Climate Change and Resilience

RESPONSE LETTERS WATER PLANS REPORTS PUBLIC COMMENTS

Draft issue statement:

Issue Source	Resource Issue	Priority Issue?	Specific Resource Identified	Category Type
Winnebago River and Upper Wapsipinicon River Watershed Monitoring and Assessment Report	Increasing Precipitation Trend			Concern
Watershed Climate Summary: Shell Rock River	Slight Climate Change			Concern
Watershed Climate Summary: Winnebago	Slight Climate Change			Concern
Shell Rock River Watershed Water Management Plan	Extreme weather events			Concern
BWSR response to notification Shell Rock Winnebago.docx	Landscape Resiliency and Climate Adaption – BWSR strongly encourages your planning partnership to consider the potential for more extreme weather events and their implications for the water and land resources of the watershed in the analysis and prioritization of issues. The weather record for the planning area shows increased frequency and severity of extreme weather events, which has a direct effect on local water management. Adjustments involving conservation and fieldwork planning and implementation should be explored; for instance, the use of an updated precipitation frequency chart such as the NOAA Atlas 14 when designing conservation projects. An additional source of information for use in the planning process is the BWSR Landscape Resiliency Toolbox. Finally, a new white paper from the Minnesota Interagency Climate Adaptation Team titled “Building Resiliency to Extreme Precipitation in Minnesota” also provides resiliency strategies related to this topic.	Yes		Concern
Kickoff	Learning how to adapt to climate change			Concern

Contaminants of Emerging Concern

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Shell Rock River Watershed Monitoring and Assessment Report	Increasing Nitrate-N Levels			Concern
Shell Rock River Watershed Monitoring and Assessment Report	Tile Drainage			Concern
Winnebago River Watershed Stressor Identification Report	High Nitrate			Concern
Winnebago River and Upper Wapsipinicon River Watershed Monitoring and Assessment Report	Nitrate in Groudwater is a Concern			Concern
Winnebago River and Upper Wapsipinicon River Watershed Monitoring and Assessment Report	42% of Wetlands are in Poor Condition			Concern
Winnebago River and Upper Wapsipinicon River Watershed Monitoring and Assessment Report	Tile Drainage			Concern
Shell Rock River Watershed Water Management Plan	NitrateN concentrations have also increased in the Shell Rock River in recent years.		Shell Rock River	Concern
Albert Lea Lake Watershed Management Plan DRAFT	Residents of the Albert Lea Lake watershed rely on groundwater for drinking water supply			Concern
Survey	Sedimentation and phosphorus			Concern
Survey	Runoff, chemicals			Concern
Survey	Pollution from all sources including farm runoff and any solid things that were dumped into the lakes by manufacturers.Algae!!!!Pollution from an abundance of Canada geese.			Concern
Survey	Abundant nutrient oversupply on the lake and river bottoms (i.e. Fountain Lake) is fueling rapid growth of duckweed and other aquatic plants with mediocre water quality visibility.Much of the extra nutrients is in the form of extra material that has accumulated over the years in part from over application of chemicals sprayed by farmers in addition to the lack of preventative measures such as filters at the entry points into the waterways. These extra nutrients and artificially shallow lake bottom is resulting in a reduced health in the ecosystem most noticeable in Bancroft Bay of Fountain lake.Early in the season before the entire bay is covered in duckweed and aquatic leaves, there is significant fish and bird activity. Once the Duckweed growth kicks in, the fish mostly depart this bay and birds (specifically Pelicans) move to Albert Lea Lake in portions that are not covered in duckweed. Beyond the ecosystem concerns this excessive growth has reduced/limited recreation abilities in at least Fountain Lake (that I can speak to).Duckweed flows regularly from Bancroft Bay into the Boathouse channel by the main boat launch.This has caused many (including myself) economic harm and reduce enjoyment of area watershed resources. Specifically after a large rain this year, a massive "bank" of duckweed got pushed down the channel to the boat launch and to the end by the entry to the main lake, which has remained for months. In one instance, every boat in front/back of us had to drive through this thick duckweed, six in total that I observed. The motor on every single boat had troubles accelerating (sputtered/died) on the main lake as the duckweed got into the cooling systems. One of my neighbor's boat motors was completely ruined (had to get replaced) and personally after this I spent hundreds on a new trolling motor so I could "troll" through this junk with an electronic motor and not harm my main boat motor. While many of these plants are native, the extent of the growth we are seeing is not and is causing ecosystem and recreation concerns, prohibiting use of public launches and waterways leading to economic harm to resident and visitor property.		Fountain Lake, Albert Lea Lake	Concern
Survey	Farming run off, all run off from streets and vehicles			Concern
Survey	Increasing scale of agriculture including non-natural inputs that degrade soil health, lack of understanding of causes, increased urban and impervious surfaces without equal consideration to water quality.			Concern
Kickoff	Clean environment free of litter			Value
Kickoff	(phosphorous) Chemicals, lawns, farms, business, run-off			Concern
Kickoff	Surface water carrying soil and pollutants into our lakes and streams - ditches			Concern
Kickoff	This watershed is a collection bowl. We need to be aware that what we put in affects our local environment.			Concern
Kickoff	Lake shore homeowner responsibility for grass fertilizer, erosion, garbage			Value

Land Development & Changes

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Kickoff	Conversion of native landscape into row crop agriculture, housing			Concern
Kickoff	Growing population = less nature because of more peeps			Concern
Kickoff	Expanding urban development and development of lakeshore and riparian/natural areas			Concern
Kickoff	Urban sprawl			Concern
Kickoff	Land management practices - clear cutting shorelines, improper tree management and removal			Concern
Kickoff	Landscaping of shorelines			Concern
Kickoff	I care about the beauty of nature. Making sure buildings don't take over. Protect nature.			Value
2019 05 29 Shell Rock 1W1P DNR Comments.pdf	Enhance the administration of the local shoreland zoning ordinance so controls are implemented and the adjacent surface water resource is restored, enhanced, or protected from development pressures	Yes		Strategy
BWSR response to notification Shell Rock Winnebago.docx	Altered Hydrology/Flooding/Water Quantity – The hydrologic conditions of the watersheds in this planning area have changed over time. In recent decades more precipitation, more runoff, and more runoff per unit of precipitation has been observed as well as more frequent periods of extremely low flow in some watercourses. These hydrologic changes as well as others have contributed to instability of natural and artificial watercourses, degradation of wetland habitats, loss of agricultural productivity, and increased the risk of flood damages. Recognizing altered hydrology as a priority issue in the plan will help ensure that a driving factor behind many related issues is directly addressed.	Yes		Strategy

Reduce Pesticide & Fertilizer Impacts

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Minnesota Department of Agriculture Initial Comment Letter - 6/20/19	Groundwater Monitoring Wells The MDA samples one monitoring well in the Shell Rock and Winnebago Rivers Watershed. Monitoring at this well began in 2013 and it is sampled twice a year. Pesticide and nitrate data is available for the well. Semiannual and hourly water level measurements are also available for the site. Nine different pesticides or pesticide breakdown products (or degradates) have been detected in this well. None have exceeded human health reference values. Nitrate-nitrite (nitrate) has been detected in the well. The nitrate concentrations range from 2 to 60 mg/L. The health risk limit (HRL) for nitrate is 10 mg/L. Monitoring of this site is expected to continue into the future.			Concern
Minnesota Department of Agriculture Initial Comment Letter - 6/20/19	Surface Water Monitoring The MDA has completed six pesticide and/or nutrient water quality sample collection events from six river and stream locations within the Shell Rock River and Winnebago River Watershed from 2010-2011. There are currently no pesticide water quality impairments in the watershed.			Concern
Shell Rock River Watershed Monitoring and Assessment Report	Lawn Fertilizer Contributions			Concern
Shell Rock River Watershed Monitoring and Assessment Report	Animal Manure Contributions			Concern
Winnebago River and Upper Wapsipinicon River Watershed Monitoring and Assessment Report	Land Cover Dominated by Row Crop Agriculture			Concern
Survey	Pollution from all sources including farm runoff and any solid things that were dumped into the lakes by manufacturers.Algae!!!!Pollution from an abundance of Canada geese.			Concern
Survey	Runoff, farm chemicals, carp and additional drainage.			Concern
Kickoff	Regulating the use of pesticides, not only for farmers but city land owners, too, on their lawns			Value
Kickoff	Reduce chemical usage on lawns			Value
Kickoff	Over use of chemicals			Concern
Kickoff	Chemical runoff from farm lands			Concern
Kickoff	Water pollution, chemical runoff, urban and rural			Concern
Kickoff	Impacts from tile drainage (nutrients) causing issues in streams			Concern
Kickoff	Ag drainage expansion			Concern
Kickoff	Over-use of chemicals (algal blooms)			Concern
Kickoff	GMO crops			Concern
Kickoff	Pesticides (one is mosquito control)			Concern
Shell Rock River Watershed Monitoring and Assessment Report	Heavily Utilized for Ag Production (78 Percent of Landscape)			Strategy
Shell Rock River Watershed Monitoring and Assessment Report	Manure Management Issue			Strategy
Survey	Dredging all parts of Fountain Lake.A “catch” basin for storm drain runoff.Eliminate farm and yard runoff into the lakes		Fountain Lake	Strategy
Survey	In Phase 2 of the Fountain Lake dredging project, dredging of all upstream sources should be completed first (Edgewater Bay-done, developed part of Bancroft Bay and Dan's Bay) before dredging the "main" lake portion. Otherwise, the upstream nutrients will keep "refilling" the dredged areas reversing any progress that was gained by the dredge. This approach will help reduce the continual flow of excess nutrients and aquatic weeds that regularly is "fed" from these bays and pushes to the main lake/boat launches causing many challenges. In addition, growing the network of filtration methods of water being fed into the rivers/lakes and expand efforts to work with farmers to eliminate any excess nutrients from fertilizers contributing to the excessive growth challenges are both critical approaches as well.		Fountain Lake	Strategy