals in and of themselves because they do not quantify a change in the resource condition.
- **INDICATOR:** A metric, benchmark, or measuring stick used to determine progress towards goals. In some cases, when a metric is not clear or feasible, the indicator might be the number of inputs or outputs themselves.
- **TARGET:** There are three facets to targeting implementation activities: 1) activity type, 2) timing, and 3) location.
 - **Activity type:** the BMPs, conservation practices, outreach and education, monitoring, technical assistance or other action that will be the most effective in addressing the prioritized issues.
 - **Timing:** The scheduling of implementation activities across the 10-year plan period, based on which priority issues will be addressed in which order.

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- o Location: The area where a specific activity will be implemented to address a priority issue. Sometimes, the location of the implementation activity will not be the same location of the priority resource that is being addressed. For instance, reducing sediment concentrations in the main stem of a river may require actions to be taken at the headwaters of minor watersheds.

PRIORITY RESOURCE LISTS

Following the May CAC meeting, the Steering Committee and Technical Advisory Committee finalized the priority resource lists. There are four separate lists:

1. Protection Lakes
2. Restoration Lakes
3. Protection Streams
4. Restoration Streams

These lists are included below for reference.

Table 1 - Priority Protection Lakes

Lake Name (Lake ID)	County
Cedar (86022700)	Wright
Ann (71006900)	Sherburne
Limestone (86016300)	Wright
Sugar (86023300)	Wright
Clearwater (86025200)	Wright
Mary (86015600)	Wright
Ida (86014600)	Wright
Nixon (86023800)	Wright
Augusta (86028400)	Stearns
Pleasant (86025100)	Wright
Little Mud (47009600)	Meeker
Warner (73001100)	Stearns
Bertram (86007000)	Wright
Bass (86023400)	Wright
Birch (86006600)	Wright
Birch (71005700)	Sherburne
Crooked (73000600)	Stearns
Long (73000400)	Stearns
Long (71015900)	Sherburne
Big (71008200)	Sherburne
Mitchell (71008100)	Sherburne
George (73061100)	Stearns

Table 2 - Priority Restoration Lakes

Lake Name (Lake ID)	County
Fremont (71001600)	Sherburne
Indian (86022300)	Wright
Orono (71001300)	Sherburne
Fish (86018300)	Wright
Julia (71014500)	Sherburne
Eagle (71006700)	Sherburne
Elk (71014100)	Sherburne
Locke (86016800)	Wright
Briggs (71014600)	Sherburne
Mayhew (05000700)	Benton
Marie (73001400)	Stearns
Louisa (86028200)	Stearns
Rush (71014700)	Sherburne
Elk (71005500)	Sherburne
Clear (47009500)	Meeker
Mink (86022900)	Wright
Somers (86023000)	Wright
Caroline (86028100)	Stearns
Scott (86029700)	Wright
Betsy (47004200)	Meeker

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Table 3 - Priority Protection Streams

Reach Name (WID)	Reach Description
Stony Brook(07010203-546)	T36 R29W S17, east line to Rice Lk
Unnamed creek(07010203-684)	Unnamed cr to Elk R
County Ditch 5(07010203-697)	Unnamed ditch to Unnamed ditch
Silver Creek(07010203-555)	Little Mary Lk to Locke Lk
Unnamed creek (Luxemburg Creek)(07010203-561)	T123 R28W S30, south line to Johnson Cr
County Ditch 13(07010203-694)	Unnamed ditch to St Francis R
Johnson Creek (Meyer Creek)(07010203-633)	Unnamed cr to Unnamed cr
Otter Creek(07010203-690)	First Lk to Unnamed cr
Tibbets Brook(07010203-736)	Unnamed ditch to Elk R
Briggs Creek(07010203-538)	T35 R29W S2, north line to Briggs Lk
Battle Brook(07010203-612)	Unnamed cr to T36 R27W S36, south line
Battle Brook(07010203-559)	T35 R27W S1, north line to CD 18
Unnamed creek (Thiel Creek)(07010203-566)	Headwaters to Lk Marie
Plum Creek(07010203-572)	Warner Lk to Mississippi R
Tibbets Brook(07010203-735)	Rice Lk to Unnamed ditch
Mississippi River(07010203-728)	Sauk R to Clearwater R
Mississippi River(07010203-729)	Clearwater R to Crow R
Willow Creek(07010203-515)	Headwaters to Lk Betsy
Johnson Creek (Meyer Creek)(07010203-632)	T122 R28W S4, south line to Unnamed cr
Johnson Creek (Meyer Creek)(07010203-635)	Unnamed cr to Unnamed cr

Table 4 - Priority Restoration Streams

Reach Name (WID)	Description
Elk River(07010203-579)	Elk Lk to St Francis R
Clearwater River(07010203-511)	Clearwater Lk to Mississippi R
Elk River(07010203-548)	St Francis R to Orono Lk
Clearwater River(07010203-549)	CD 44 to Lk Betsy
Silver Creek(07010203-557)	Locke Lk to Mississippi R
Johnson Creek (Meyer Creek)(07010203-639)	T123 R28W S14, west line to Mississippi R
Battle Brook(07010203-535)	CD 18 to Elk Lk
County Ditch 22(07010203-695)	Headwaters to St Francis R
St Francis River(07010203-704)	Unnamed lk (71-0731-00) to Rice Lk
Clearwater River(07010203-717)	Scott Lk to Lk Louisa
St Francis River(07010203-702)	Rice Lk to Elk R
County Ditch 44(07010203-550)	Clear Lk to Clearwater R
St Francis River(07010203-700)	Headwaters to Unnamed lk (71-0371-00)
Unnamed creek (Robinson Hill Creek)(07010203-724)	CD 14 to CSAH 136
Elk River(07010203-507)	Mayhew Cr to Rice Cr
Unnamed ditch(07010203-523)	Headwaters (Lk Fremont 71-0016-00) to Tibbits Bk
Mayhew Creek(07010203-750)	T36 R30W S21, west line to Elk R
Elk River(07010203-508)	Headwaters to Mayhew Cr
Snake River(07010203-529)	Unnamed cr to Eagle Lk outlet
Rice Creek(07010203-512)	Rice Lk to Elk R

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Figure 1: Priority Protection Lakes and Streams

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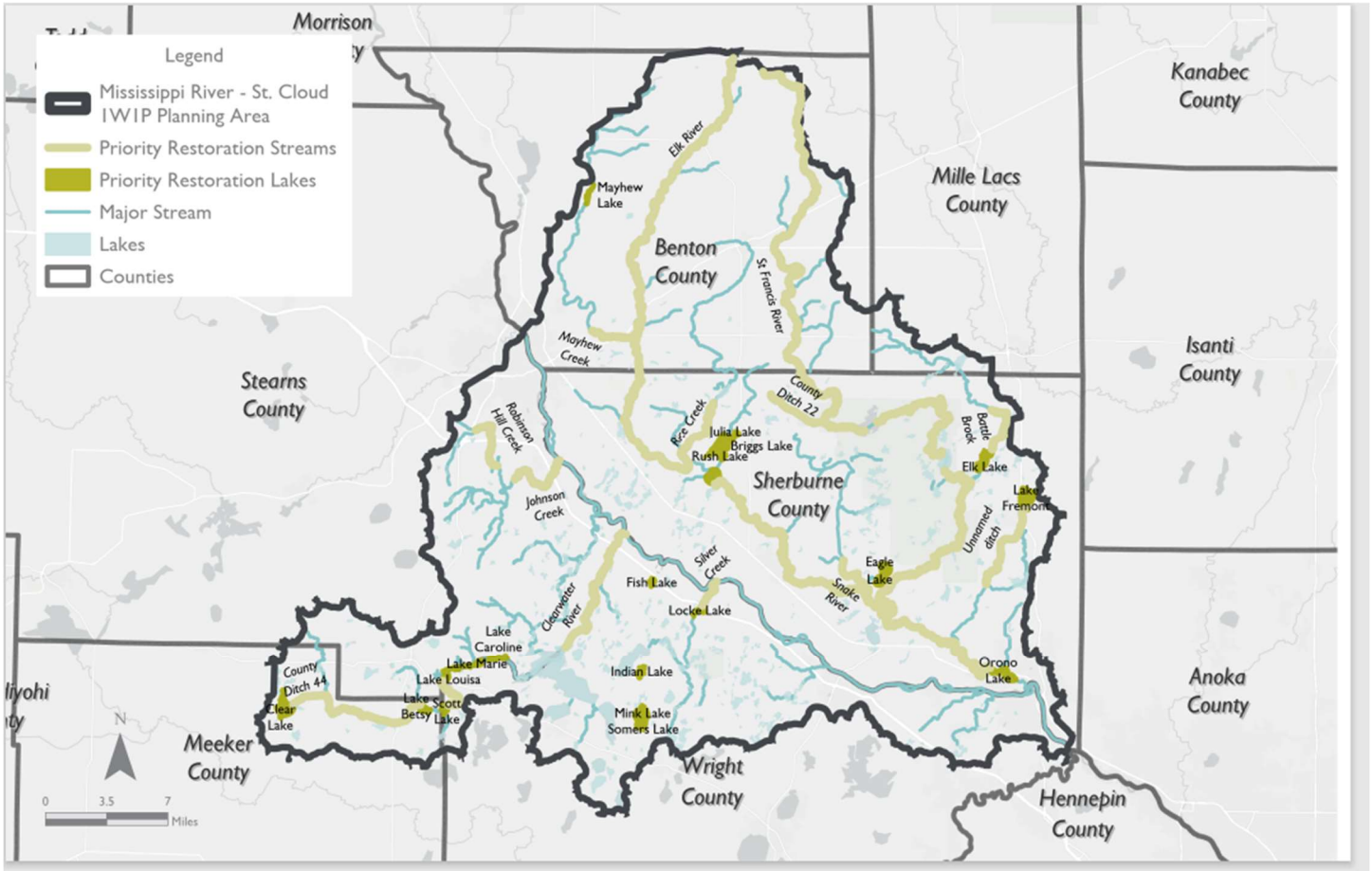


Figure 2: Priority Restoration Lakes and Streams

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MEASURABLE GOAL FRAMEWORK

The Technical Advisory and Steering Committees have been developing content for a framework document that will be used to draft the narrative of the Comprehensive Watershed Management Plan. When completed, the framework will include issue statements, desired future conditions, measurable goals, targeting information, and implementation strategies to address the goals. Included below are the issue statements, desired future conditions, measurable goals, and targeting criteria to reflect upon for the meeting discussion on measurable goals and targeting.

When reviewing the content, please keep the following in mind:

1. Measurable goals are developed to track progress towards implementing the plan
2. Efforts tracked will be used for reporting what has been accomplished
3. Measurable goals should reflect the issues and concerns identified earlier in the planning process
4. Not all measurable goals will include numeric values at this time
5. Make note of any data gaps, inconsistencies between issue statements, desired future conditions, measurable goals, and watershed concerns that are not captured through this content
6. Location of areas that should be considered for targeting

Surface Water

Issue Statement #1: Pollutant Runoff - Surface waters threatened or impaired by pollutants result in damaging impacts to the environment, economy, and quality of life.

Desired Future Condition: Surface waters across the watershed have a healthy and thriving environment that supports aquatic life and human recreation.

Measurable Goal/s:

1. Delist x number of waterbodies from the state's impaired waters list for nutrients and sediment.
2. Reduce total phosphorus loading to priority lakes according to the following table:
 - a. Create table of priority resources
 - b. Provide load reductions in lbs and %, use % of TMDL or LPSS to derive the lbs goal
3. No new nutrient impairments on priority protections waterbodies.
4. Reduce acute/chronic exceedances of *E.coli* loading to priority streams.
 - a. Provide a table with the priority streams and the exceedance goal

Targeting Criteria:

- Areas contributing high pollutant loads to priority lakes and streams (HSPF fate/transport analysis)
- Areas that provide greatest multiple benefits of other priority issues listed below:
 - Groundwater protection areas
 - Habitat/perennial cover
- Areas with higher animal unit densities from feedlot data layer and *E.coli* values with greatest exceedance of acute standard
- Identify in plan that additional tools will be used during site selection such as:
 - Existing feasibility studies
 - ACPF where completed
 - PTMAApp where completed

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Issue Statement #2: Altered Hydrology - Altered hydrology changes the timing and volume of water delivered downstream impacting the environment, economy, and quality of life. **Note: content under Issue Statement #2: Altered Hydrology is still going through revisions at the subcommittee level.*

Desired Future Condition: The watershed has achieved a balanced and sustainable surface water hydrologic regime with timing and volume of water delivered downstream supporting the ecological functioning of riparian areas and aquatic habitats.

1. *Subcommittee Notes on Issue Statement/Desired Future Condition: Focus is currently on storage and ecology. Are we missing issues pertaining to connectivity and quality of life (flooding)? Or is this captured through “ecological functioning of riparian areas and aquatic habitats”.*

Measurable Goal/s:

1. Peak Flow
 - a. Reduce 100-year, 10-day event peak flow by X% (potential convert to X acre-feet)
 - i. *Subcommittee notes: this goal is likely best suited for three subwatersheds that are monitored with USGS gauging stations. If an LGU feels areas outside of this monitored area should apply as well, monitoring and development of a stream discharge rating curve should be investigated.*
2. Base Flow
 - a. Maintain a mean daily flow of X cfs during (months) to support aquatic habitat for streams/subwatersheds in the priority areas
 - b. Reduce / maintain the 10th percentile flows in X months for streams/subwatersheds in the priority areas.
 - i. *Subcommittee Notes: Some discussion but no conclusion on altering or removing these goals. The “new” goal described above may be a suitable alternative if it is able to address low flow concerns outlined in MPCA Stressor ID reports which was the catalyst for the original Base Flow goals.*
3. *Proposed additional goal is being developed by the subcommittee. There is a desire to have a goal related to something that is directly measurable, such as channel morphology or specifics related to Stressor ID reports.*

Targeting Criteria:

- Drainage areas to priority resources
- Restorable wetland inventory data layer

Issue Statement #3: Internal Load Processes - Surface waters are impaired by sediment, nutrient release, recreational activities, and invasive species.

Desired Future Condition: Internal nutrient cycling and disturbance of bottom sediments is not a significant source of phosphorus for lakes throughout the watershed.

Measurable Goal/s:

1. Complete feasibility studies and/or lake management plans to address potential internal nutrients on X waterbodies.
2. Reduce internal nutrient sources on X waterbodies.

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Targeting Criteria:

- Nearly/Barely Lakes
- Previous Data/Models
- Trend Data

Groundwater

Issue Statement #1: Quantity - Groundwater quantity resiliency is threatened when there is an imbalance between recharge and withdrawals.

Desired Future Condition: Groundwater systems demonstrate a balanced relationship between recharge and withdrawals.

Measurable Goal/s:

1. Groundwater levels are maintained to baseline year (TBD) levels relative to precipitation as indicated by the DNR groundwater-level monitoring program report.

Targeting Criteria: •

- Priority groundwater recharge areas which include the Anoka Sand Plain
- Use running averages and trend data to get a holistic picture of what is happening and not a snapshot in time.

Issue Statement #2: Quality - Groundwater quality is impacted by naturally occurring processes and land use practices that degrade drinking water and surface water connections.

Desired Future Condition: Land use practices are managed sustainably to minimize impacts on groundwater quality and allow safe drinking water for all people in the watershed.

Measurable Goal/s

1. Decrease nutrient loading by x lbs to groundwater sources.
 - a. Note: Nitrogen and phosphorus reduction estimators are available via MPCA SSE
2. Minimize groundwater source contamination by sealing x wells.
3. Establish x number of acres in a nutrient or nitrogen management federal, state, or local program.
4. Establish x acres of newly enrolled cover crop (nitrogen scavenging) in groundwater protection priority areas.
5. Partner with X number municipalities and large-parcel landowners on turf management BMPs in high priority areas.

Targeting Criteria:

- Areas of with medium, high, and very high pollution sensitivity of near surface materials
- DWSMAs

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Habitat and Natural Resources

Issue Statement #1: Restoration, Protection + Preservation - Aquatic and terrestrial habitats are diminished due to fragmentation, degradation, and loss, which risks the stability of native species and ecosystems.

Desired Future Condition: Aquatic and terrestrial habitats are enhanced, restored, and connected with existing habitat complexes to build resiliency for native plant and animal communities in priority areas.

Measurable Goal/s

1. Increase protected landscape acres by X% in priority areas.
2. Restore landscape habitat acreage by X% in priority areas.
3. Improve aquatic habitat within priority waterways as demonstrated by a X% increase in IBI scores in X waterbodies.
4. Restore or permanently protect X units of shoreline habitat along priority waterbodies.

Targeting Criteria:

- Priority areas identified in LSP
- Areas contributing high pollutant loads to priority lakes and streams (HSPF fate/transport analysis)
- Resources identified in previous studies/reports that identify poor habitat as a stressor
- Priority Lakes/Streams with TNC multiple-benefits analysis
- Streams/lakes with IBI issues, would rely on Stressor ID reports/WRAPS/DNR/USFWS to determine applicable areas and BMP types.

Landscape Resiliency *Note: components listed as "Proposed" in the landscape resiliency would replace other content if approved.

Issue Statement #1: Soil Health - Landscape resiliency is impacted by soil health, which also affects land productivity and natural resources.

Proposed Issue Statement: Degraded soil health diminishes resiliency and limits the ecological functions of the landscape.

Desired Future Condition: Adoption of soil health practices across the entire watershed that results in increased resiliency to erosion and maintain productivity of the land.

Proposed Desired Future Condition: Adoption of soil health practices across the watershed that results in increased resiliency and ecological functions of the land.

Measurable Goal/s

1. Improve soil health on X% of cropland acres across the entire watershed.
2. Improve soil health on X% of non-cropland acres across the entire watershed
3. Proposed Measurable Goal: Implement soil health practices in each management zone as outlined in Table X.
 - a. Note: Table X includes agricultural land, pastureland, and turfgrass.
4. Proposed Measurable Goal: Demonstrate an increase in soil health adoption amongst agricultural producers in the watershed.
 - a. Note: Consider the following narrative, or similar, as explanation - The partnership will complete a study/report in the first biennium of the CWMP that identifies the current status of soil health adoption in the

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watershed (how many farms/producers are integrating soil health practices). The report will recommend, based upon the findings, a measurable goal to obtain by Year 10

Targeting Criteria:

- Areas contributing high pollutant loads to priority lakes and streams (HSPF fate/transport analysis)
- Highly erodible lands
- Wind-prone erosion areas (data source needed)
- BWSR works with UofM using remote sensing to – Brad to send out (*Note: we have transect data quantifying conservation tillage so could use this as a baseline)

NEXT STEPS

The Technical Advisory and Steering Committees are working on the next components of the framework document, Targeting and Strategies. This information will be compiled in table format and serve as the implementation tables within the plan document, identifying specific areas where the partners plan to complete projects and the type of projects they anticipate implementing.