

A Proposed Solution for an Unattended Problem

Milwaukee Metropolitan Sewerage District
Private Property Infiltration and Inflow
Reduction Program



Brown AND Caldwell

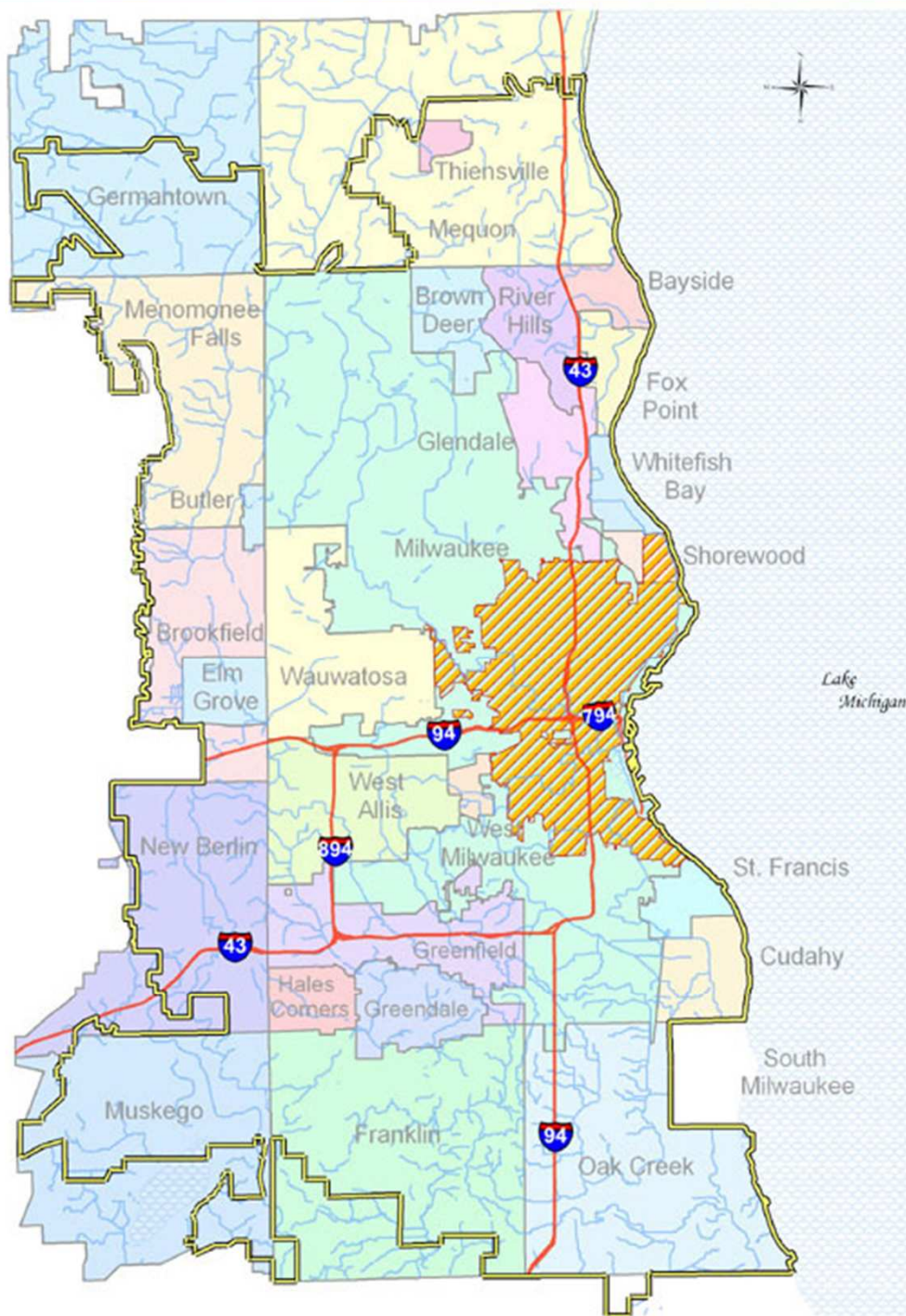
What is MMSD ?

- Regional Agency
- Established by State Law
- Provide water reclamation and flood management



MMSD Serves:

- 1.1 Million Customers
- 28 Municipalities
- 411 Square Miles

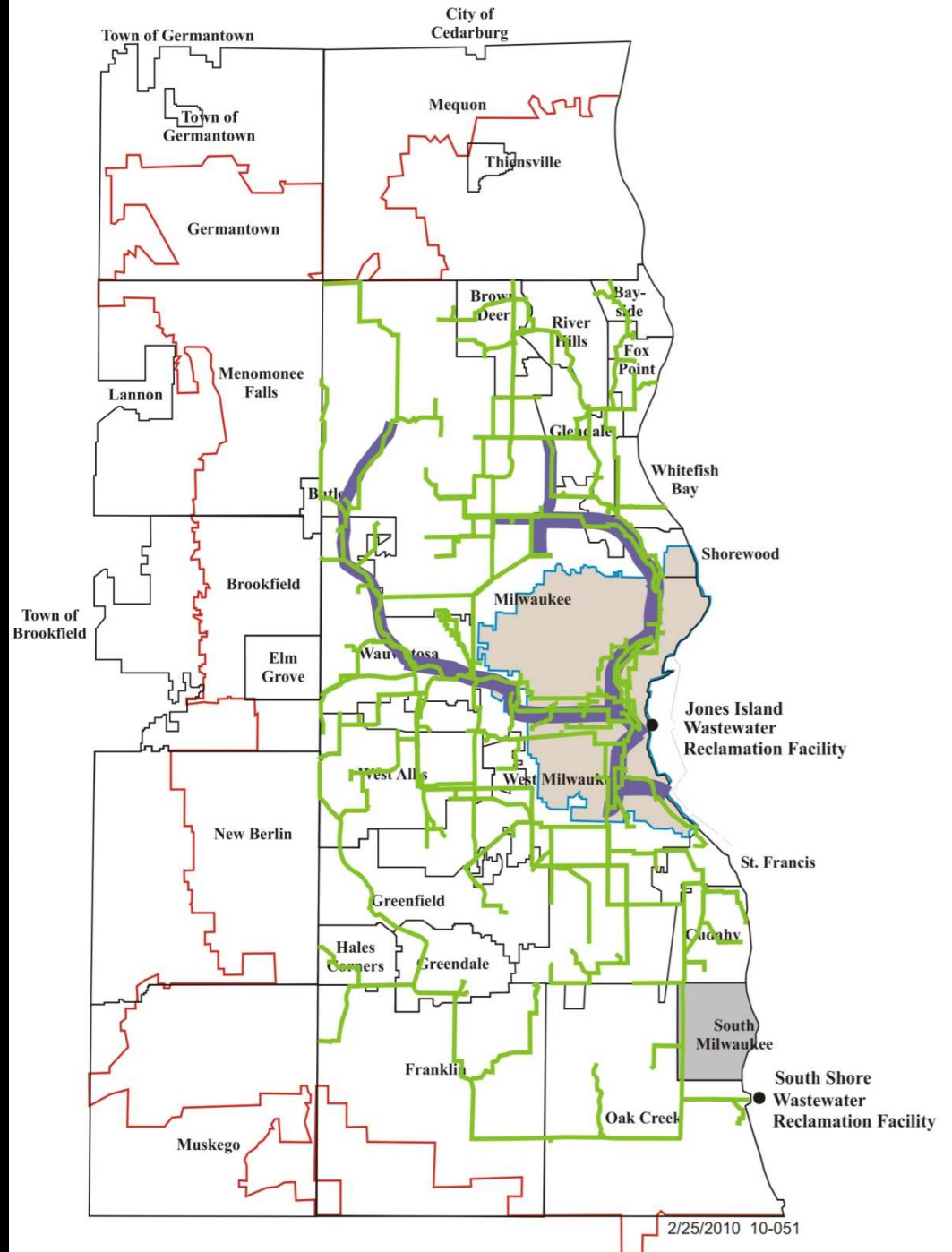


Sewers

300 Miles
MMSD Sewers

3,000 Miles
Municipality Owned Sewers

3,000 Miles
Private Laterals





Water Reclamation Facilities



Jones Island



South Shore

I/I Management History: 1980s-1990s

- Master FP and WPAP
 - I/I Analysis
 - Sewer System Evaluation Survey (SSES)
 - PPII Pilot Project
- Identified I/I sources, did not mandate fixes
- Anticipated: 13% decrease in I/I
- Actual: 17% increase

History: 1998-2004

- 2010 Facilities Plan
 - 5% reduction to achieve overflow control objective
- I/I Reduction Pilot Projects
- Private Property I/I Reduction Study
- Achieved 5% reduction
 - Primarily through public I/I work

I/I Reduction Demonstration Project Report

February 15, 2006

Prepared for:



Milwaukee Metropolitan
Sewerage District

Prepared by:



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As an element of

MMSD Project: C063PE001

I/I Reduction Demonstration Project

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History: 2005-2010

- 2020 Facilities Plan
 - Satellite “Level of Service” Commitment
 - Rules for peak flow limits
 - Require “consideration” of PP I/I
- PP I/I not embraced by satellites
 - Legal?
 - Political Support?
 - Too difficult?
- Funding for \$6M over 5 years for PP I/I
 - Viewed as a “pilot” effort

Then, Summer of 2010 Storms!
(Roll Tape)

Summer 2010 Storms

- Back to back storms
 - July 15 and 22
- Up to 8" in 2 hours
- 10,000+ water in basement
 - Both surface and backups
- FEMA disaster declaration
 - \$40M in damages



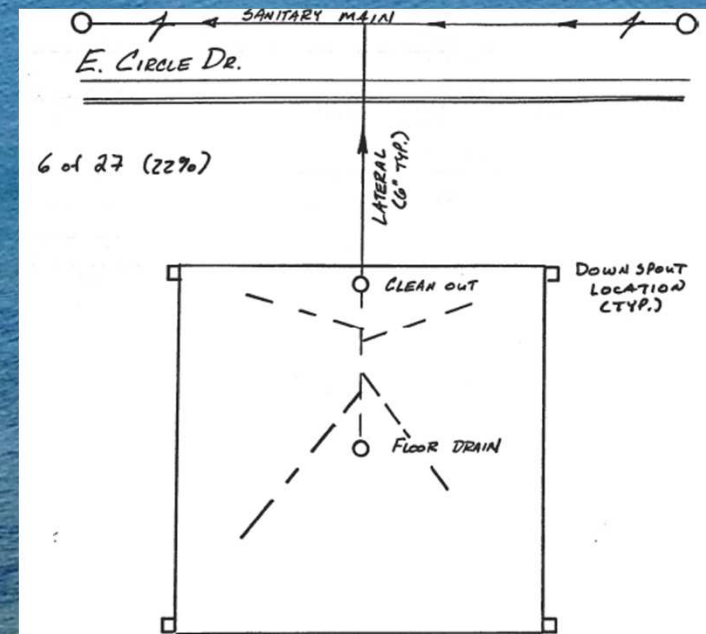
MMSD Response

- Public meetings
- Implementing two new pump stations
- Repairs to MMSD facilities
- Private Property I/I Contracts
 - Lateral inspection
 - Engineering
- Increased PPII Reduction funding and overall program development



Program Objectives

- Program would spend \$156 million between 2011-2020.
- Focus of program is to fund
 - disconnections of foundation drains
 - repair or rehabilitation of private laterals
 - other actions to reduce known sources of I/I
- District can not fund work on locally owned public infrastructure, whether storm or sanitary.
- Significant public education component.
- Program is not a panacea for basement backups



Proposed PPII Budget

Year	\$ (millions)		Year	\$ (millions)
2010	\$1		2016	\$20
2011	\$8		2017	\$10
2012	\$22		2018	\$10
2013	\$22		2019	\$10
2014	\$22		2020	\$5
2015	\$21		Total	\$151

Initial Vision -- A Neighborhood by Neighborhood Approach

- Municipalities will determine priority areas for I/I private property work.
- Plan will be submitted to the District.
- District will provide funding to the Municipalities.
- Options on the table – may be possible for District to lead work to provide economies of scale.



Review of Other Similar Programs

- Many ways to tackle PPII
- Driven by individual community interests
- Programs we looked at showed reduced SSOs, basement backups, flows
- Contracting models vary
- Variety of cost share models
- Rules often financially incentivize owner



Miami-Dade
Water and Sewer Department

Comprehensive Lateral
Investigation Program (CLIP)

Report

February 2007

Variety of Issues for Discussion

- Prioritization of Areas for Work
- Funding for Design and Planning
- Eligible Work
- Credits and Debits
- Procurement
- New Rules
- Cost Share



PPII Contracts

- 3 efforts/contracts available to MMSD and municipalities
 - Lateral Inspections: Budgeted for 6,000 laterals with simultaneous dye testing
 - Engineering Services : Building plumbing inspection, “design,” construction coordination
 - Public Information/ Education: Systemwide and localized approaches
- Contracts are “On Call” available at request of municipality



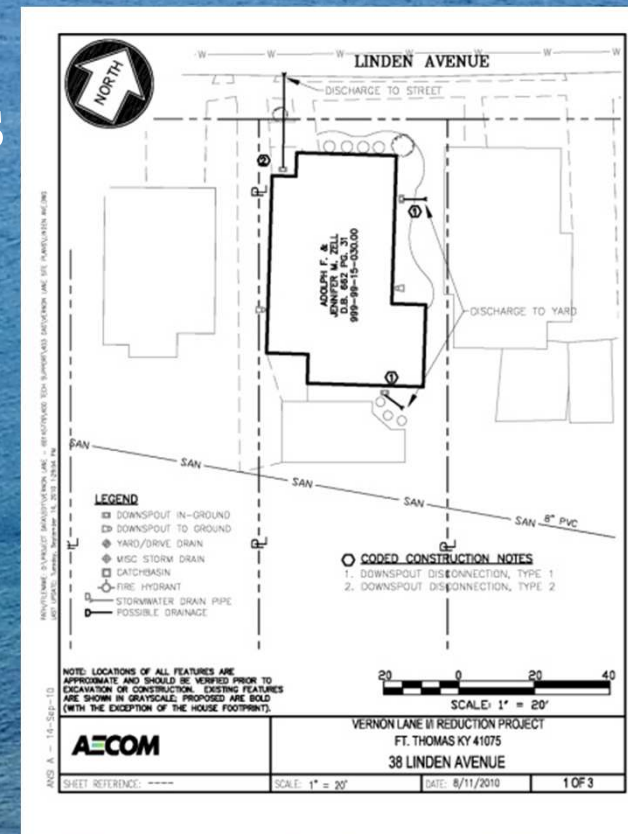
Rationale

- Allow for at least some degree of consistency across region
- Allow all communities ability to tap into high level of expertise
- Facilitate sharing best practices among municipalities
- Provides some economies of scale



Available scope of services

- Community specific private property I/I program
- Investigate individual properties
- Recommend property “fixes”
- Implement PPII program
- Other technical support
 - Flow monitoring
 - Modeling
 - As defined by municipality



Specifics of the Program Are Still Under Development

- Coordinated effort between MMSD and satellites
 - “It’s your program.”
 - What should program look like?
 - How should funding be used – what can qualify?
 - Should a municipal cost-share be required?
 - Should a property owner cost-share be required?
 - Should basement backup prevention be included?
 - How should contracting be done?
 - Prioritization vs. “shot gun” approach
 - What happens when satellite “runs out of problems to solve?”

Four Options to Get Work Done

- Municipality contracts out - MMSD reimburses
- MMSD does ALL work, hires and pays for contractors
- Municipality uses its own work force to perform repairs and requests reimbursement
- Municipality requires homeowner to hire contractors and request reimbursement

Municipal Concerns

- MMSD is moving too fast
- We don't have much of a PP I/I problem
 - Can't spend all the money
- Projected rate increases are not acceptable
 - Scale back the program
- Is this legal?
- However, even with these concerns, many are providing constructive input to the program

Steps in Process

- July 2010: The Storms
- September 2010: Budget proposed \$151M for PP I/I
- October 2010: Budget adopted, concerns expressed
- November 18, 2010, TAT meeting – I/I summit
- December TAT
- Issued updated policy document
- January 17 MJS Article (\$3000 per home!)
- January TAT – more comments received
- New policy issued to TAT on Feb 1 - \$156 million
- February MMSD Commission
- Anticipated Program Initiation in March 2010
- Several municipalities are ready to start

