

A bit about the “Before and After” of stormwater management

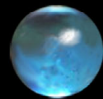
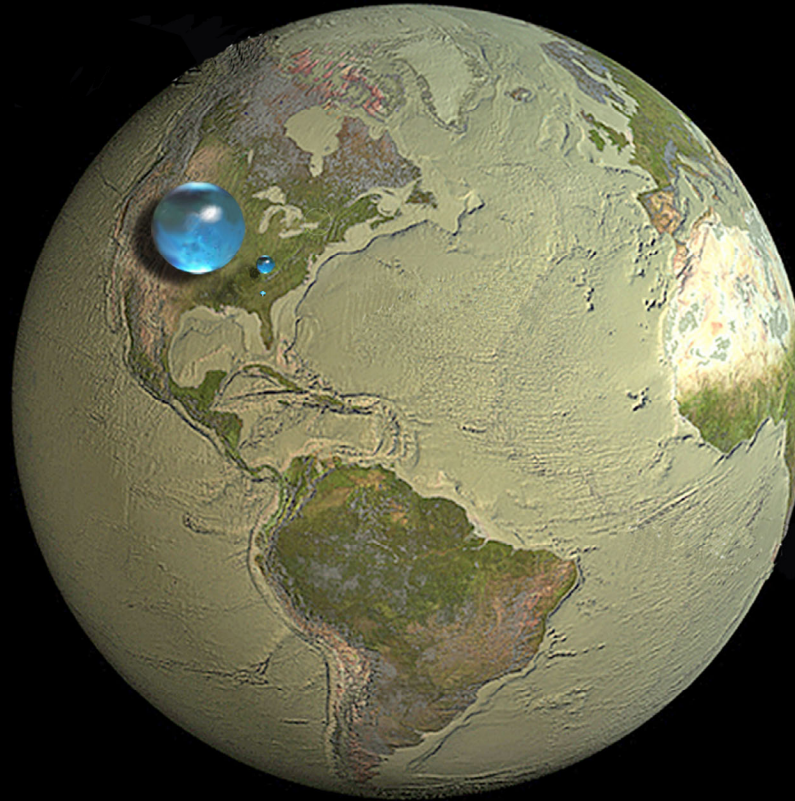
Associate Research Professor

John A. Chapman

February 13, 2025



The World's Water



All water on, in, and above the Earth



Liquid fresh water

- **Fresh-water lakes and rivers**

Howard Perlman, USGS,
Jack Cook, Woods Hole Oceanographic Institution,
Adam Nieman
Data source: Igor Shiklomanov
<http://ga.water.usgs.gov/edu/earthhowmuch.html>







AUTHORIZATION TO DISCHARGE
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)/
STATE DISPOSAL SYSTEM (SDS) PROGRAM
MNR100001

Permittee: Multiple
Project Name: Construction Stormwater General Permit
Issuance date: August 1, 2023
Expiration date: July 31, 2028

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee(s) named above seeking coverage under this general permit to discharge stormwater associated with construction activity to waters of the state of Minnesota in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with the U.S. Clean Water Act, Minnesota statutes and rules, and federal laws and regulations.

This permit is effective on the issuance date identified above. This permit expires at midnight on the expiration date identified above.

Signature:

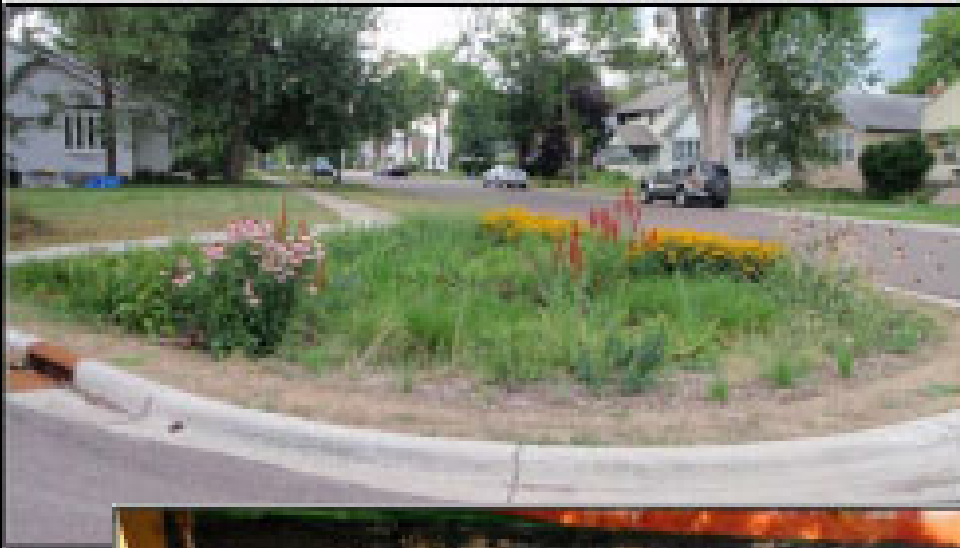
Ryan Anderson
This document has been electronically signed.

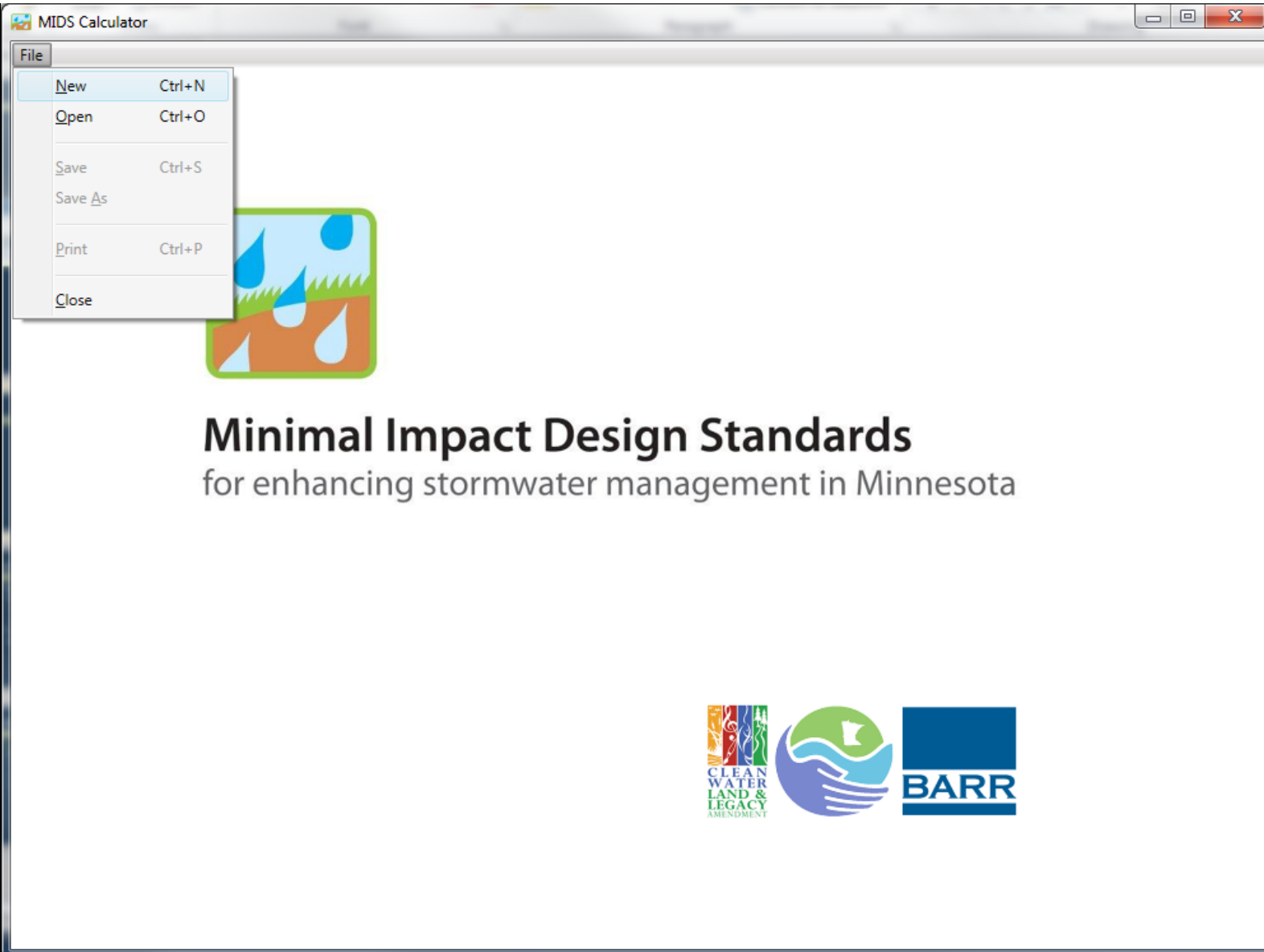
Ryan Anderson
Manager
Stormwater Section
Municipal Division

for the Minnesota Pollution Control Agency

Permit application:
Submit via MPCA e-Services at
<https://rsp.pca.state.mn.us/>

Questions on this permit?
Contact e-Services at
651-757-2728 or 844-828-0942





What about
Maintenance?



Perimeter Control



Filter berm –
wood chip



Filter berms : cornstalks and rock



Filter berm : topsoil



Bag-type inlet protection



Storm drain inlet protection



No unsealed coverings!



Don't forget to protect the curb head



09/24/



Repair inlets once found destroyed!

Protect and sweep!







Enforcement





References and Research

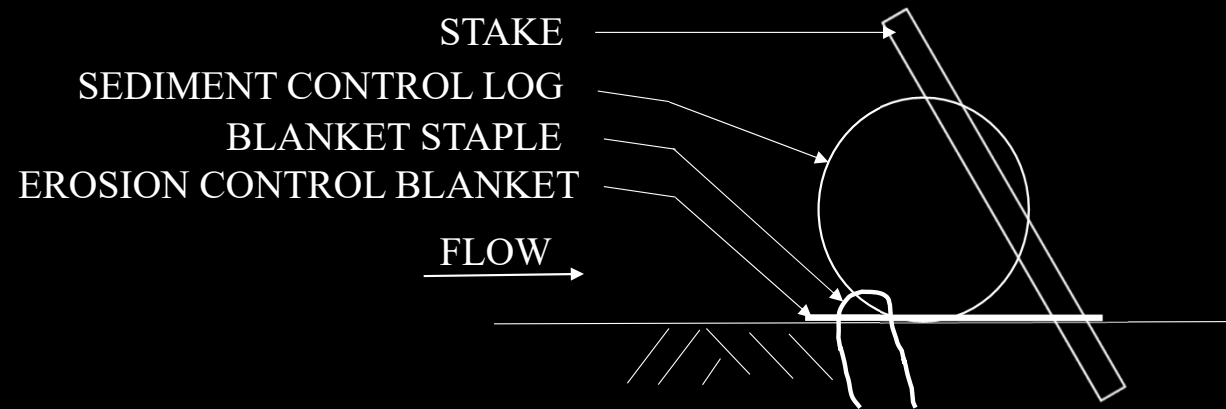
- Minnesota Stormwater Manual:
stormwater.pca.mn.us
MIDS
- Erosion.umn.edu
 - Biolog performance
 - Manhole sump performance
 - Gross solids in Stormwater
 - Erosion Control Blanket Longevity (in progress)



Installation



Installation





A man wearing a hat, sunglasses, and a life vest is paddling a yellow kayak on a calm lake. The background shows a dense forest of green trees along the shoreline under a clear sky. The text "Thank you" is overlaid in white. The URL "www.erosion.umn.edu" is overlaid in yellow at the bottom.

Thank you

www.erosion.umn.edu