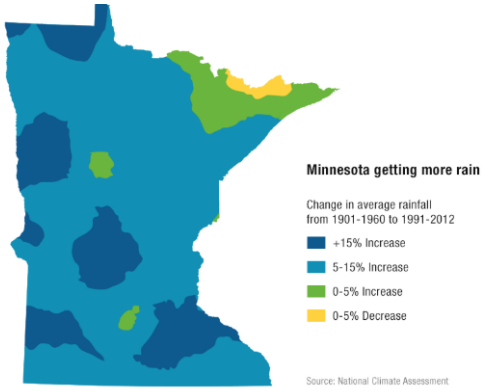
The Minnesota River is growing

Proposal: The Minnesota River is growing at alarming rates. A combination of increased annual precipitation, more high intensity rainfall events, and crops that require drainage to thrive have increased water flow in the Minnesota River and its tributaries. This has led to dangerous and unsustainable levels of erosion of the land.

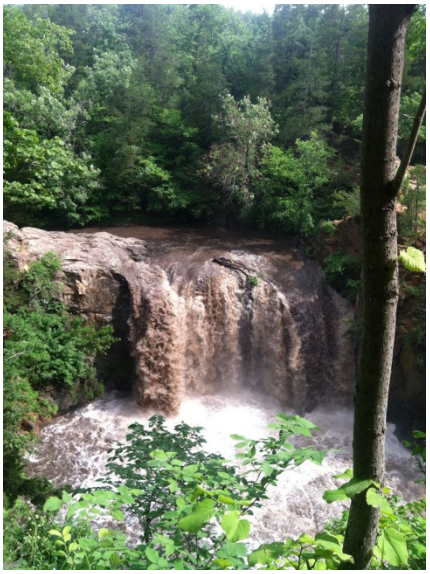
One solution to dial back the flows is to temporarily store water on the land at critical times and in key places, reducing the erosive power of the river.

HF932 creates authority for the Board of Water and Soil Resources (BWSR) to establish a program to deliver financial incentives to landowners who are willing to temporarily store water on the land during critical periods to reduce flow.



A climate primer from MPR. https://www.mprnews.org/story/2015/02/02/climate-change-primer

Minnesota River in flood stage near St. Peter



Background: You have probably noticed the significant changes in the amount of water falling on—and running off—the Minnesota River watershed. The Minnesota River seems to be flooding all the time and its tributaries become raging, muddy torrents quickly.

The combination of more annual precipitation, mega rain events, plus crops that need drainage to thrive are adding up to increases in river flow. There is simply more water falling on the watershed, more quickly, especially in the critical months of May and June.

Alexander Ramsey Falls in May, Redwood Falls, Minn.

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As a result, the Minnesota River and tributaries are eroding their banks to accommodate the record high flows and landowners both upstream and down are suffering. Dramatic increases in channel width at rates from 2 to 10 inches/year erode fields, yards and undercut homes. An average of 80 acres a year are lost to bank erosion.

Bank failure on the Le Sueur River

At the downstream end, people from Chaska to the Mississippi confluence are repeatedly digging out from the excess sediment deposited in the navigation channel and on trails and roads in the floodplain.

Residents across the watershed have been asking for help and have been promised action since the Carlson administration. Now, with increasing rain and persistent high flow, we need a tool to begin to hold water back, reducing the damaging flood flows that we have helped create.

Solution: Over the course of a 5-year effort to find effective, cost-efficient, and fair strategies to address sediment in the Minnesota River by a team including local and state agribusiness and environmental organizations, temporary water storage was agreed to be an effective tool to reduce river flow and bank erosion. **HF932** sets up the framework for a program within BWSR with the guidelines for financial incentives that can be made to willing landowners. Creating this framework now, provides an opportunity for Federal, state and local funds to be leveraged.

		Above ground		On ground		Below ground	
		Cover crops	Perennial crops	Restored wetlands	Detention basins	Reduced tillage	Controlled drainage
Increased	Spring transpiration	x	x				
	Surface water evaporation			x			
	Infiltration	x	x	x	x	x	
	Soil water retention	x	x			x	
Reduced	Total water delivery	x	x	x	x		x
	P and sediment delivery	x	x	x	x	x	
	Peak flows	x	x	x	x		x

Participants in the 5-year effort to find fair and effective strategies to reduce flow included:

Minnesota Pollution Control Agency

CLEAN WATER LAND & LEGACY AMENDMENT

MINNESOTA DEPARTMENT OF AGRICULTURE

MAWRC MINNESOTA AGRICULTURAL WATER RESOURCE CENTER

FRESHWATER SOCIETY

ST. ANTHONY FALLS LABORATORY

College of Science & Engineering

University of Minnesota

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