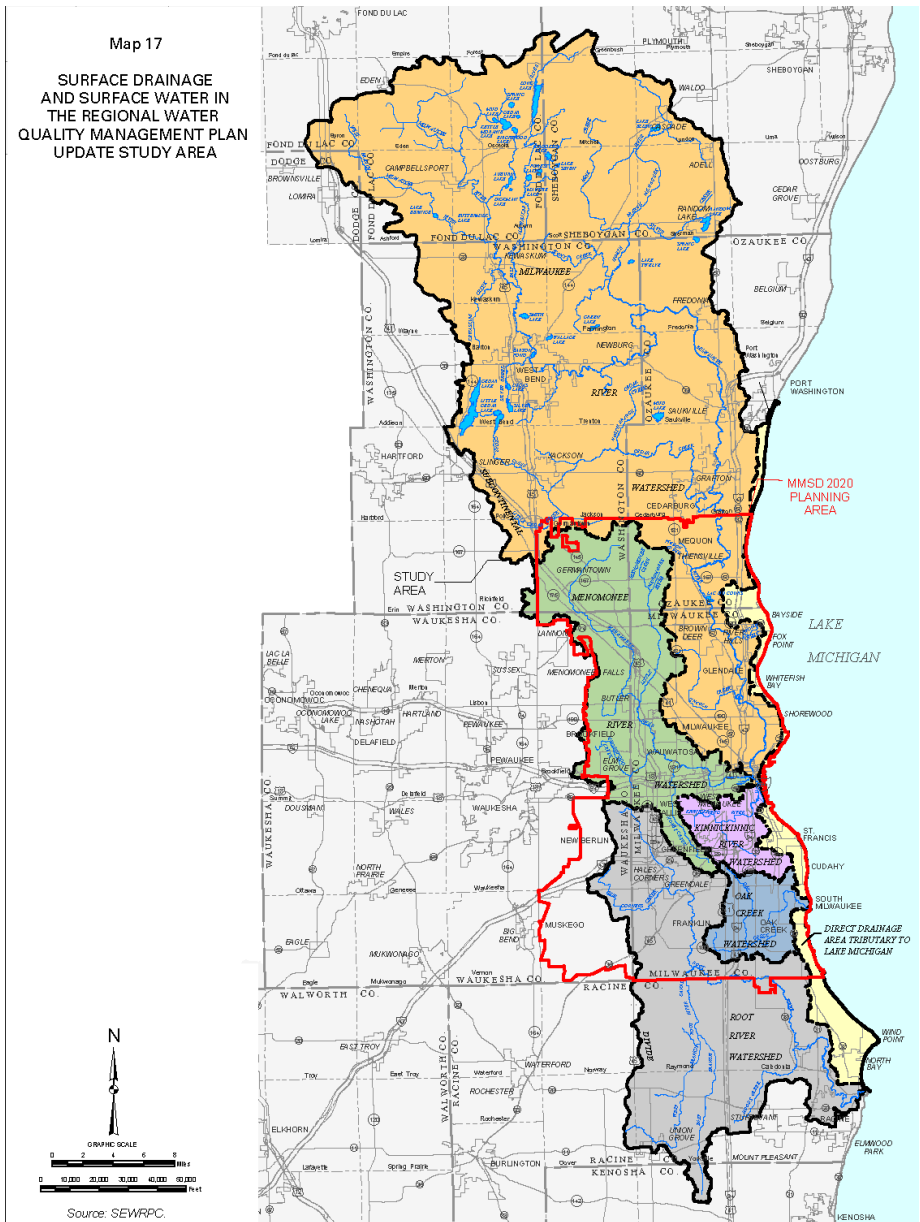
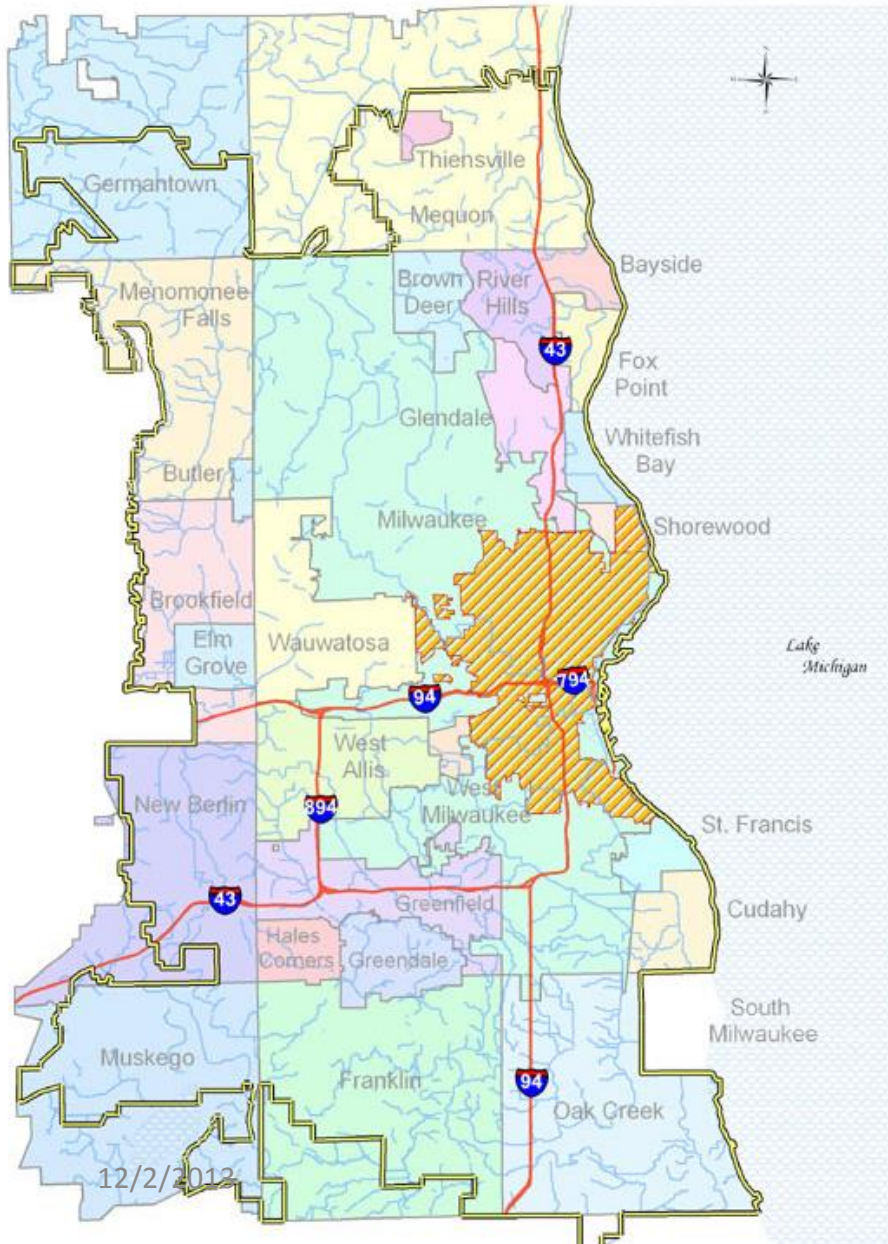


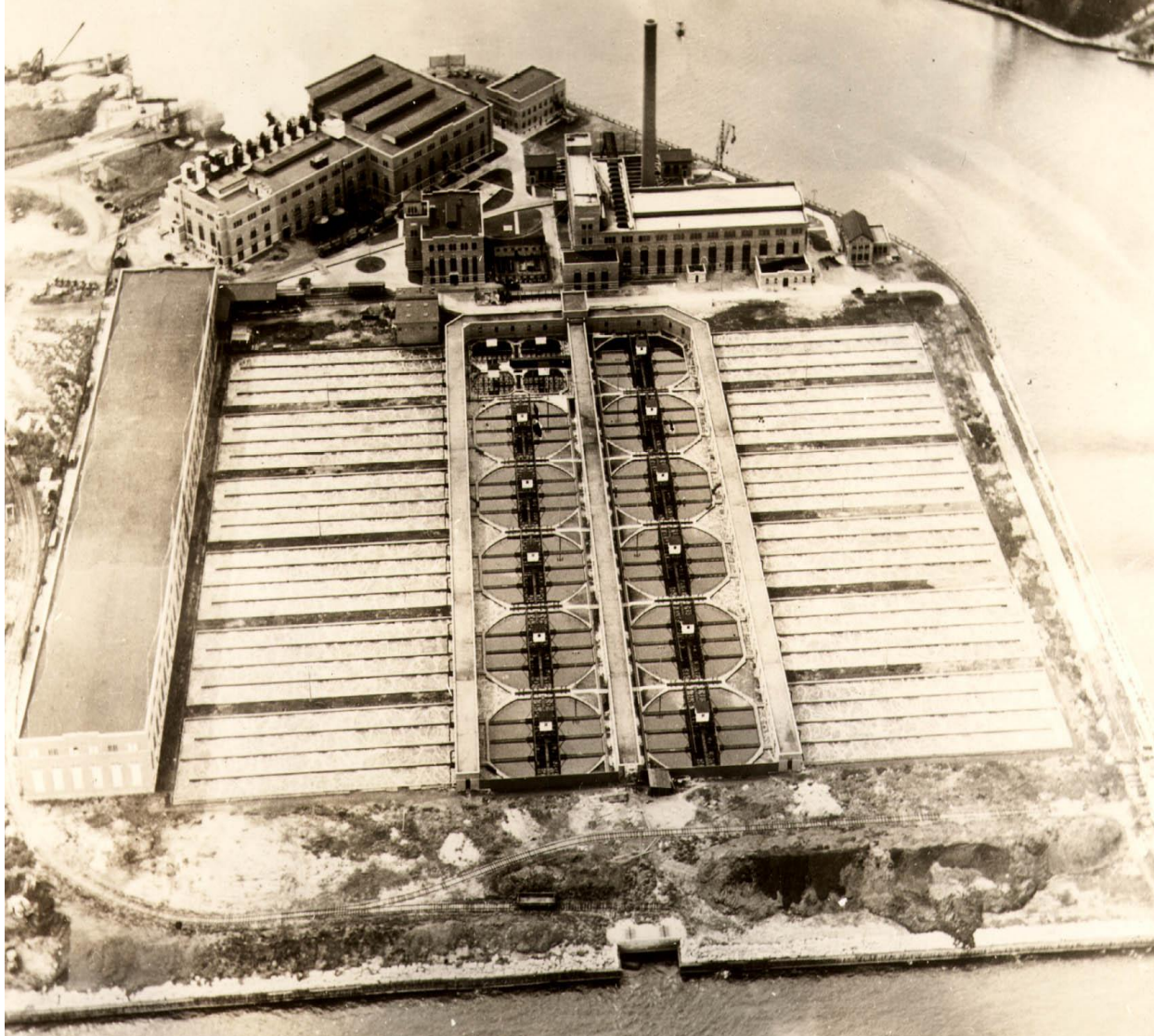


Milwaukee Metropolitan Sewerage District



Jones Island Wastewater Treatment Plant

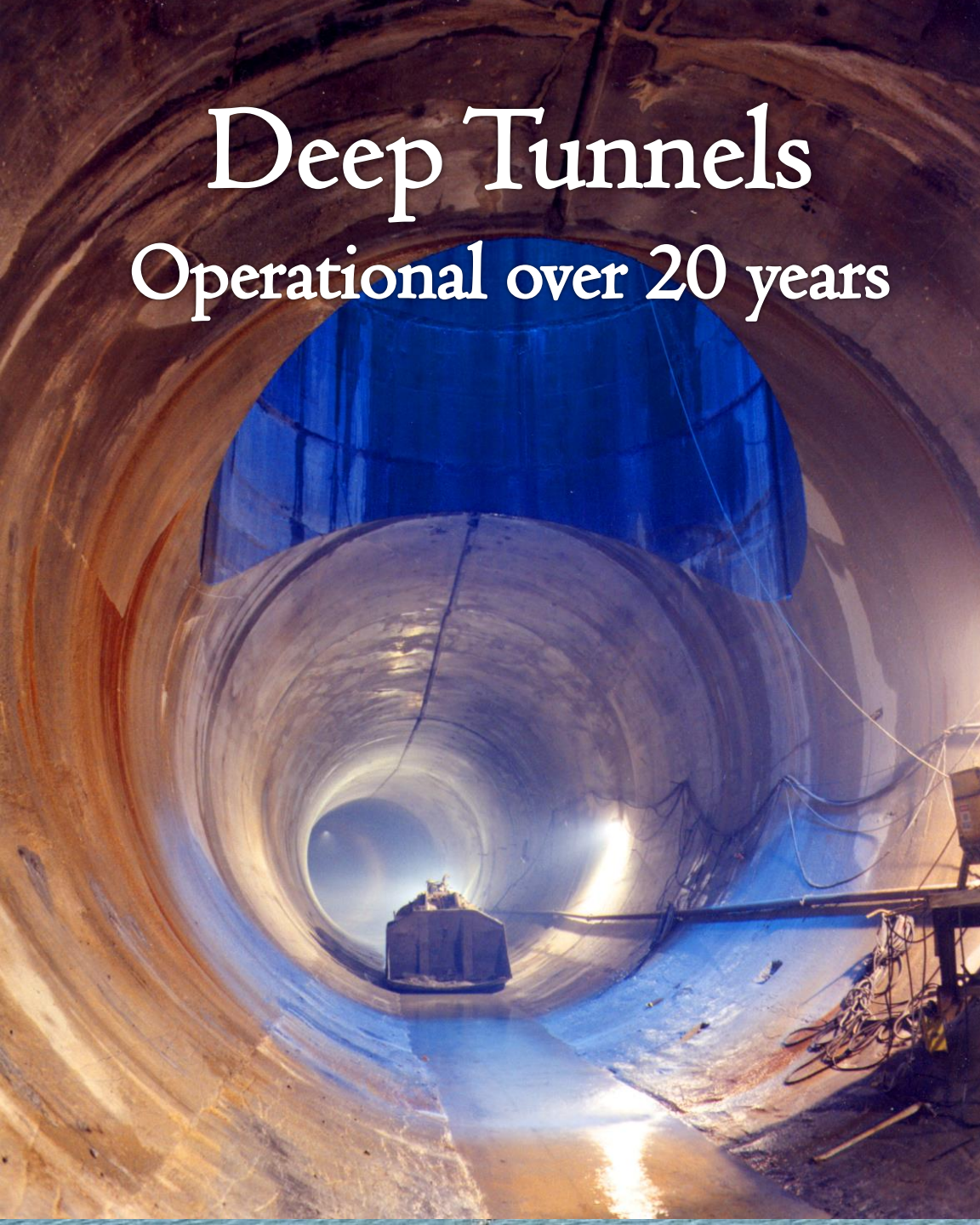
1926



ORGANIC NITROGEN

Milorganite®

FERTILIZER



Deep Tunnels

Operational over 20 years

300 Feet
Below ground

521 Million
Gallons of Storage

28.5 Miles
Long

17- to 32-feet
In Diameter

Designed to minimize
basement backups and for
1-2 overflows per year.

% OF VOLUMES CAPTURED & CLEANED

TOTAL
PERCENT
CAPTURE
98.3%

1994	99%
1995	98%
1996	99%
1997	97%
1998	99%

1999	94%
2000	95%
2001	99%
2002	99%
2003	99%

2004	97%
2005	99%
2006	99%
2007	99%
2008	95%

2009	98%
2010	96%
2011	99%
2012	99%

Some Perspective...

32 Billion gallons in 2009

Detroit

<http://greatlakes.org/detroit>

21 billion gallons in 5 years⁽²⁰⁰⁷⁻²⁰¹²⁾

Chicago

http://articles.chicagotribune.com/2013-04-18/news/chi-flooding-forces-sewage-to-be-diverted-into-lake-michigan-20130418_1_sewage-overflows-chicago-river-locks-and-gates

27 billion gallons per year

New York City

<http://www.riverkeeper.org/campaigns/stop-polluters/sewage-contamination/cso/>

13.5 billion gallons per year

Philadelphia

http://blog.cleveland.com/metro/2011/10/regional_sewer_district_to_spe.html

13.4 billion gallons per year

St. Louis

<http://www.epa.gov/compliance/resources/cases/civil/cwa/stlouis.html>

25.3 Billion gallons in 20 years

Milwaukee

Next Steps...

Menomonee River Flood Management and Concrete Removal



MMSD's New Direction – Back to Nature





Bioswales



Green Roofs



MMSD



Mequon



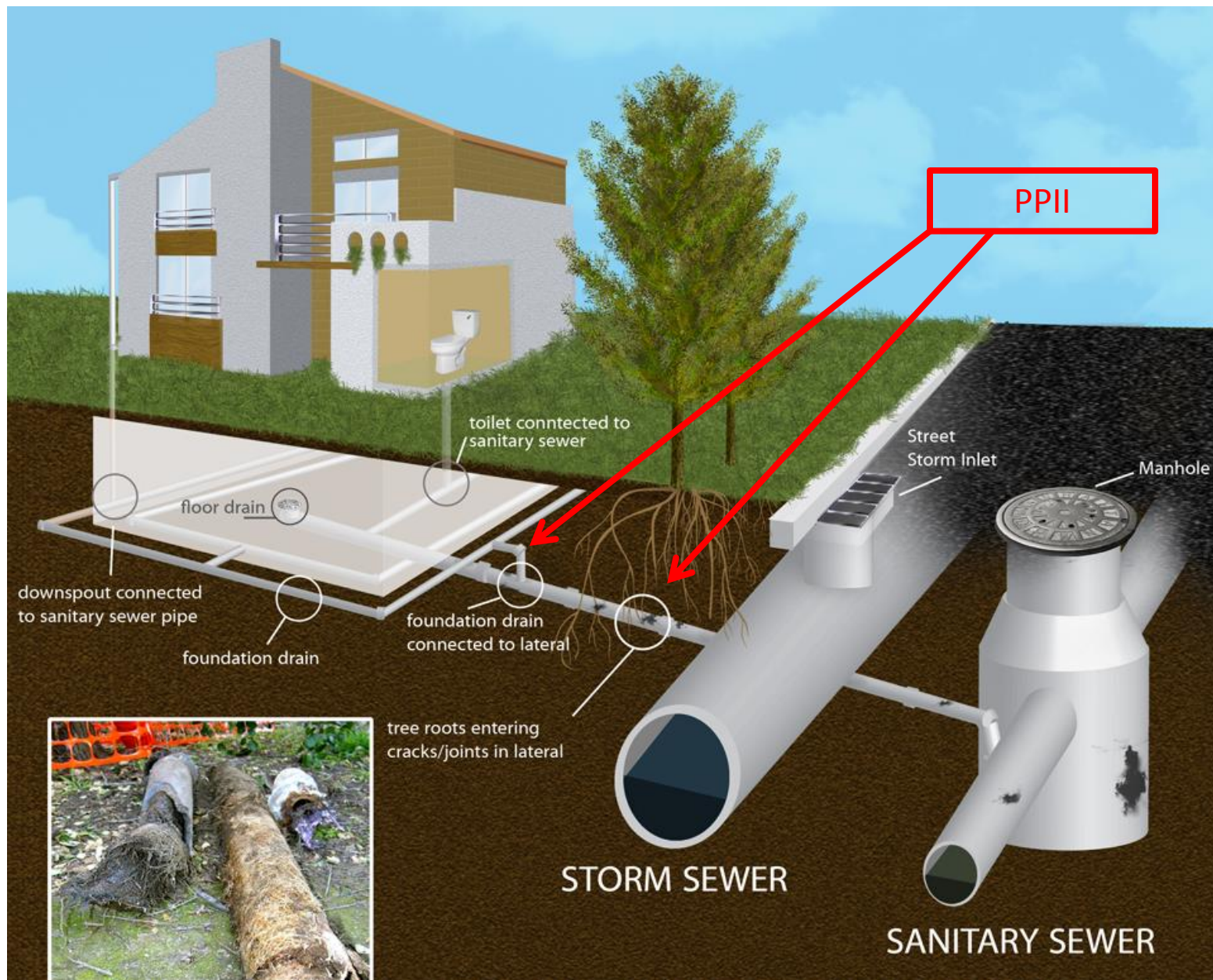
Milwaukee
County
Zoo



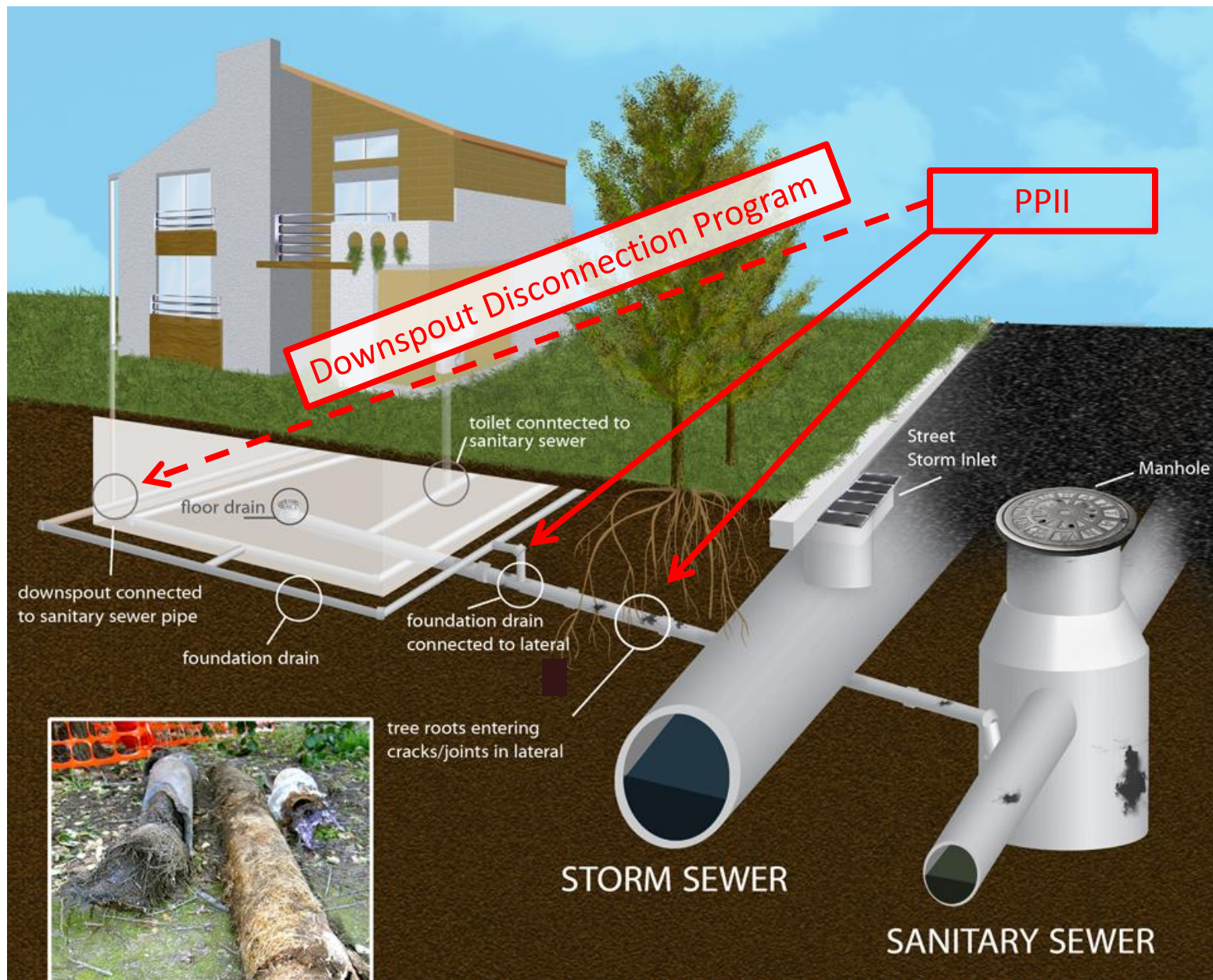
MillerCoors

MMSD Private Property Inflow and Infiltration (PPII) Program

- \$62M Program budget 2010-2020
- Allocated annually on an equalized property value basis to the 28 municipalities
- Voluntary participation
- Combined and separate sewer areas
- Flexibility in completing work
 - District contracts
 - Municipal procured
 - Property owner procured





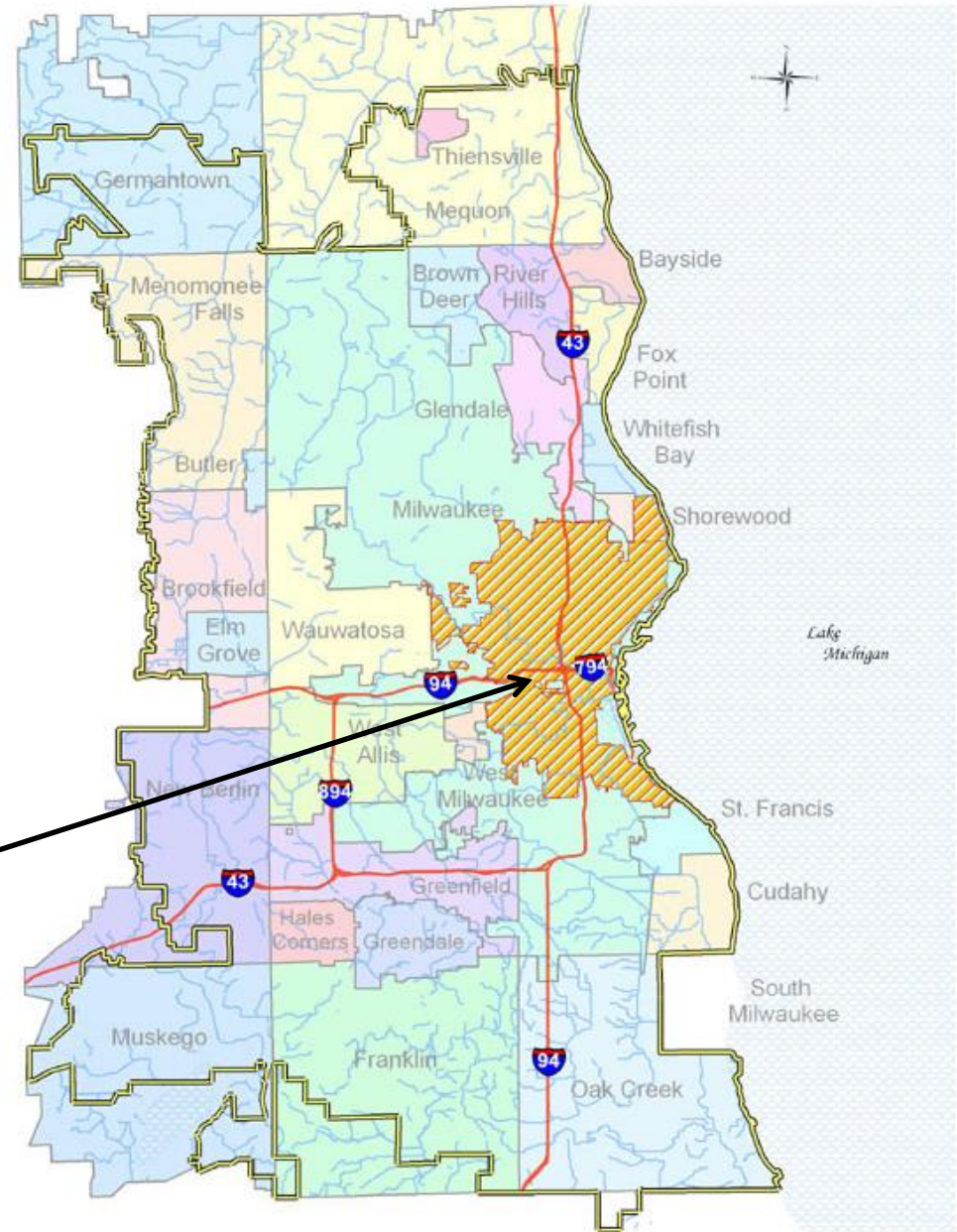


Downspout Impacts

The combined sewer area in Milwaukee and Superior are the **only** locations in the state where downspouts can legally be connected to the sanitary sewers.

One downspout delivers about **12 gallons per minute** during a typical storm.

Combined Sewer Area



Legend

- Current MMSD Service Area
- Interstates
- Combined Sewer Zone
- Water

0 1 2 Miles

Downspout Disconnection Program

- Milwaukee and Shorewood have existing disconnection initiatives. The criteria in these programs will be the basis for this MMSD program.
- Residential disconnection required unless the municipality finds that disconnection would cause property damage or unsafe conditions.
- Disconnection program would start no later than 2016 with public education starting immediately.
- Require all eligible residential structures to disconnect before 2025.
- MMSD's Private Property Inflow and Infiltration funding can be used for downspout disconnection.



Benefits of the Program

- Fewer basement backups
- Fewer combined sewer overflows
- Workforce development and employment potential

MMSD – 2012 Recipient



PARTNERS FOR A CLEANER ENVIRONMENT