

**Wisconsin Wastewater Operators Association
Annual Conference
Workshop
“Find It, Fund It, Fix it”
Private Property Programs
October 21st 2010
Joan B. Hawley, P.E.**

**Superior
Engineering**



Private Property Programs Overview

Joan B. Hawley, P.E.
Superior Engineering

The first steps

- Develop the Program
 - Legal/Ordinance Structure to enable
 - Street Reconstruction Program
 - Identify initiatives
 - Internal Review (Marshfield example)
- Then develop solutions (later)
- Develop Public Outreach
- Identify Stakeholders



Insert photos of
different types of
properties

Finding Private Property



Ron Dickrell, Superintendent
City of Marshfield

Identify the program

- What are your program elements?
 - Downspout disconnects?
 - Sump pump installation?
 - Lateral inspection and replacement?
 - Stormwater storage
 - Stormwater conveyance
- Identify the I/I sources and provide the best economical



Things to Consider

- Ordinance in Place
- Funds
- Fines
- City/Village Insurance – ie League of Municipalities – Insurance

Funding

- Low Income
- Social impact
- Economic impact
- Using the right solution

Funding – Types

- Property Owner versus Municipality
- Taxes
- Fees
- Insurance
- Monthly/quarterly
- Assessments
- Grants



Village of Morton, IL

- 17,000 customers
- Sump pump disconnect program
- Property owner is responsible for the work
- \$500 grant





Campbellsport, Wi

- Over 700 homes replaced laterals
- On-going long term program
- Hickups in the beginning – defined guidelines and eliminated some of them





Campbellsport, Wi

- Sewer Lateral Replacement Fund
 - \$5.00 fee to the quarterly bill
 - Customers need to apply for the application
- Replace during street reconstruction – assess \$75/foot
- Approximately \$14,000 collected
- <http://www.campbellsport.govoffice.com/>



Program Highlights

GSWSA, Conway, SC

- **Voluntary Lateral Maintenance Program**
 - Customer signs up for \$30/year (\$2.50/mth/REU*)
 - Maintenance includes:
 - Clearing blockages
 - Repairing lateral to building
 - Reimbursing sewer backup damages

Fiscal Year	Actual Revenue	Estimated Number of Customers	Approximate Percent of Customers Participating
2002	\$ 0.00	0	0 %
2003	\$ 43,043.00	1,550	3 %
2004	\$ 96,912.00	3,550	7 %
2005	\$ 219,667.50	7,940	16 %
2006	\$ 321,741.50	11,640	22 %

Johnson County

- www.jwc.org
- Started by “request” from EPA
- Foundation Drain Disconnect Program
- Reimbursement of funds
- Lots of documents/references available

PLEASE READ

NOTICE TO RESIDENT

JOHNSON COUNTY UNIFIED WASTEWATER DISTRICTS IS COLLECTING INFORMATION THAT WILL LEAD TO IMPROVEMENTS IN THE SANITARY SEWER SYSTEM. THE DISTRICTS WERE RECENTLY AT YOUR HOME FOR THE REASONS CHECKED BELOW:

TO PERFORM AN INTERIOR AND EXTERIOR INSPECTION OF STORM DRAINAGE FACILITIES AT YOUR HOME. PLEASE FILL IN AND MAIL THE ATTACHED CARD SO THE DISTRICTS MAY COMPLETE THE SURVEY!

TO PERFORM A FINAL INSPECTION OF THE PLUMBING MODIFICATIONS AT YOUR HOME. PLEASE CONTACT THE II COORDINATOR AT THE NUMBER LISTED BELOW SO THE DISTRICTS MAY COMPLETE THIS INSPECTION.

FOR ANY QUESTIONS CONTACT THE II DEPARTMENT AT 338-1300

YOUR COOPERATION IS APPRECIATED

DETACH CARD

PLEASE RETURN THIS CARD WITHIN 15 DAYS
INDICATE THE TIME AND DATE FOR THE INSPECTION
AT YOUR CONVENIENCE

PLEASE SCHEDULE APPOINTMENT AT LEAST
FIVE (5) WORKING DAYS FROM MAILING DATE

TIME _____ 10 AM - 4 PM

DATE _____ MON - FRI

NAME _____

STREET ADDRESS _____

CITY _____

PHONE NUMBER _____

Vallejo Sanitation and Flood Control District

- Upper lateral Fee - \$1.38/month/customer (2005)
- Inspection program
- www.vsfcd.org





Developer Rehabilitation Program

Erie County, New York

- Applies to development in areas with capacity limitations
- Developers must rehabilitate existing sanitary sewers (which can include laterals) to remove I/I sources equivalent to 4 times the proposed peak flow for development
 - Developers pay for the lateral replacement costs
 - Property owners are responsible for the final restoration (including top soil, seeding, watering, etc.)

**Erie County Sewer District's
General I/I Source Flow Contribution**

Problem Type	Severity	I/I Contribution (gpm)
Manholes:		
Surface Water/Low-lying Manholes		4
Frame ⁽¹⁾ , cover, barrel leaks	Slight	0.5
	Moderate	1
	Severe	2
Joint leaks	Slight	1
	Moderate	3
	Severe	5
Exposed frame and cover in ditch (Excavated)	Slight	5
	Moderate	10
	Severe	15
Cracks in the concrete or paved surface area surrounding a manhole with leaks in frame and cover		10
Pipe Segments⁽²⁾		
Joint infiltration		1
Pipe broken		2
Pipe cracked		1
Leaking lateral at the connection to the main		1
Private Sources:		
Low-lying lawn vent		0.1 to 80 ⁽³⁾
Downspout		5
Defective residential lateral	Case-specific, no general classification	15 to 70

1. The term frame in this report includes the manhole frame adjustment rings or bricks beneath the frame.
 2. During the Parsons I/I study in ECSD #1 conducted in 2001, CCTV inspection was conducted in dry weather, under frozen ground conditions. Field observations were not always available, therefore, these general values were assigned to various defects.
 3. Individual low-lying lawn vents vary in contribution according to surface characteristics.

AMY\infrastructure
Parsons Engineering Science ECSD #1 Cinton Trunk Table 3.1
2/5/05



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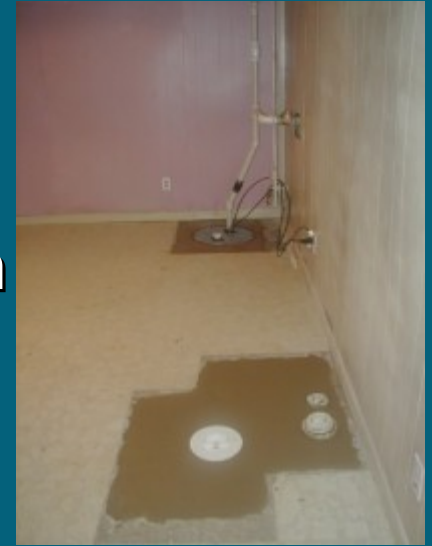
*Residence Equivalency Unit



Program Highlights

Auburn Hills, MI

- Program included:
 - Downspout extension
 - Footing drain / sump pump disconnection
 - Backflow prevention valves installed
- Under abatement order to eliminate overflow and basement flooding





Program Highlights Auburn Hills, MI (cont.)

- Paid for out of General Fund
- Implemented from 2000 through 2006
 - Discontinued because 99% of the homes were disconnected and metering results favorable
- Lessons Learned
 - Extremely effective at eliminating the excess flows in the system
 - Public education and relations are critical

SUMP PUMP TESTING, INSPECTION AND MAINTENANCE

The sump pump installed in your home comes with a one-year manufacturer's warranty and is capable of pumping flows equivalent to or even the worst conditions.

How do I verify that my sump pump is operating properly?

- Listen for the pump to turn on. When the pump activates, it will make a soft "humming" noise.
- If the pump is not running, uncover the access plug from the sump check cover and run water into the sump check.



(Access hole in lower-left corner.)

The pump will activate when enough water accumulates in the sump.



(Cover cap is removed.)

3. If the sump still does not activate, by activating the pump by plugging the pump motor directly into the outlet. (Your pump comes with a "piggy-back" plug.)



(Piggy-backed plug.)

The portion of the plug with both male and female connections is the level sensor for the pump and activates the pump when the water level rises to a certain height in the sump. The plug, with only male connections is the power cord for the pump motor. Plugging the pump motor cord directly into the outlet will actuate the pump for emergency or testing purposes.



(Pump motor cord directly to outlet.)

4. If your pump does not activate after check valve disconnection:

CAUTION: DO NOT OPEN CHECK VALVE IF YOU SUSPECT A SANITARY SEWER BACK-UP EXISTS. OPENING YOUR CHECK VALVE UNDER THESE CONDITIONS COULD RESULT IN BASEMENT FLOODING!

THE ELECTRICAL CIRCUIT AND OUTLET INSTALLED IS DEDICATED TO THE SUMP PUMP. KEEP THE SUMP PUMP PLUGGED IN TO THIS DEDICATED OUTLET AT ALL TIMES.

FOR ADDITIONAL SECURITY AGAINST BASEMENT FLOODING, A BACK-UP HYDRAULIC SUMP PUMP OR BATTERY IS RECOMMENDED.

BLOOMFIELD ORCHARDS FOOTING DRAIN DISCONNECT PROJECT

CITY OF AUBURN HILLS

SUMP PUMP AND CHECK VALVE MAINTENANCE

Your home has been equipped with a hydrostatic → sump pump and sanitary sewer back-flow preventer (check valve). The sump pump has been installed to pump ground water and storm water away from the foundation of your home and into the storm sewer system. This pump replaces your home to current plumbing codes as adopted by the City of Auburn Hills.

In addition, a check valve or back-flow preventer was installed on your sanitary sewer line to prevent basement flooding as a result of sanitary sewer back-ups.

An owner's manual was provided to you, which provides general care requirements for your sump pump.

This flyer provides additional recommended inspection and maintenance procedures for your sump pump and check valve.

September 2003





Program Highlights

McMinnville, Oregon

■ Private Building Sewer Replacement Program

- City inspects lateral and assigns condition assessment rating after receiving complaint of lateral issue
- Homeowner responsible for replacing deficient lateral
 - City reimburses 10% up to \$250 for work completed within 90 days
- City replaces public portion of lateral and installs cleanout
 - Also done on major sewer projects
- Downspouts disconnected

**My Property and
The City of McMinnville's Private Building Sewer
Replacement Program**
(A Guide For Property Owners in a Question and Answer Format)

**City of McMinnville
Building Sewer Condition Assessment Report**

DATE:

ADDRESS/LOCATION:

BUILDING SEWER CONDITION					
ESTIMATED AGE OF BUILDING SEWER (years)			CORROSION		
(Circle One)	Value	Points	(Circle One)	Value	Points
0 - 10	0	<input type="text"/>	None	0	<input type="text"/>
11 - 20	100	<input type="text"/>	Light	100	<input type="text"/>
21 - 30	500	<input type="text"/>	Medium	250	<input type="text"/>
> 30	1000	<input type="text"/>	Heavy	500	<input type="text"/>
BUILDING SEWER MATERIAL			ROOTS/MINERALS		
(Circle One)	Value	Points	(Circle One)	Value	Points
ABS, HDPE, or PVC	0	<input type="text"/>	None	0	<input type="text"/>
Cast Iron	0	<input type="text"/>	Light	100	<input type="text"/>
Concrete	250	<input type="text"/>	Medium	250	<input type="text"/>
Clay	500	<input type="text"/>	Heavy	500	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Unknown	0	<input type="text"/>			
PIPE CONDITION:			INFILTRATION: Wet / Dry (Circle)		
(Circle One)	Number	Value	(Circle One)	Value	Points
Cracks	<input type="text"/>	100	None	0	<input type="text"/>
Holes	<input type="text"/>	250	Light	100	<input type="text"/>
Broken	<input type="text"/>	500	Medium	250	<input type="text"/>
Deformed	<input type="text"/>	500	Heavy	750	<input type="text"/>
Collapsed	<input type="text"/>	1000	<input type="text"/>	<input type="text"/>	<input type="text"/>
JOINT CONDITION:			DEBRIS:		
(Circle One)	Number	Value	(Circle One)	Value	Points
Cracks	<input type="text"/>	100	None	0	<input type="text"/>
Broken	<input type="text"/>	250	Light	100	<input type="text"/>
Open	<input type="text"/>	500	Medium	250	<input type="text"/>
Offset	<input type="text"/>	500	Heavy	500	<input type="text"/>
SUBTOTAL BUILDING SEWER CONDITION: <input type="text"/>					

Legal Issues

- Notification to property owners
- Inspect laterals
- Replace/Rehabilitate laterals
- Going on private property

Handout – Funding

- Who owns What – and how is being paid for
- Lateral - \$1.38/lateral/month sewer fee
- Campbellsport \$5/quarter/lateral/year
- Racine \$50/year – per lateral – within road
City takes care of it

Find It

Ron Dickrell, Superintendent
City of Marshfield