

Introduction

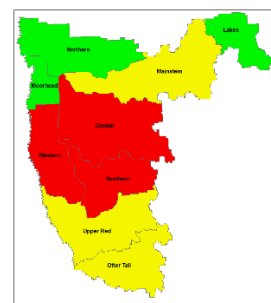
The Advisory Committee and Planning Team have been working on drafting measurable goals for this plan. The summary below is a brief overview of goals that are developed and how they will be measured. Additional detail will be added in a fact sheet for each goal (see sample fact sheet on the last page of this summary).

Buffalo Red River Watershed • Priority A Goals

These goals received the highest priority for plan implementation. The maps on the right prioritize this goal by planning region based on need. Red = High Priority, Yellow = Medium Priority, Green = Low Priority. Since there are other factors that determine where projects are implemented (such as landowner willingness), this prioritization is just a guide and does not limit working only in the red and yellow planning regions.

1. Runoff Volume Reduction to Address Altered Hydrology and Reduce Flood Damage

This measurable goal addresses both altered hydrology and flood damage reduction issues because the means for addressing each, through runoff and peak flow reduction, are similar. The Short-Term Watershed-wide and Planning Region goal is based on an altered hydrology study from the Minnesota Soybean Growers Research and Promotion Council, the Buffalo River WRAPs and the Upper Red River WRAPs. The Long-Term Goal was developed from extensive hydrologic modeling of the Buffalo-Red River Watershed as part of the BRRWD Revised Watershed District Management Plan.

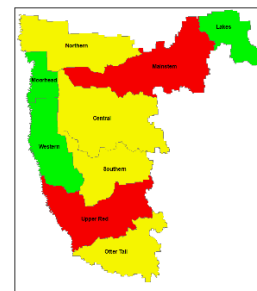


Metric: Acre-feet runoff volume reduction

Plan Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	9000	2250	8500	0	3500	6000	6000	3750	3750
Long-term Goal	36000	9000	34000	0	14000	24000	24000	15000	15000

2. Reduce Sediment Delivery and Load to Rivers and Streams

This measurable goal sets short-term and long-term targets for addressing excess sediment in a prioritized, targeted and measurable way using the Buffalo River and Upper Red River Watershed Restoration and Protection Strategies (WRAPs) and the Lower Otter Tail Total Maximum Daily Load (TMDL) as the scientific basis for the goal. The goal is set at a Planning Region scale in order to account for regional variation in the watershed.

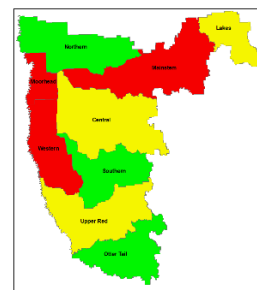


Metric: % load reduction as modeled in PTMApp

Planning Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	25% (1,850 tons/yr.)	25% (318 tons/yr.)	25% (1,660 tons/yr.)	25% (55 tons/yr.)	25% (2,049 tons/yr.)	25% (634 tons/yr.)	25% (1,434 tons/yr.)	25% (1,206 tons/yr.)	25% (321 tons/yr.)
Long-Term Goal	37% (7,400 tons/yr.)	20% (1,271 tons/yr.)	73% (6,641 tons/yr.)	10% (550 tons/yr.)	52% (8,194 tons/yr.)	17% (2,537 tons/yr.)	66% (5,735 tons/yr.)	29% (4,823 tons/yr.)	10% (1,282 tons/yr.)

3. Improve Agricultural Soil Health

The Planning Team developed a Cropland Risk Erosion Analysis for each Planning Region in the watershed. This analysis identifies the top 25% of critical sediment loss areas due to overland erosion at the parcel scale as well as parcels containing soils vulnerable to wind erosion. This measurable goal sets short and long-term acreage targets for the top 25% critical sediment loss agricultural parcels with soils vulnerable to wind erosion.



Metric: # of acres with management practices

Planning Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	1,743	1,093	3,997	711	982	610	750	1,323	2,530
Long-Term Goal	11,620	7,285	26,648	4,739	6,545	4,068	5,000	8,817	16,867

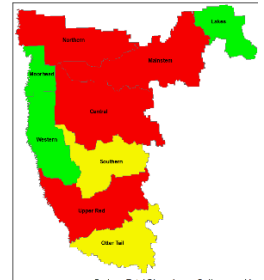
4. Stabilize Stream Banks and Channels

This measurable goal addresses the issue of instability impacting the stream and river bank and channel integrity. Metrics will be based on a new geomorphology report and will be measured in miles of stream restored.

Metric: miles of streams restored

5. Reduce Total Phosphorus Delivery and Load to Lakes, Rivers and Streams

This measurable goal sets short and long-term goals for addressing excess phosphorus in rivers and stream as well as lakes. Though there are currently no phosphorus impairments for rivers and streams in the watershed, a goal was developed to align the Minnesota State Nutrient Reduction Strategy for the Lake Winnipeg Basin in Manitoba.



Metric: % load reduction as modeled in PTMApp

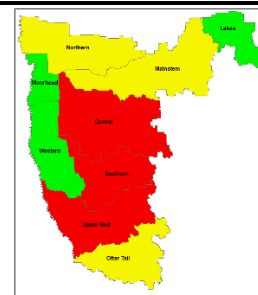
Planning Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	50% (1,084 lbs./yr.)	50% (65 lbs./yr.)	50% (530 lbs./yr.)	50% (221 lbs./yr.)	50% (1,372 lbs./yr.)	50% (595 lbs./yr.)	50% (480 lbs./yr.)	50% (594 lbs./yr.)	50% (470 lbs./yr.)
Long-Term Goal	6% (2,167 lbs./yr.)	6% (131 lbs./yr.)	6% (1,059 lbs./yr.)	6% (442 lbs./yr.)	6% (2,745 lbs./yr.)	6% (1,189 lbs./yr.)	6% (960 lbs./yr.)	6% (1,188 lbs./yr.)	6% (940 lbs./yr.)

Buffalo Red River Watershed • Priority B Goals

These goals will still be addressed in the plan but at a slightly lower priority than the A Goals.

6. Restore and Protect Wetlands and Upland Areas

This measurable goal establishes short- and long-term restoration targets for grassland and wetland restoration. The Short-Term Goal is based on Planning Region Goals identified in the BRRWD Revised Watershed Management Plan and for select Planning Regions, includes estimated wetland and grassland restoration acres from planned stream restoration projects in the watershed. The Long-Term Goal is based on the MN DNR Prairie Conservation Plan.

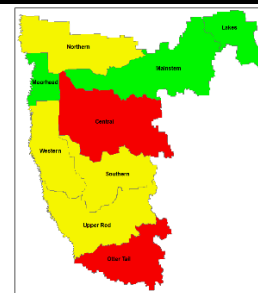


Metric: # of acres

Goals	Land Cover	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal (acres)	Grassland	912	65	174	Progress	260	1,486	1,269	809	493
	Wetland	647	40	315	Progress	315	100	642	179	218

7. Stabilize Ditch Banks and Outlets (Legal Drainage Systems)

This measurable goal identifies priority areas for ditch improvements in the Buffalo-Red River Watershed. The Short-Term Goal defines a realistic and achievable target for ditch channel and outlet stabilization as identified by the Planning Team for the lifespan of this plan. The Long-Term Goal identifies current ditch channel and outlet stabilization targets beyond the lifespan of this plan. As drainage systems require regular maintenance, the Long-Term Goal will be reviewed and likely revised as future stability issues are identified.

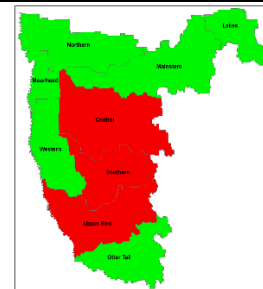


Metric: miles of ditches repaired; # of ditches repaired

Planning Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	25% of Long-Term Goal	N/A	0.8 miles of ditches	50% of Long-Term Goal	50% of Long-Term Goal	50% of Long-Term Goal	50% of Long-Term Goal	50% of Long-Term Goal	25% of Long-Term Goal
Long-Term Goal	7.7 miles of ditches; 3 outlets	N/A	Re-evaluate goal	1.7 miles of ditches; 2 outlets	6 miles of ditches; 3 outlets	4.2 miles of ditches; 2 outlets	4.75 miles of ditches; 2 outlets	3.9 miles of ditches; 3 outlets	3.2 miles of ditches; 4 outlets

8. Increase Dissolved Oxygen (DO) Concentrations

This measurable goal targets the three Planning Regions with biologically impaired streams attributed to low DO levels. The Short-Term Goal focuses on increasing the concentration of DO levels above the daily minimum of 5 mg/L. The Long-Term Goal is more of a challenge to attain, and progress towards this goal will likely come from progress made towards the altered hydrology and flood damage reduction goal.

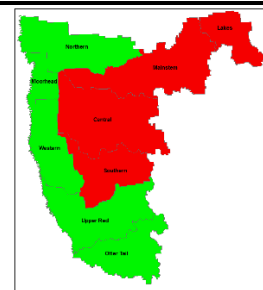


Metric: % samples above daily minimum of 5 mg/L; late summer baseflow

Short-Term Goal	>90% of reading above or equal to daily minimum of 5 mg/L
Long-Term Goal	Maintain measurable baseflow in channels during late summer months (August-September)

9. Reduce Bacteria Delivery and Load

This goal addresses bacteria impairments in the watershed. The Long-Term Goal is based on reducing the number of impairments in the watershed. As delisting an impaired stream reach can be a long process, the Short-Term Goal is based on any, however incremental, progress towards the Long-Term Goal.

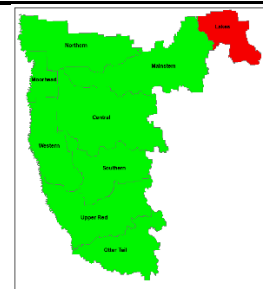


Metric: # impairments

Planning Region	Central	Lakes	Mainstem	Moorhead	Northern	Otter Tail	Southern	Upper Red	Western
Short-Term Goal	Progress towards LTG	Progress towards LTG	Progress towards LTG	Complete bacteria source assessment	Progress towards LTG	No new impairments	Progress towards LTG	Progress towards LTG	Progress towards LTG
Long-Term Goal	Reduce 7 of 7 impairments	Reduce 1 of 1 impairments	Reduce 4 of 4 impairments	No new impairments	Reduce 4 of 4 impairments	No new impairments	Reduce 3 of 3 impairments	Reduce 1 of 1 impairments	Reduce 1 of 1 impairments

10. Stabilize Lake Shoreland

This goal focuses on achieving 100% compliance with the 50-ft buffer requirement in agricultural areas and assisting lakeshore owners with shoreland restorations in the lakes region. The Planning Team prioritized Buffalo, Little Sugar Bush and Rock Lakes as their priority resource concerns.



Metric: # projects installed, % compliance with buffer law

Planning Region	Lakes	Central	Mainstem	Northern	Otter Tail	Southern	Upper Red
Short-Term Goal	10 lakeshore owners assisted through shoreland restoration	100% Compliance with 50-ft. buffer requirement 103F.48					

11. Protect Groundwater Quality

This goal focuses on continued protection of groundwater through well-sealing, septic system maintenance, stewardship plans and Drinking Water Supply Management Areas (DWSMAS).

Metric: # projects installed, # wells sealed

MEASURABLE GOAL: STABILIZE LAKE SHORELAND

Basis for Goal:

Shoreland instability is a concern for seasonal and residential lakeshore homeowners as well as for lake water quality and wildlife. Fluctuating water levels, increased impervious cover and decreased vegetative cover and declines in native plant species composition all contribute to decreasing water clarity and quality and degraded habitat. Because lake-specific shoreland degradation and sensitivity data (See the Sensitive Lakeshore Assessment for North Central Minnesota for an example) is not currently available in the Buffalo-Red River watershed, the Planning Team and Advisory Committee identified three lakes to target for improving shoreland sensitivity, all in the Lakes Planning Region.



References: Becker County Local Water Management Plan; Buffalo-Red River Revised Watershed Management Plan; Clay County Local Water Management Plan; Otter Tail County Water Management Plan; MN Buffer Law

Primary Priority B Issue(s) Addressed

- Instability impacting lake shore integrity.

Secondary Priority A Issue(s) Addressed

- Increased phosphorus loading contributing to elevated concentrations in waterbodies approaching (protection) or exceeding (restoration) water quality standards for aquatic life and aquatic recreation;
- Decreased soil health and its impact on agricultural productivity, water quality and water-holding capacity; and
- Increased erosion and sedimentation from upland sources in excess of natural rates.

Metric

- % Compliance with MN Buffer Law
- # Lakeshore owners assisted

Short-term Goal:



100% Compliance with 50-ft. buffer requirement (103F.48). 10 lakeshore owners assisted through shoreland restoration on Buffalo; Little Sugar Bush; and Rock Lakes

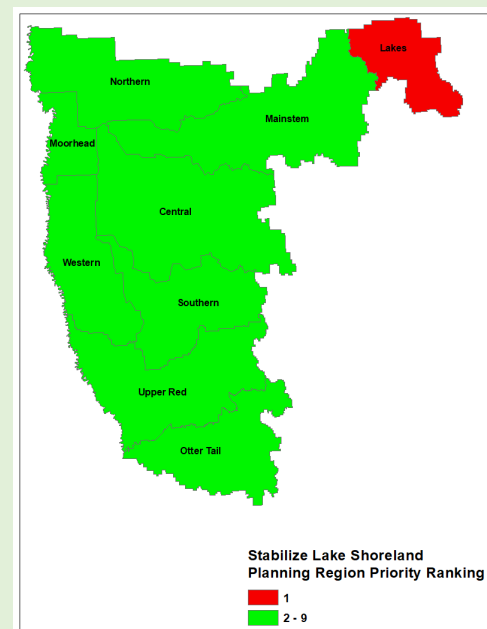
Long-term Goal:



Maintain 100% compliance with 50-ft. buffer requirement (103F.48).

Continue to provide lakeshore owners with shoreland restoration assistance.

Planning Region Priority



Resource Priorities

- **Buffalo Lake**
- **Little Sugar Bush Lake**
- **Rock Lake**