



Working Collaboratively for Clean Water and Healthy Communities

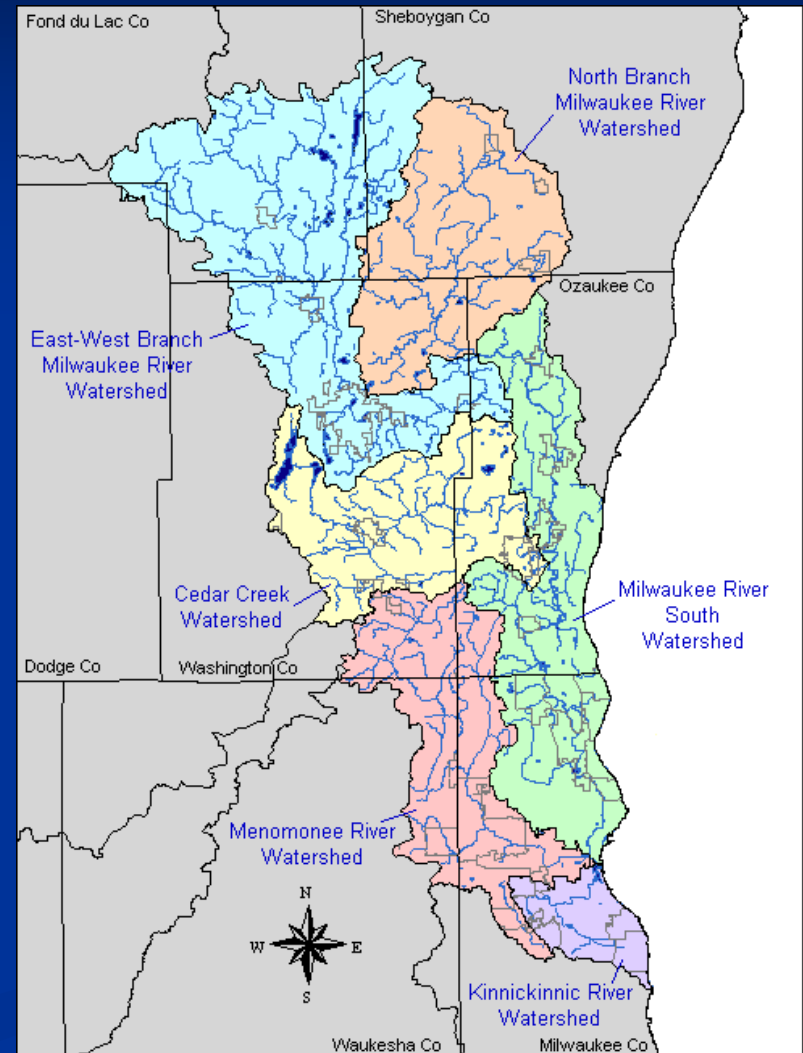
Cheryl Nenn

Milwaukee Riverkeeper



Milwaukee Riverkeeper

Our *mission* is to protect water quality and wildlife habitat and advocate for sound land use in the Milwaukee, Menomonee, and Kinnickinnic River Watersheds.



We are the Milwaukee Riverkeeper®

- One of 199 Waterkeepers licensed by the Waterkeeper Alliance, based in New York
- An independent watchdog for the river
- Responds to citizen concerns and complaints
- Finds solutions to environmental problems
- Physically patrols river, conducts pro-active monitoring, and expands citizen monitoring network



www.milwaukeekeeper.org

WATERKEEPER ALLIANCE



- Waterkeeper Alliance is a global environmental movement uniting more than 199 Waterkeeper organizations around the world and focusing citizen advocacy on the issues that affect our waterways, from pollution to climate change. Waterkeepers patrol more than 100,000 miles of rivers, streams and coastlines in the Americas, Europe, Australia, Asia and Africa.

International Waterkeeper Organizations

- Argentina
- Australia
- Bangladesh
- Bolivia
- Brazil
- Canada
- Chile
- China
- Colombia
- Czech Republic
- Ecuador
- England
- India
- Mexico
- Nepal
- Peru
- Russia
- Senegal



What is a Waterkeeper?

- An informed environmental advocate,
A consistent voice on the water,
A flexible coalition builder,
A thorough investigator,
A trusted spokesperson,
A dependable listener,
A community servant,
A dedicated scientist,
A dynamic educator,
An resolute leader,
A trusted expert,
An economist,
A visionary.



International

Total World Water

2.5%

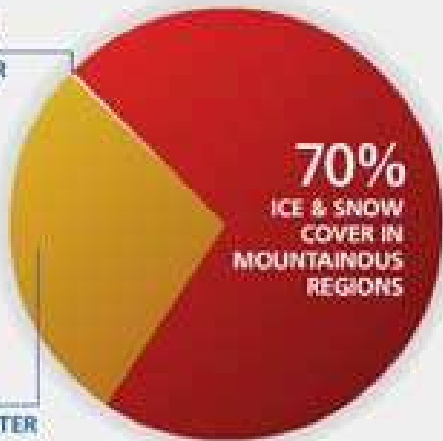
FRESHWATER



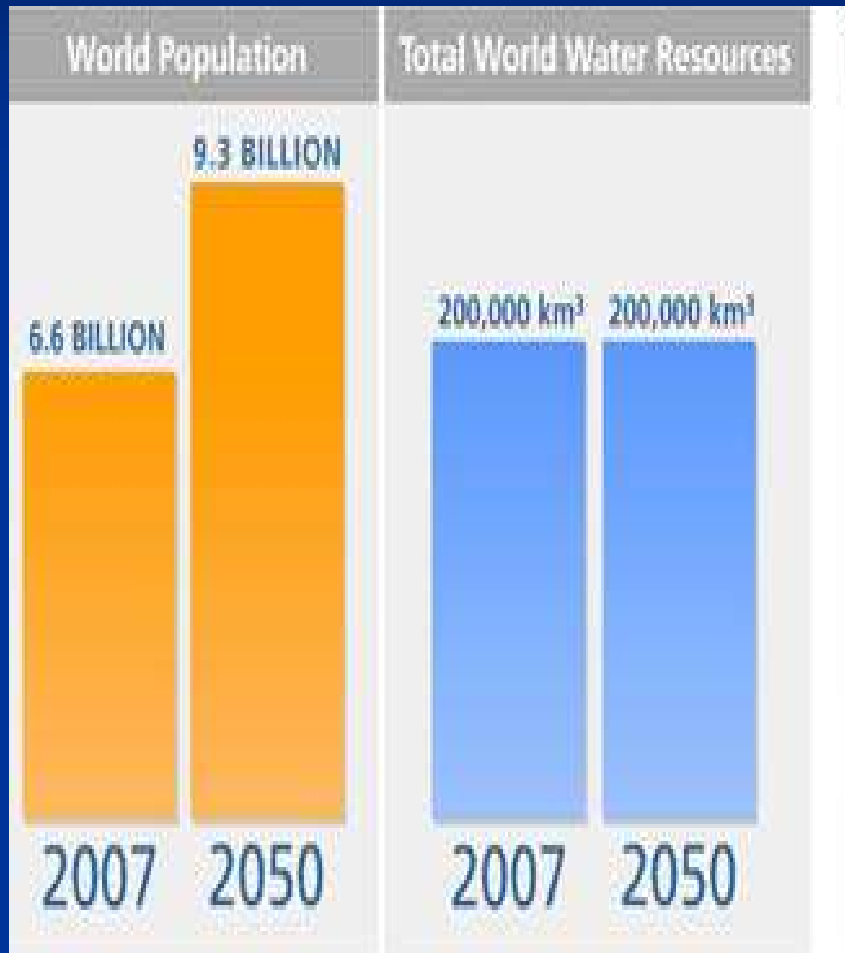
Breakdown of freshwater resources

0.3%

FRESHWATER
LAKES &
RIVERS



International

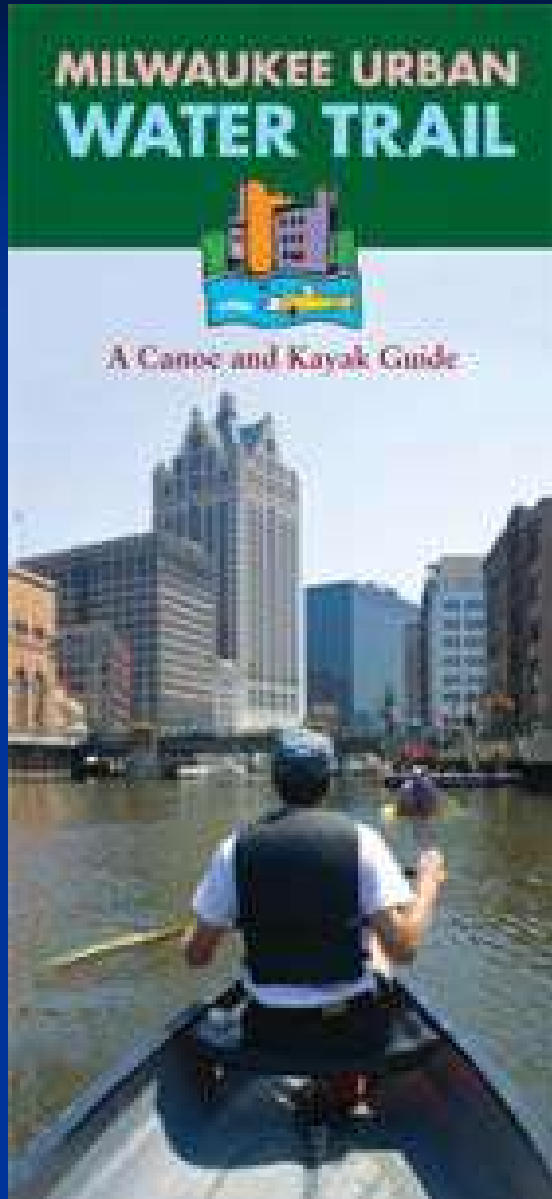


- Population and water consumption are increasing
- Food and Water Nexus
- Climate Change = rain-dependent agricultural yields projected to go down 50%
- By 2020, the UN forecasts 50 nations will have “severe” water shortages

Protecting Water Quality



Water Trail Map



Protecting Wildlife Habitat



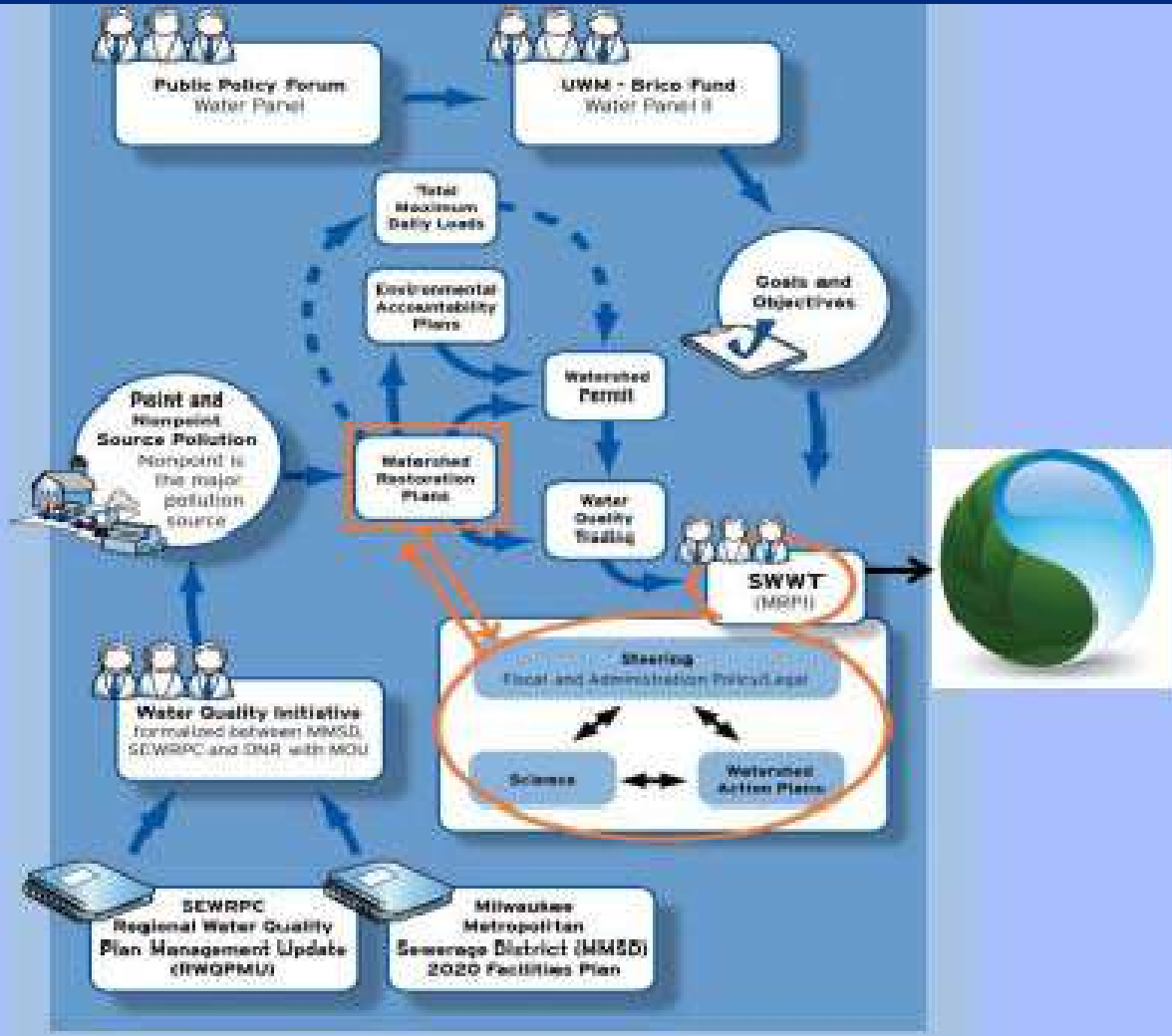
Advocating Sound Land Use



Illicit Discharge Detection



The diagram illustrates the Water Quality Initiative process. At the top, the 'Public Policy Forum Water Panel' and 'UWM - Brico Fund Water Panel II' lead to 'Total Maximum Daily Loads' and 'Environmental Accountability Plans'. These lead to 'Watershed Permit' and 'Water Quality Trading'. 'Watershed Permit' leads to 'Watershed Restoration Plans' (highlighted with a red box). 'Water Quality Trading' leads to 'SWWT (MOP)'. 'SWWT (MOP)' leads to a 'Steering' box containing 'Fiscal and Administration Policy/Legal', 'Science', and 'Watershed Action Plans'. 'Watershed Restoration Plans' also leads to 'SWWT (MOP)'. 'SWWT (MOP)' leads to a green yin-yang symbol. 'Point and Nonpoint Source Pollution' is identified as the major pollution source. 'Water Quality Initiative' is formalized between MMSD, SEWRPC and DNR with MOU. 'SEWRPC Regional Water Quality Plan Management Update (RWQPMU)' and 'Milwaukee Metropolitan Sewerage District (MMSD) 2020 Facilities Plan' lead to the 'Water Quality Initiative'.



Purpose of the Watershed Restoration Plans



- Develop a plan to improve our watersheds based on science and with input from stakeholders
- Identify cost effective water quality and habitat improvements
- Incorporate the public's desire for improvements along the waterways
- Identify actions (both short and long term) to achieve our water quality goals and objectives



Outcome of the Watershed Restoration Plans

Load Reduction



Improved Water Quality



Improved Habitat



Watershed Restoration Actions

SWWT Goals and Focus Areas

- SWWT has been working to build partnerships and set up committees: Science; Policy; Watershed Action Teams
- Goal to implement SEWRPC Regional Water Quality Plan
- Goal to incorporate citizen/stakeholder input: water quality, habitat, aesthetics, access, etc.
- Focus areas identified by committees and public:
 - Human Health
 - Habitat
 - Nutrients



Habitat includes:

Physical Aspects and Chemical Components:

- Chloride
- Sediment/TSS
- Dissolved oxygen/BOD
- Temperature
- Trash
- High flow and flood impacts
- Physical aspects

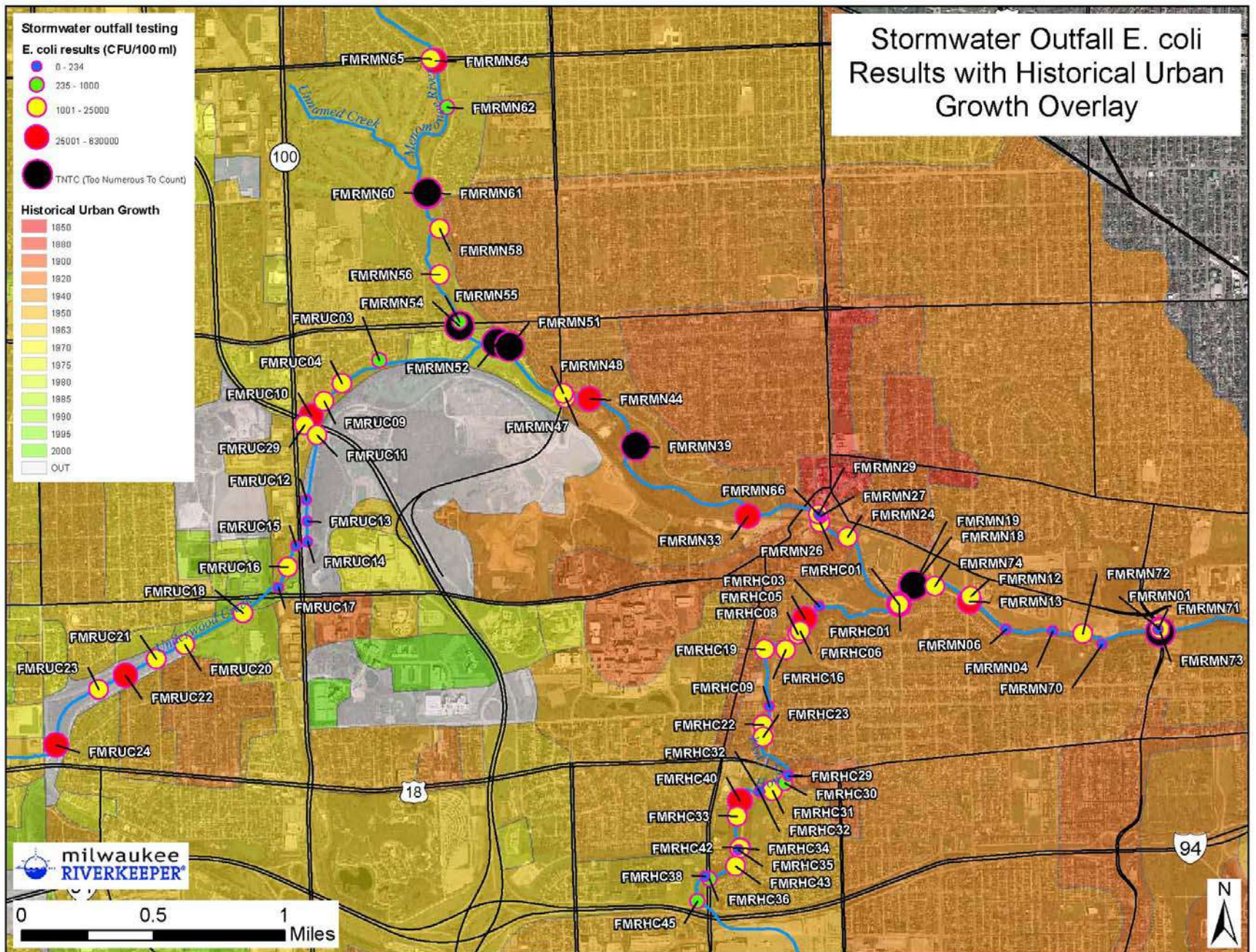


Human Health:

- Includes bacteria and pathogens
- Focus is to improve water quality to allow for safe recreation (kayaking, fishing, wading)
- Fecal coliform is the parameter used but other measures will be used in the future
- Action underway – UWM/WQI, Riverkeepers, MMSD and municipalities



Stormwater Outfall E. coli Results with Historical Urban Growth Overlay





Phosphorus

- Key nutrient for Lake Michigan near shore
- Actions underway – state ban on Phosphorus in fertilizer and new water quality standard

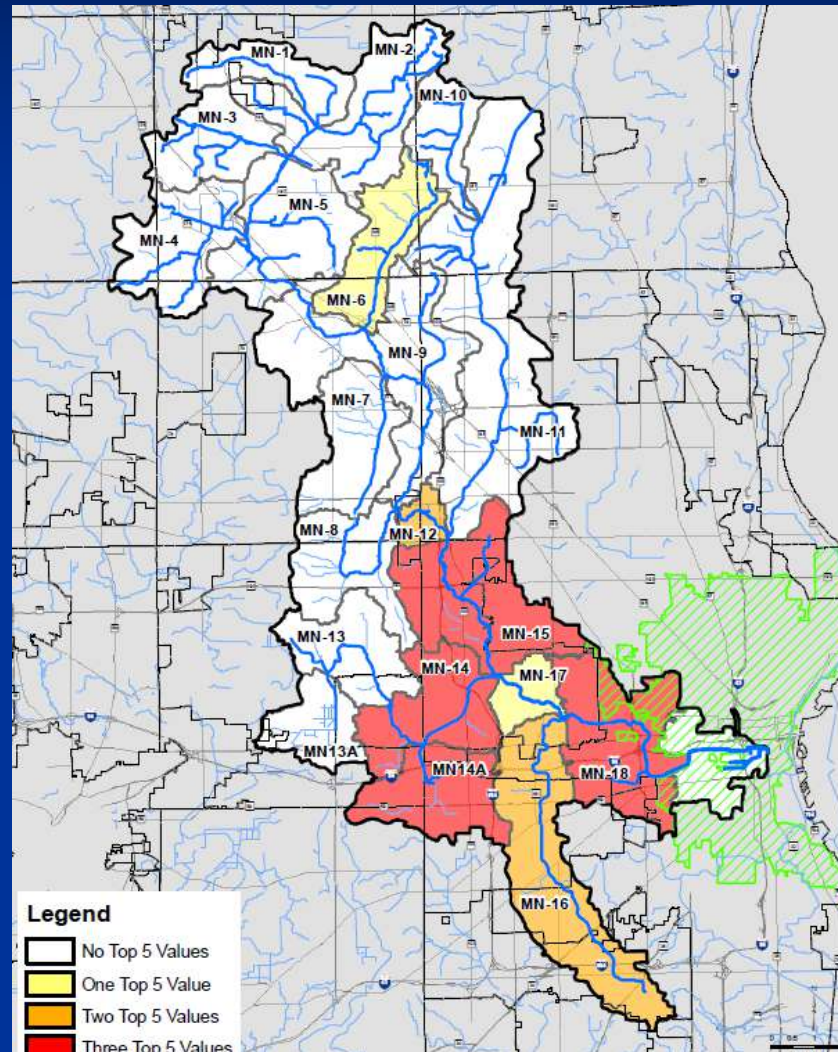


How You Can Help

in the Development of the Watershed Restoration Plans

- Join the SWWT
- Get involved on one of the SWWT Watershed Action Teams (WATs)
- Help to prioritize future actions
- Get involved in implementation in your watershed/neighborhood

Hot Spots of Contamination





Watershed Implementation Plans

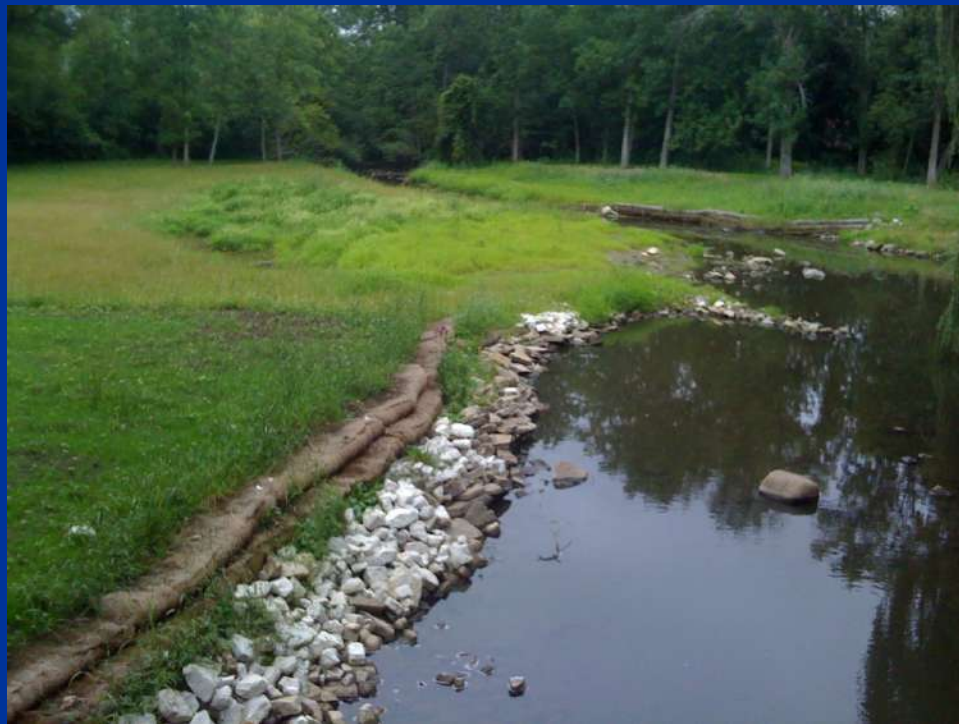
Reduced nutrient inputs	Multiple	Private and public golf courses should be targeted for phosphorus reduction, including: Dretzka, North Hills, Westmoor Country Club, Bluemound Country Club, Hanson, and Currie golf courses. (Note this overlaps with riparian corridor priority)
Reduced nutrient inputs	Multiple	Milwaukee County Parks is a huge opportunity for reducing phosphorus in county parks and parkways along the rivers, as well as at Timmerman Airport. Determine if they are using Milorganite, and investigate opportunities to minimize fertilizer use, and increase buffers along Parkways, in Parks, and at Timmerman Airport.
Reduced nutrient inputs	Multiple	Investigate opportunities to reduce phosphorus from industrial cooling water discharges that contain an anti-corrosion inhibitor called orthophosphate (which is added to Milwaukee drinking water). Investigate regulatory issues involved as well as technological improvements available for reducing phosphorus used in water treatment process.
Reduced nutrient inputs	Multiple	Work with Department of Transportation to identify areas to reduce fertilizer application and migration to surface water bodies.
Reduced nutrient inputs	Multiple	Monitor implementation of statewide phosphorus rules and phosphorus ban in fertilizers and detergents, and quantify impacts to local rivers. Assess phosphorus loading areas having the biggest impact on algal growth.
Recreational access improvements		
Recreational access improvements	Multiple	Future recreational access projects should be implemented given opportunity and community interest, but should also be reviewed in light of bacteria data to eliminate any human exposure to bacteria that could pose public health risks (see master list of priority projects for suggested locations).
Recreational access improvements	MN 14, MN 16	Increase recreational access to the Menomonee River and tributaries in conjunction with MMSD flood management/channel rehabilitation projects (Underwood Creek, Western Milwaukee Flood Management, concrete removal downstream Miller Brewery, etc.)

Milwaukee River fish Passage Project

Project Partners

-  Milwaukee Riverkeeper
-  Ulao Creek Partnership
-  Riveredge Nature Center
-  Concordia University
-  Marquette University
-  Great Lakes Sport Fishermen
-  Trout Unlimited
-  Community High Schools
-  River Revitalization Foundation
-  Urban Ecology Center
-  Ozaukee Washington Land Trust
-  Ozaukee County Land Conservation Partnership
-  Ozaukee County Tourism Council
-  Milwaukee Audubon Society
-  WI Department of Natural Resources
-  National Oceanic & Atmospheric Administration
-  Ozaukee County
-  UW Extension
-  City of Mequon, Village of Thiensville, Village of Grafton, Town of Grafton, Town of Saukville, Village of Fredonia, Town of Fredonia







KK River Concrete Removal



A New Kinnickinnic River

Overview / Background / Neighborhood Plan Recommendations / Next Steps

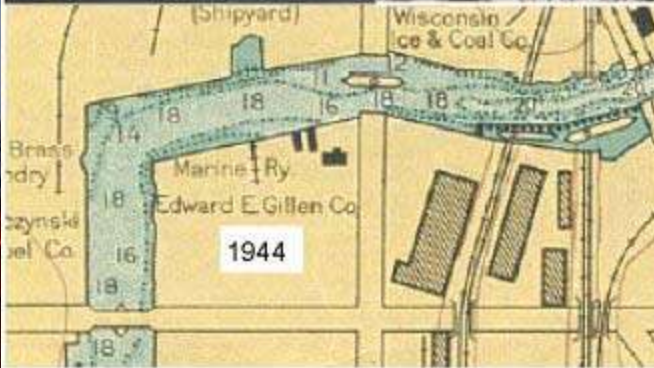
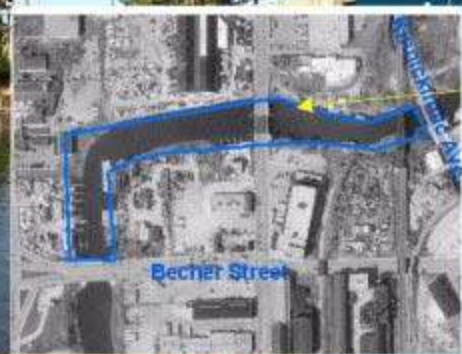


River Zone 3: Collect
(emphasis on stormwater
management)

River Zone 2: Gather
(emphasis on community)

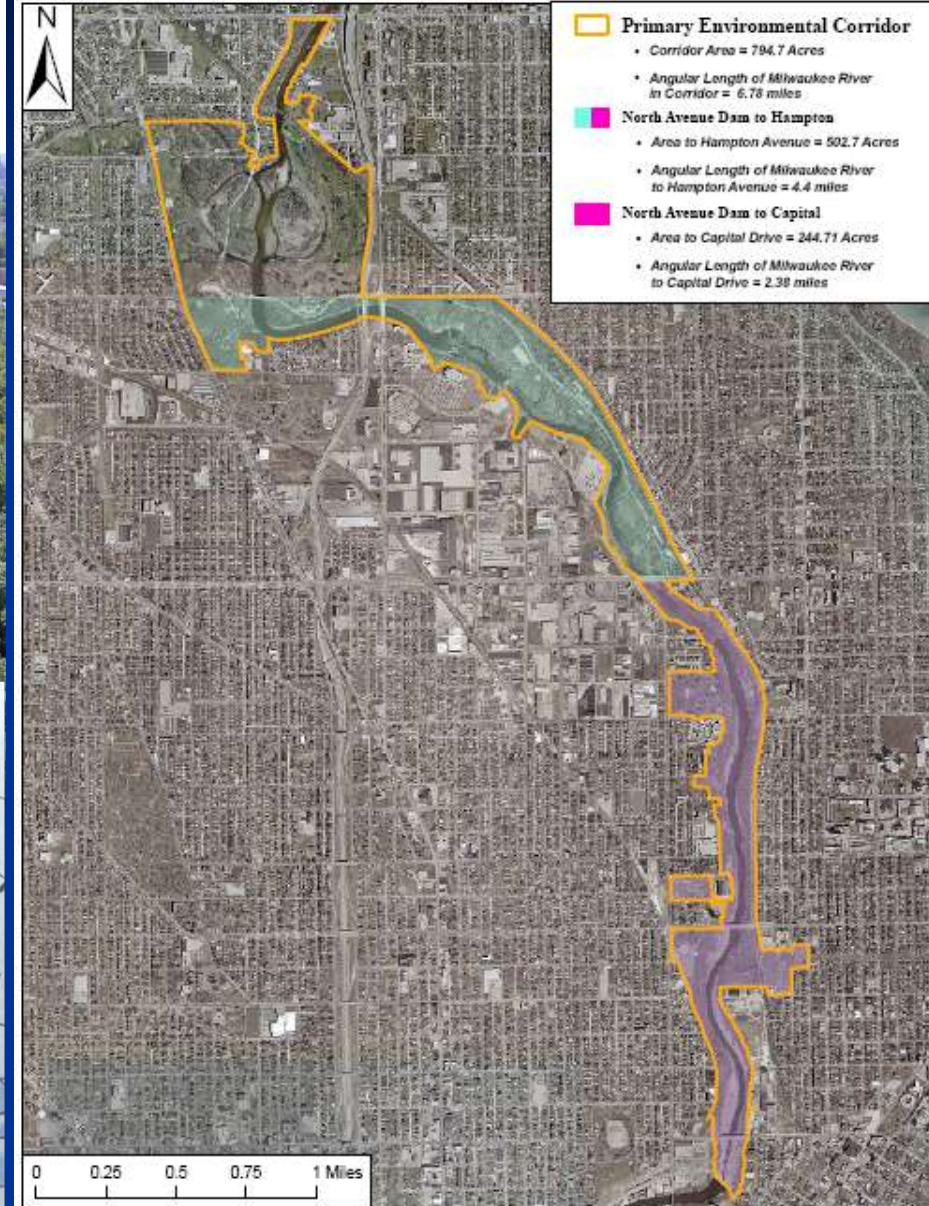
River Zone 1: Grow
(emphasis on urban agriculture)

KK River Projects



2002

Milwaukee Central Park



KPOW—Keep Public Our Water

We All Need Milwaukee's Water



for our families, our neighborhoods and our businesses!

A Risky Proposal: Certain Milwaukee leaders want to privatize our drinking water by leasing our waterworks to a multinational corporation for a nearly century.

**Come to City Hall! Tell our Aldermen
Milwaukee's water is NOT for sale.**

Join us:

June 15, 12:30pm

City Hall, 3rd Floor

200 E. Wells St.

Steering and Rules Committee Meeting

For more info: 414-967-1682 or

corinnerosen@yahoo.com



Water for People, Not for Profit



Mortgaging Milwaukee's Future

Why Leasing the Water System Is a Bad Deal for Consumers



WATER QUALITY TESTING PROGRAMS



Goals of Monitoring Program:

- Establish a watershed-wide network of trained citizen volunteers monitoring streams, collecting information in a consistent and useable format
- Train volunteers to recognize and respond appropriately to questionable practices (erosion violations, illicit discharges, etc.)
- Improve the quantity and quality of data that can be used to monitor the health of our waters

Water Quality Trainings

- Since 2006, trained 50 Level II advanced volunteers
- Trained 115 Level I (WAV) volunteers
- Trained 165 volunteers total
- Crayfish/AIS/Project RED trainings
- Bacteria monitoring



WQ Parameters Monitored

- Level II volunteers-monitored pH, DO, turbidity, and temperature (using automated thermistors).
- Level I volunteers measured DO, temperature, turbidity, flow, and macroinvertebrates
- Volunteers monitor on at least a monthly basis.
- Data will be entered into either the DNR "SWIMS" or WAV databases



Citizen Enforcers?!

Residents and volunteers identify problem areas/places of concern in the Basin (e.g. algal outbreaks, poor erosion control, cows in the stream, etc.), and Riverkeeper staff try to address these concerns and/or refer to DNR staff.





swim

drink

fish

KNOW YOUR RIGHTS

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