

Update on Evaluation of I/I Reduction Concepts

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Agenda

- Project Objective, Progress, and Next Steps
- Feedback on Common Standards and Inspection Program
- Framework for Private Side Sewer Program

Background and Progress

Objectives:

- Inform about potential new elements for Regional I/I Control Program
- Present frameworks for implementation of potential programs
- Recommendation on new elements for Regional I/I Control Program

Progress:

- ✓ Assessed local agency standards and inspection programs
- ✓ Draft framework for common standards program
- ✓ Draft framework for regional inspection training

Next Steps

- 12/7/17 - Private Side Sewer Program Framework
- 2018
 - ☐ Revised Common Sewer and Side Sewer Standards and Training Program Outline
 - ☐ Draft and Revised Private Side Sewer Program Framework
 - ☐ E&P Recommendation
 - ☐ MWPAAC Recommendation

November E&P Meeting

- Common standards
- Regional inspector training
- Discussion guide handout

What we heard

Common sewer & side sewer standards:

- General agreement on common standards with strong support of voluntary participation
- Suggestion included:
 - A list of relevant procedures
 - Incentives
 - If mandated, more discussion needed
 - Phased implementation, if mandatory

What we heard

Common sewer & side sewer standards:

- Educational materials on costs & benefits
- Means to share standards and best practices between agencies
- Info needed by some to implement
 - More detail on summaries of current practices and improved presentation
 - Improved summaries to share within agencies

What we heard

Regional training program:

- General agreement on benefit from training
- Preference for regional entity/ association develops and coordinates trainings
- Program should focus on new-to-the-industry inspectors
- Different ideas on role of experienced inspectors
- General agreement on training fee per person attending; does not include cost for program development

What we heard

Regional training program:

- Suggestion that KC cover cost to develop program
- Suggestion to get input from inspectors in program development
- Different ideas on frequency
- Different ideas on training method
- Strong agreement that no minimum hiring requirements desired, but sharing of qualifications may be helpful

Today's Discussion

- Private Side Sewer I/I Programs
- Case studies where programs have been implemented
- Private Side Sewer Program considerations

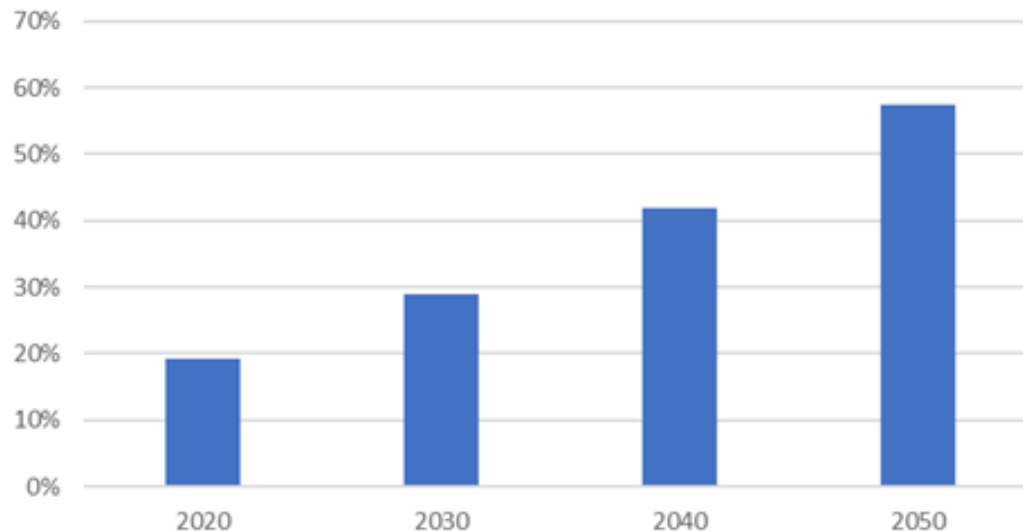
Private Side Sewer Programs

Task Activities:

- Develop an understanding of potential private side sewer programs that could be established in the region
- Identify types of programs used by other sewer utilities across the nation and examine the potential for use of these types of programs by the region
- Present potential frameworks for each type of program considered to be applicable and feasible to implement in the region

Drivers for Private Side Sewer Program

- Aging laterals
- Estimated 50-70% of I/I is from private side sewers



Estimated King County laterals older than 75 Years

Private Side Sewer Programs Considered

- Side sewer inspection and certification program
- Regional private side sewer insurance program
- Regional private side sewer maintenance program
- Private side sewer grant or loan programs

Private Side Sewer Programs Reviewed

- Side sewer inspection and certification programs
 - general
 - point of sale
- Private side sewer grant or loan programs
- Private side sewer I/I regional support programs

Overview of Programs

For each program the following is provided:

- Description
- National case studies
- Benefits/Risks of each program
- Key program considerations for implementation



Key Considerations for Programs

Key Consideration	Potential Criteria
Overall Cost/Benefit	Determine potential program cost at a conceptual level and compare to the potential program benefit using case studies as base for benefit determination
Effectiveness in Reducing I/I	Assess potential program effectiveness based performance of case studies
Funding	Rate based, regionally funded, local agency funded, grant or loan funded
Resource Intensity (e.g. staffing)	Additional staff and/or equipment needed for program
Ease of Program Development	Potential ease and/or complication in developing the program
Ease of Implementation	Potential ease and/or complication in implementing the program
Local versus Regional Management	Would the program be more effective if managed through the region versus the local agencies
Legal Implications	List of potential legal implications (new ordinances, access to private property) of program
Equity and Social Justice	Ability of the program to be managed and implemented equitably within the Region
Agency Participation	Level of agency participation for the program to be effective

Private Side Sewer Inspection Programs

General Inspection Program:

- Materials and methods inspection of side sewer new construction, repair, replacement, and demolition
- Internal CCTV inspections of existing side sewers conducted with dye flooding
- Rainfall simulation to identify defects and illicit clear water connections

National Case Studies

- **Milwaukee Metropolitan Sewer District (MMSD), Wisconsin:**
 - From 2008-2010 storms caused thousands of basement back ups
 - Establishment of a regional Private Property I/I (PPII) reduction program
 - Developed comprehensive PPII policy
 - Policy allowed for investigation and inspection specifically intended to identify and/or quantify PPII sources

Private Side Sewer Inspection Programs

General Inspection Program Benefits:

- Construction, repair, rehabilitation, and demolition inspections has potential to ensure conformance with required standards
- CCTV inspections of existing side sewers could identify structural defects and I/I sources

General Inspection Program Risks:

- Disconnection/redirection of I/I sources may not be currently allowed by agencies

Private Side Sewer Inspection Programs - General

Key Consideration	Description as Applies to Region
Overall Cost/Benefit	
Effectiveness in Reducing I/I	Potential to be high
Funding	
Resource Intensity (e.g. staffing)	
Ease of Program Development	
Ease of Implementation	
Local versus Regional Management	Local likely to be more effective
Legal Implications	Need to review private property access for inspection
Equity and Social Justice	Agencies with older systems may have more issues to correct with inspections
Agency Participation	

Private Side Sewer Inspection Programs

Point of Sale (POS) Inspection Program:

- Side sewers are inspected prior to the transfer of property

National Case Studies

- **East Bay Municipal Utilities District (MUD), California:**
 - Point of sale/major remodel trigger
 - Regional contracts for inspections
- **South Fayette Township, Pennsylvania:**
 - Point of sale lateral and clear water inspections
 - Rebates to property owner for repairs

Private Side Sewer Inspection Programs

POS Inspection Program Benefits:

- Side sewers are systematically inspected over time and most could potentially be inspected within a 20-25 year period

POS Inspection Program Risks:

- Real estate transactions could be slowed down
- Costs of repair could be high for home owners
- Potential equity and social justice issues if program creates hardship on buyers/sellers

Private Side Sewer Inspection Programs- POS

Key Consideration	Description as Applies to Region
Overall Cost/Benefit	
Effectiveness in Reducing I/I	
Funding	Private and/or associated with Grant/Loan programs
Resource Intensity (e.g. staffing)	
Ease of Program Development	Complex to develop. Need to coordinate with real estate industry, each agency and the County
Ease of Implementation	Complex to implement
Local versus Regional Management	
Legal Implications	Potential to be high with determining and enforcing triggers for side sewer repairs
Equity and Social Justice	Potential to be high for low-income areas
Agency Participation	

Grant/Loan Programs

- Provided to reduce the financial impact to the owners of private side sewers where repair or replacement of a private side sewer is required

National Case Studies

- **Milwaukee Metropolitan Sewer District (MMSD), Wisconsin:**
 - Financial support – grants
- **City of McMinnville, Oregon:**
 - Community Development Block Grant-backed low interest loans for lateral repairs
- **Costa Mesa Sanitary District, California:**
 - 50 percent reimbursement program

Grant/Loan Programs

Grant/Loan Program Benefits:

- Financial impact to customers could be reduced for certain programs
- Potential for I/I reduction if connected to a proactive inspection program

Grant/Loan Program Risks:

- Unless the financial assistance is large, it may not be enough to significantly increase the number of side sewer repairs/replacements needed to have an impact on I/I reduction

Grant/Loan Programs

Key Consideration	Description as Applies to Region
Overall Cost/Benefit	Dependent of the type of program the Grants/Loans would support
Effectiveness in Reducing I/I	Dependent of the type of program the Grants/Loans would support
Funding	Rate based
Resource Intensity (e.g. staffing)	Moderate to high
Ease of Program Development	Some agencies have programs in place that could be used as a model
Ease of Implementation	Moderate to high
Local versus Regional Management	Dependent of the type of program the Grants/Loans would support
Legal Implications	Moderate to low
Equity and Social Justice	Potential to be high, depending on conditions for approvals
Agency Participation	Dependent of the type of program the Grants/Loans would support

Regional I/I Support Programs

- Program and policy development support
- Training: classroom and field demonstration
- Regional consulting contracts for specialty needs
- Physical resource sharing
- I/I Toolkits for activities, such as artificial rainfall generation/smoke testing/flow monitoring

National Case Studies

- **Milwaukee Metropolitan Sewer District (MMSD), Wisconsin:**
 - Sharing information
 - Flow monitoring support
 - Modeling support
- **East Bay Municipal Utilities District (MUD), California:**
 - I/I testing standards for laterals pre/post repair
 - Regional contracts for inspections
 - Public education support
- **Metropolitan Council Environmental Services (MCES), Minnesota:**
 - Toolkit for local agencies

Regional I/I Support Programs

Regional I/I Support Program Benefits:

- Potentially reduce risk for structural defects with common standards
- Resource sharing could allow agencies to expand services limiting impact on budgets

Regional I/I Support Program Risks:

- Prioritization of local agency needs could potentially be difficult with the diversity of the region
- Equity and social justice concerns if programs aren't seen as fairly distributed in the region

Regional I/I Support Programs

Key Consideration	Description as Applies to Region
Overall Cost/Benefit	
Effectiveness in Reducing I/I	
Funding	
Resource Intensity (e.g. staffing)	
Ease of Program Development	
Ease of Implementation	
Local versus Regional Management	
Legal Implications	Resource sharing could have policy implications for some agencies
Equity and Social Justice	Some agencies could be perceived as benefiting more than others from programs
Agency Participation	

Private Side Sewer Program Comparison

Program	Effectiveness	Cost/Resource Intensity	Complexity to Implement
Inspection – General			
Inspection – POS			
Grant/Loan			
Regional I/I Support			

Discussion

- Have we addressed the right key questions or policy considerations?
- Are there preferred programs for further development?
- What should be the participation requirements?
- How would you like us to proceed?

Next Steps and Action Items

- Draft Private Side Sewer Program Technical Memorandum
- Compile feedback from E&P
- Develop method for ranking/scoring programs for potential implementation

Questions?

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