Minnesota Pollution Control Agency

# The TMDL Process as it Relates to Stormwater

wq-strm7-83a

Stormwater Module 3a
Minnesota Pollution Control Agency

# Training Goals

- Understand what a TMDL is
- How TMDLs are developed
- How TMDLs relate to stormwater

# Acronyms

| | |
|---|---|
| TMDL | total maximum daily load |
| MS4 | municipal separate storm sewer system |
| WLA | waste load allocation |
| LA | load allocation |
| NPDES | National Pollutant Discharge Elimination System |
| SWPPP | stormwater pollution prevention plan (construction) OR stormwater pollution prevention program (municipal) |
| BMP | best management practice |
| WMO | Watershed Management Organization |

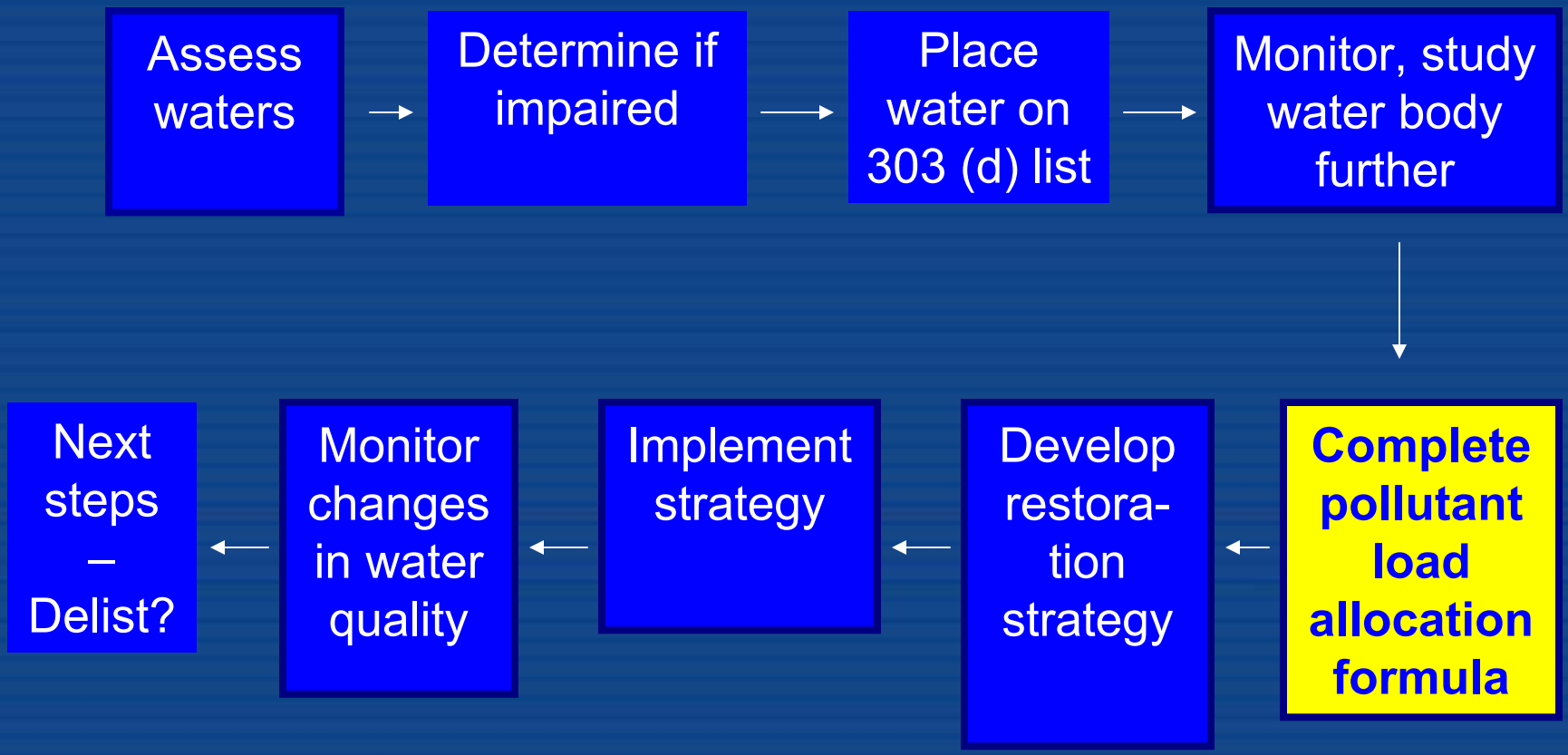
# What is a TMDL?

- The maximum amount of a pollutant that can be discharged into a water body from all sources (point and non-point) and still maintain water quality standards.
- TMDL = WLA + LA + MOS + RC
  - WLA = NPDES permitted loads (point sources)
  - LA = non-permitted sources (nonpoint sources)
  - MOS = margin of safety (accounts for uncertainty in estimates of WLA and LA)
  - RC = reserve capacity (allows for future growth)

# What is a TMDL?

- A study that identifies pollutant loadings and necessary reductions in pollutant loadings needed to bring a lake or stream into compliance with water quality standards
- A TMDL contains some information on implementation and monitoring and provides reasonable assurances that the pollutant load reductions can be met

# TMDLs are part of a process to assess and improve water quality



# What must a TMDL Study include?

1. A ***public participation plan*** to ensure engagement, collaboration, success

2. An ***assessment*** *of what's causing impairment*
   *(may include biological, chemical, habitat, flow, etc.)*

3. A ***technical analysis*** of existing pollutant loads from point and nonpoint sources

# What must a TMDL Study include?

4. An ***allocation*** of acceptable pollutant loads from point and nonpoint sources

5. An ***implementation strategy***

6. A ***monitoring strategy*** to determine effectiveness of restoration activities

# How does a TMDL relate to Permitted Stormwater

- TMDL identifies pollutant loads and needed reductions in loads
- Stormwater contributes pollutants to receiving waters
- Reductions in pollutant loads from stormwater may be needed to bring a water into compliance with standards
- Stormwater permits require compliance with TMDL requirements
- TMDL describes what reductions are needed from stormwater

# What makes a good TMDL?

- Accurate load calculations
- Clear language about how loads were calculated and needed reductions in loading
- Flexible load calculations that account for future growth and loading from the different stormwater sectors
- Some language that describes activities needed to meet the load reduction requirements

# Summary

- A TMDL study will determine what pollutant load reductions are necessary and identify strategies for achieving load reductions
- Stormwater can have pollutant load requirements in a TMDL
- The TMDL may provide strategies, including monitoring, for stormwater