DEPARTMENT OF NATURAL RESOURCES

Minnesota Department of Natural Resources
Southern Region Headquarters
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Thank you for inviting input from the Minnesota Department of Natural Resources (DNR) as you and local partners begin developing a Comprehensive Watershed Management Plan for the Cannon River Watershed.

We recognize the challenge of creating a shared vision for a healthy, well-functioning watershed. Local water management and political jurisdictions can have differring perspectives, priorities and goals. The DNR can and is anxious to provide technical support in the planning process.

Attached to this letter are DNR priority concerns for the Cannon River watershed. Using sound technical science and governance strategies to sustain water resources is a top DNR priority that aligns well with the One Watershed One Plan (1W1P) effort. DNR field staff from multiple divisions helped develop specific resource priorities for the Cannon River Watershed using an approach that identified common concerns of the agency. Additional information about these priorities can be provided as you progress in developing the plan.

Priority issues play a key role in watershed health by having multiple benefits including, but not limited to environmental, social/economic, and recreational. We believe incooperating these priorities will enhance water quality, aquatic and upland habitats, species diversity, groundwater protection and recharge plus other resource benefits that will enhance the quality of life in the watershed.

Our lead DNR staff person for the Cannon River 1W1P project is Todd Piepho, Area Hydrologist at the Waterville DNR office. He can be reached by telephone at 507-362-8868, or email at Todd.Piepho@state.mn.us. Please contact Todd if you have questions or would like more information about the attached priorities or the types of support we can provide. Feel free to contact us as well if you need additional support.

Sincerely,

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Minnesota DNR Priority Resources and Issues for the Cannon River Watershed

The Department of Natural Resources (DNR) recommends the Cannon River 1W1P planning committee consider the following priority resource concerns and opportunities, which reflect input from DNR staff in Fisheries, Wildlife, Nongame, Ecological and Water Resources, Forestry, Parks and Trails, and Lands and Minerals. These priorities include items that can be measured, mapped, and implemented realistically within the Cannon River watershed. The DNR can provide additional data around each issue as you begin developing the watershed plan, including information to help target areas for protection and restoration.

Outdoor Recreation & Natural Heritage: Enhance public recreation opportunities, promote clean water, connect habitat, and prevent invasive species by protecting, restoring, and enhancing aquatic and upland habitat in lakes, streams, wetlands, riparian zones, and uplands in ways that

- **Protecting high priority lakes:** There are many high priority lakes in the Cannon River Watershed that support diverse fisheries, offer outstanding recreational resources, abundant native aquatic plant communities with high species diversity, outstanding water quality, and support relatively abundant woodlands, grasslands and wetlands. Protection measures are needed to maintain or improve these high public recreational and resource value waters to continue to meet water quality guidelines for water recreation and fish consumption.

    - Lakes that fully support fish consumption include: Beaver, Dora, German, Jefferson, and Roberds Lakes.

    - Lakes that fully support water recreation include: Roemhildts, Fish, Dudley, Kelly, and Beaver.

- The Cannon River Watershed Restoration and Protection Strategy (WRAPS) Report identified lakes that currently meet recreational and/or fish consumption guidelines but are at risk due to their high sensitivity to land use changes. Protection measures for these sensitive lakes should focus on land use, planning and zoning to protect the lake watershed.

- The DNR can help identify many other lakes in the watershed, impaired and unimpaired, that support rare or threatened aquatic plant communities and/or unique animal species.

- **Protect high-priority warm and cold water streams:** Warm and cold water streams and rivers of high priority in the Cannon River Watershed provide unique fisheries, recreational resources, and high habitat value. Protection measures are needed to maintain the high quality value of these waters.

- High quality cold water streams include: Trout Brook, Pine Creek, Rice Creek, Belle Creek, Spring Creek and the Little Cannon River. Rice Creek, Trout Brook, and Pine Creek are all state listed trout streams. Protection measures should be identified in the plan to maintain and enhance these unique and important fisheries. Examples include easements, stream habitat projects, reducing surface water inputs, and limiting groundwater appropriations for sources supplying the stream.

- High quality warm water streams include: Maple Creek, Falls Creek, Turtle Creek, Mud Creek, and the Lower Cannon River. The main concerns facing these streams are excess sediment, nutrients, invasive species, altered hydrology, restricted or elevated culverts, loss of natural perennial cover, and loss of floodplain connectivity due to poor stream stability.

Riparian and upland land use practices can dramatically improve the quality of water entering both lakes and stream channels in the Cannon River watershed. Increasing the perennial/woody vegetation in riparian areas, best management practices (BMPs) on agricultural land, and implementing sustainable development within the shoreland district are DNR priorities to consider for the protection and maintainance of existing high quality water resources.

- **Protect rare and natural features.** Rare features contribute to the overall health, habitat, diversity and environmental quality in the Cannon River watershed. Because of the sensitivity of these resources each may require consideration for extra protection. These rare features also contribute directly to local economies in the form of recreation, hunting, fishing, wildlife viewing, tourism, paddling and camping. A few of the rare species in the watershed include, blanding's turtle, wood turtle, loggerhead shrike, upland sandpiper, round pigtoe mussel, milksnake, and western foxsnake. The DNR has additional information available for the species of concern, along with a complete list of rare and natural features and communities found in the Cannon River Watershed.

Shoreland and Riparian Zones: Following and implementing the shoreland ordinance will help maintain and improve water quality, provide aquatic and riparian habitat, improve fish and wildlife use, enhance aesthetic qualities, improve property values and reduce future impairments.

- **Restoring perennial vegetation in riparian areas:** Changes in vegetative cover across the watershed are a significant concern, specifically the loss of native and perennial vegetation along the lakes, wetlands and riparian corridors. The loss of perennial/woody vegetation in these areas increase the likelihood of bank and channel erosion, creates habitat fragmentation, and allows invasive species to establish. Practices that establish and maintain perennial vegetation, native prairie, and cover crops should be included in this plan. With nearly 70% of the watershed in row-crop agriculture, BMPs are essential, especially in water and habitat sensitive areas. Prime agricultural land needs to remain protected as a resource, however areas

that flood frequently and consistently produce low yields should be reviewed for potential alternative crops and conservation practices. Development in and along these areas should be limited. Local zoning and floodplain ordinances should be applied in all cases to these sensitive areas.

- **Aggragrate and mineral resources**: DNR supports planning efforts by local units of government in the development and access to natural resources for supplying aggregate and other natural construction materials for building and maintaining roads, other infrastructure and environmentally sound mining.

- **Slowing the flow:** Water is flowing faster into our streams, rivers, and lakes in the Cannon River resulting from adding impervious surfaces, drain tile, ditching, piped storm water, and removal of native vegetation. Establishing grass or forested buffers throughout the watershed can help slow the flow, increase water retention and infiltration, reduce erosion, filter sediment and nutrients, stabilize streambanks and lakeshores, provide wildlife habitat, and connect habitat patches.

- **Protecting a Wild & Scenic River**: The portion of the Cannon River from the northern city limits of Faribault to the confluence with the Mississippi River is designated by the state as wild and scenic. The designation is intended to maintain and preserve the natural and esthetic quality of the river for public benefit. Protection of the designated riparian area as required by state statute is important to the protection of this natural water resource.

Water Storage and Retention: Managing surface and subsurface drainage systems, restoring wetlands, and implementing water storage projects are all ways to reduce flood damage, protect fish and wildlife habitat, maintain stream stability, support summer and winter stream base flows, filter sediment and nutrients, and improve groundwater recharge.

- **Wetland restoration and water storage projects**: Intensive land use and surface and subsurface drainage of shallow lakes and wetlands have contributed to more runoff, more water downstream, less overall water storage and reduced groundwater recharge. Wetland restoration and water retention practices, specifically in the upper reaches of the Cannon River watershed, can help decrease the impact of flood events, enhance water quality, and reduce erosion by holding and metering out the water over a longer period of time or allowing it to infiltrate through the soil. The cities of Waterville, Morristown, Faribault, Northfield and other communities along the Cannon River have experienced more frequent and extensive flooding as result of reductions in water storage and retention within the watershed and increased frequency of large rainfall events.

- **Restoring altered hydrology**: The natural hydrologic functions of streams, rivers and lakes in the Cannon River Watershed have been altered due to actions such as straightening stream channels, ditching, tiling, draining wetlands or depressional areas, and adding impervious

surfaces. These changes in the landscape and water management play a large role in water quality impairments that impact the watershed as a whole. The net increase in flows leaving the watershed, more extensive flooding events, decreased aquatic habitat and species diversity, and increased nutrient and sediment loads can all be attributed to altered hydrology. This major concern should be addressed as part of this watershed plan by improving land use and water management practices targeted to reduce these impacts.

Groundwater Supply: Working to protect groundwater sources and recharge areas is essential for a sustainable water supply for today and future generations.

- **Water supply planning**: Clean drinking water is our most precious resource, but often overlooked. Increasing demand from domestic, agricultural, and industrial water users can strain water resources and municipal water supply systems. The DNR and other state agencies have resources that local units of government can use to educate and assist water users on conservation measures and practices. Planning for a sustainable water supply and implementation of water conservation measures is vital for future generations.

- **Groundwater recharge in sensitive areas**: Groundwater resources supply about 75 percent of Minnesota's drinking water and nearly 90 percent of water used for agricultural irrigation. BMPs should be implemented in groundwater recharge areas, specifically the surficial sands and gravels and outwash areas where the chance of groundwater contamination is highest.