

STREAM RESTORATION

INDICATOR: Number of river and stream restoration projects; Number of unsafe or unsound dams removed or modified

WHY IS THIS INDICATOR IMPORTANT?

Dams, culverts, ditches, agricultural and urban runoff, degraded riparian zones, and pollution make rivers and streams among the most degraded ecosystems in Minnesota. Degradation harms water quality, biological condition, and aquatic habitat by increasing erosion, reducing connectivity, and altering water and sediment transport. Removal or modification of dams and restoration of stream function and stability eliminates safety hazards and improves property values, fish and wildlife habitat, water quality, water availability, and recreational value.

WHAT IS DNR DOING?

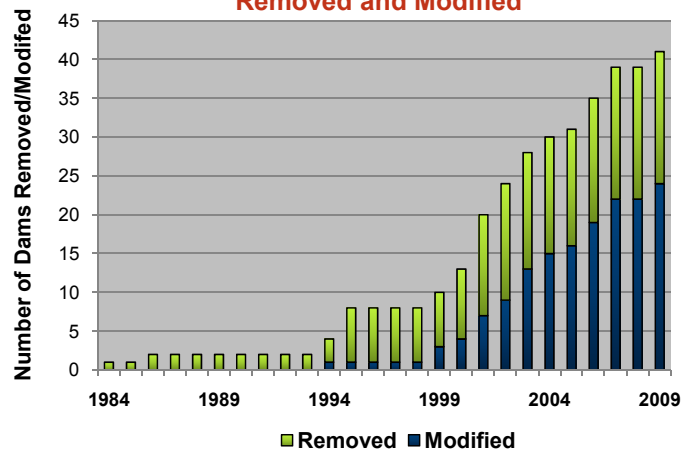
Restoration involves returning a stream to a natural shape so its dimension, pattern, and profile are suited to the water and sediment supply from the watershed. A stream should be able to maintain its shape without accumulating or removing too much sediment and should be connected to a naturally vegetated floodplain. To plan a restoration, we identify the natural, stable channel form and reshape the stream accordingly. DNR has designed and carried out five types of river restoration projects: 1) channel restoration, 2) bank stabilization, 3) dam removal and channel restoration, 4) dam conversion, and 5) fish passage. DNR's dam safety program provides information and funding for removing (up to 100% of costs) or modifying (up to 50% of costs) dams. DNR has helped remove or modify 41 dams and has completed numerous river restorations.

TARGET: Complete seven additional river and stream restoration projects by FY 2013. DNR maintains a stream restoration priority list and will pursue funding for top priority restoration projects that have local support. DNR will seek funding of at least \$1 million per year for priority dam projects, including dam modifications and removals. We continue to monitor stream geomorphology and establish an information database to assist with designs and ensure successful restorations.



DNR worked with local communities and agencies to remove a dam and restore the natural meandering shape of the Pomme de Terre River in Appleton. River restoration removes dam hazards, restores stream function and stability, benefits fish and wildlife, and improves water quality and aquatic habitat.

Cumulative Number of Dams Removed and Modified



DNR provides funds to help communities remove or modify river dams that are aging, unsafe, or bad for the river environment. So far 41 dams have been removed or modified around the state.

LEARN MORE ABOUT:

- New publication: "Reconnecting Rivers: Natural Channel Design in Dam Removal and Fish Passage": www.dnr.state.mn.us/eco/streamhab
- Dam safety at: www.dnr.state.mn.us/waters/surfacewater_section/damsafety
- The health of Minnesota's watersheds using the Watershed Assessment Tool: www.dnr.state.mn.us/watershed_tool