

SHELL ROCK - WINNEBAGO RIVER 1W1P MEMORANDUM

Date: December 9, 2019

To: Shell Rock - Winnebago River 1W1P Advisory Committee

From: Julie Blackburn, RESPEC (julie.blackburn@respec.com or 651.605.5705)

RE: Background information on the draft issue statements, desired future conditions, and goals for the December 16, 2019 Advisory Committee meeting.

This memorandum presents the draft issue statements and associated desired future conditions (DFC) and goals for the Surface Water, Groundwater, and Natural Resource categories for the Shell Rock – Winnebago River 1W1P. Also outlined in this memorandum are the methods that were used to collect, aggregate, and categorize data and input which was then used by the Steering Committee to develop these issue statements and associated DFC and goals.

DATA COLLECTION AND AGGREGATION

An extensive amount of data was collected from a number of sources. All the data were entered into a master spreadsheet and then categorized according to Resource Category and Subcategory (Table 1). The sources of data included:

- Existing plans, reports, and studies,
- Comment letters that were submitted during the official comment period, and
- Input from the public that were obtained at kick-off meeting and through an on-line survey.

CATEGORIZATION

After organizing all the data points into the Resource Categories, each data point was categorized according to whether the data referred to one of the following criteria: values, concerns, or strategies. The values and concerns for each resource category were considered in drafting the issue statements. Strategies will be considered later in the 1W1P process.

DRAFT ISSUE STATEMENTS AND ASSOCIATED DESIRED FUTURE CONDITIONS AND GOALS

The only draft issue statements that are being provided to the Advisory Committee at this time are for the Surface Water, Groundwater, and Natural Resources categories. The remaining categories will be addressed later in the process. The draft issue statements were developed and revisited and revised twice to ensure the issue statement captured the nature of the issue accurately. Once the issue statements were drafted, desired future condition (DFC) statements were developed. DFCs are intended to represent the long-term, blue sky version of what we would like the resource condition to be if we were to solve the issues. It's another way to capture the context of the issue and is useful in goal-setting. The Steering Committee then drafted goals for each issue statement. These are preliminary in that they have not received multiple reviews for refinement. The complete list of issue statements, DFCs, and goals is provided in Table 2.

Table 1: Resource Categories

Surface Water
Altered Hydrology
Drainage System Management
Erosion & Sediment Control
Flooding & Floodplain
Protect Surface Water Resources
Stormwater Management
Surface Water Quality
Water Rate & Quantity

Groundwater
Drinking Water Supply
Groundwater Quality
Groundwater Quantity
Infiltration & Recharge
Protect Groundwater Resources

Natural Resources
Manage, Enhance, and Restore Habitat
Fish Habitat
Wetland Habitat
Upland Habitat
Invasive Species
Preserve Sites of High Ecological Value
Protect Soil Health

Emerging Issues
Climate Change and Resilience
Contaminants of Emerging Concern
Land Development & Changes
Reduce Pesticide & Fertilizer Impacts

Quality of Life
Aquatic Consumption
Aquatic Recreation
Public Safety

Leadership
Administrative Priorities
Collaboration
Financing
Maintenance
Policy and Regulation [or Land Use Management]
Public Outreach
Stakeholder Involvement
Other

Table 2: Draft Issue Statements, Desired Future Conditions, and Goals for Each Issue Statement (as of 11/26/19)

Resource Category	Resource Concern	Issue Statement	Desired Future Condition	DRAFT 10-Year Plan Goal <i>(Please note that the actual measure for these goals is not yet determined. Draft goal statements are a first step in developing improvement targets and restoration strategies).</i>
Surface Water Resources	Surface Water Quantity	Landscape and channel alterations have caused adverse impacts to hydrology such as localized flooding. There is a risk of increased flooding due to loss of wetlands and this risk may be compounded due to increased rates of extreme weather events.	Eliminate localized flooding during extreme weather events.	<ol style="list-style-type: none"> 1) Reduce the frequency and intensity of flooding by X %. 2) Increased water storage
Surface Water Resources	Surface Water Quality	The lakes and streams are threatened or impaired due to excess pollution including nutrients and sediment and streams are threatened or impaired due to bacteria contamination. These excessive pollutants can cause eutrophication, impact aquatic life, and decrease recreational use opportunities.	All lakes and streams meet MPCA standards for aquatic life and recreational use.	<p><i>Lakes:</i></p> <ol style="list-style-type: none"> 1) 50% reduction of internal phosphorus loading. 2) Increase lake Trophic Status Index (TSI) values by X%. 3) Decrease rough fish population/abundance by X lbs./acre <p><i>Streams:</i></p> <ol style="list-style-type: none"> 1) Reduce E.coli source loading by X%. 2) Reduce sediment, and nutrient loading by X%. 3) Reduce TSS concentration by X%. 4) Improve DO conditions (flux and minimums) by X%.
Surface Water Resources	Erosion and Sediment Control	Increased and accelerated runoff have caused elevated or fluctuating water levels which result in shoreland and streambank erosion. Increased erosion and sedimentation issues in waterbodies is the result of a lack of vegetation on streambanks and shoreland areas as well as land management practices. These impacts may be compounded due to increased rates of extreme weather events.	Excessive erosion and sedimentation in all land uses is controlled.	<ol style="list-style-type: none"> 1) Reduce streambank erosion by X %. 2) Improve soil health conditions. 3) Reduce TSS concentrations in streams by X (%). 4) Reduce loading (volume, TSS, TP) from MS4 areas by X%.
Natural Resources	Protect Soil Health	Degraded soil conditions have resulted in erosion across the landscape and sedimentation in surface waters.	Improved soil health no longer causes erosion and sedimentation.	<ol style="list-style-type: none"> 1) Increase the number of soil health practices on agricultural land by X% and/or X # of acres. 2) Better understand current soil health conditions in the watersheds.
Natural Resources	Manage, Enhance, and Restore Habitat /Preserve Sites of High Ecological Value	Land alteration and altered hydrology have reduced, degraded, and removed significant portions of native habitat. The few remaining resources with high ecological value are at risk of degradation.	Significant portions of native habitat have been restored. The few remaining resources of high ecological value are protected.	<ol style="list-style-type: none"> 1) All (100%) outstanding, high, and moderate biologically significant areas are protected. 2) Restore X% and /or X # of acres of wetland, upland, and aquatic habitat.
Natural Resources	Upland and Wetland Habitat	Intensifying land use has resulted in reduced upland and wetland habitat, quality, and abundance.	Existing upland and wetland habitat are of high quality and are protected.	<ol style="list-style-type: none"> 1) Restore X% and /or X # of acres of wetland, upland, and aquatic habitat.
Natural Resources	Fish Habitat	Native fish populations are threatened by a lack of habitat, poor biological quality, channelized streams and poor water quality due to high sediment loading and algal blooms.	Fish habitat fully supports native fish communities.	<ol style="list-style-type: none"> 1) Improve MIBI/FIBI by X%. 2) Decrease rough fish population/abundance by X lbs./acre 3) Vegetation

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Natural Resources	Invasive Species	Invasive species threaten the health and quality of upland, wetland, riparian, and aquatic ecosystems. Invasive species need to be controlled to reduce their impact.	Invasive species have been controlled and no longer impact native ecosystems.	<ol style="list-style-type: none"> 1) Reduce AIS by X% on X # of waterbodies. <i>(carp, vegetation, all?)</i>. 2) Reduce wetland/upland invasive species by X # of acres. 3) No newly detected invasive species will become established.
Ground Water Resources	Protecting Ground Water Resources	Groundwater recharge areas and particularly karst areas of watershed are vulnerable and difficult to protect. There is a lack of information on where vulnerable groundwater resources are and how to protect them from pollution.	There is an understanding of groundwater vulnerability sufficient enough to allow protection of the resources.	<ol style="list-style-type: none"> 1) Complete groundwater vulnerability study to expand knowledge. 2) Protect known highly vulnerable areas by x%.
Ground Water Resources	Drinking Water and Groundwater Quality and Quantity	Groundwater and drinking water supplies are threatened by human actions and non-compliant septic systems as well as naturally occurring contaminants. There may be areas that have low groundwater volume which could be impacted by high capacity wells.	To have sustainable, drinkable groundwater.	<ol style="list-style-type: none"> 1) Maintain aquifer withdrawal rates over the 10-year planning period by encouraging conservation while supporting growth 2) Reduce non-naturally occurring ammonia in groundwater by X% (90% is the goal for the City of Albert Lea). 3) Reduce failing and non-compliant septic systems by X% 3) Improve X% of feedlots; feedlot compliance rates by X%