

FRESHWATER

Freshwater supports BWSR in using the newly created Water Storage program to target projects that protect rivers from streambank erosion, especially in the Minnesota River watershed.

HF3459/SFXXX provides \$5 million in bonding for the newly created water storage program in [Minn. Stat. § 103F.05](#). The purpose of this program is to slow the rate of runoff to rivers by temporarily storing water on the land and to reduce the overall volume of runoff by allowing water to soak into the ground.

It is important to differentiate these kinds of water storage from flood control, a well-known problem with well-defined programs offering solutions. The projects supported in this new program will be designed to function during **non-flood, high water periods when rivers are full and eroding their banks** and therefore widening their channels. These projects will also function during times of flooding, when rivers are out of their banks, but their main purpose is to minimize the stream bank erosion that accompanies bank-full flows. We are losing 80 acres a year due to bank erosion and that sediment ends up clouding the water, impairing riverine habitats, clogging navigation channels, and burying infrastructure in downstream areas.

- **We are receiving larger rains:** the annual average rainfall is not significantly greater but individual rain events are larger.
 - We are seeing more >2" rains = mega rains.
 - That means that we are experiencing longer dry spells, another reason to store water.
- **For each rain event, a greater portion of it runs off** than ever before.
 - Less water is held in plant roots and leaves (because we grow annuals);
 - Less water soaks in (due to decreased soil health, wetland loss, tiling, and impermeable surfaces)
 - Less water recharges deep groundwater potentially threatening future long-term aquifer supply
- **River channels are the predominant source of sediment now.**
 - All of them are getting wider, deeper
 - Tributaries and ravines are growing in width and length.
- The **moderately high flows do most of the work shaping the channel**—not the much rarer floods.
- **Flood control structures target only the very high flows.**
 - They are still needed but don't address the more frequent, channel-forming flows.

Reducing streambank erosion requires practices that **1) reduce peak flow by holding water back temporarily**, thereby delaying the time it takes to reach the stream **and 2) allowing water to soak in** thereby reducing the total volume of water reaching the stream. These practices can help during times of drought as well as mega rains. There are a number of agreed-upon practices and decades of study show where and how water storage can most effectively reduce peak flows, especially in tributary watersheds in the Minnesota River Basin. Communities, individuals and agribusiness leaders in the Basin support a water storage initiative. Focusing water storage here benefits landowners and everyone downstream and uses state funding most effectively.

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