



Final St. Louis River 1W1P Issue Statements are provided below for consideration. These statements were developed over the past few months in collaboration with the St. Louis 1W1P Steering Team and Advisory Committee and were finalized at the March 16, 2021 Advisory Committee.

Issue Category	Sub-issue	Sub-Issue Statement
Surface Water Quality	Pollutants	Pollutants (e.g., nutrients, bacteria, sediment, chloride, etc.) are a source of degradation leading to the impairment of aquatic life, aquatic consumption, and aquatic recreation uses.
	Mercury & sulfate	Mercury and sulfate contamination pose a risk to critical species, cultural needs, the environment, and public health. Activities (e.g., channelization, wetland degradation) contribute to conditions that increase mercury methylation rates and conversion of sulfate to sulfide.
	Wastewater	Non-compliant and failing septic systems, along with failing wastewater treatment infrastructure, can impact surface water quality.
	Drinking water from surface water	Drinking water obtained from surface water sources is threatened by excess sediment, nutrients, and stormwater pollutants which can impact ecosystem and human health.
Altered Hydrology	Loss of storage	Loss of water storage, increased flows, and changes in watershed boundaries are the result of land development, drainage, and mining that alters natural hydrologic processes.
	Floodplain disconnection/ habitat degradation	Floodplain disconnection and habitat degradation are commonly associated with altered hydrology.
	Channel instability/ sedimentation	Channel instability, excess sedimentation, and disruption of natural sediment transport are caused by activities such as channelization, improperly installed culverts, drainage activities, and land use changes.
	Water chemistry changes	Changes in water chemistry, including changes in dissolved oxygen, temperature, sulfate reduction to sulfide, and mercury methylation and bioaccumulation are the result of drainage activities and impoundments.
	Invasive species	Damage to existing ecosystems from invasive species negatively alters the function of natural hydrologic systems in the watershed.
	Aging infrastructure	Much of the watershed contains aging infrastructure that is not consistent with current standards and impedes hydrologic conditions.
	Dams	Functioning dams are important features in some areas of the watershed, while obsolete or nonfunctioning dams are no longer needed but continue to alter natural hydrology and impede fish passage and aquatic organism movement and affect stream temperature.
Groundwater	Drinking water quality/ quantity	Drinking water quality and quantity obtained from groundwater can be threatened by land use activities and water appropriations in the Planning Area.

Issue Category	Sub-issue	Sub-Issue Statement
	Septic systems	Failing septic systems can contaminate groundwater and localized drinking water and may lead to imminent threats to public health.
	GW recharge	Loss of groundwater recharge can impact vulnerable cold-water habitats and drinking water supplies.
	SW/GW interactions	Protection and restoration of groundwater and surface water interactions requires a detailed understanding of the local and regional hydrologic system.
	Mining	Mining activities have altered surface and groundwater dynamics in the upper part of the watershed.
Habitat	Aquatic habitat	Aquatic, riparian, and shoreland habitats are impacted by land use changes, pollution, climate change and altered flows which can lead to degraded resources, impeded fish passage, and fragmentation.
	Best practices	Healthy and functioning ecosystems rely on best practices for conservation and sustainability being implemented on public and private lands.
	Invasive species	Aquatic and terrestrial invasive species are present throughout the Planning Area and pose a threat to individual habitats and overall biodiversity.
	Wild rice	Wild rice populations have diminished due to fluctuating water levels, land use changes that erode shorelines and disturb stands, and degraded water quality. Climate change also threatens wild rice as it is sensitive to both flooding and drought, and warmer temperatures may make wild rice more susceptible to disease.
Land Use	Forestry	Land use change, climate change, and invasive species have a high likelihood of driving forest fragmentation and loss. These processes can affect ecological community processes, community resilience and adaptive capacity, habitat connectivity and quality, species migration capacity, and surface water and groundwater quality.
	Agricultural pollution	Agricultural land use can result in impacts to surface water quality and quantity, affect sensitive aquatic resources through nutrient and sediment contributions, and groundwater.
	Urbanization	Urbanization, development, and road expansion can impact watershed health and increase nutrient and other pollutant loadings when stormwater is left untreated.
	Metallic mining	Metallic mining has resulted in historic impacts and can affect existing and future water quality and quantity as well as aquatic life.
	Aggregate mining	Aggregate mining can alter natural hydrology, impacting baseflows for nearby streams and local and regional aquifers.
	Water/land-based recreation	Water- and land-based recreational activities can impact the quality of lakes and streams, stress wildlife, degrade habitats, and lead to conflict between different uses.