Sewer Cross Bore Program

Puget Sound Energy

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Presentation Summary

- PSE System Overview
- Sewer Cross Bore Program Structure
- Public Awareness
- Cross Bore Inspections
- Lessons Learned
- Program Future Outlook
PSE Cross Bore Program Structure

Public Awareness

Lowering the Risk of Cross Bore Incidents

Find Cross Bores from Legacy Construction

No New Cross Bores Left Behind
Public Awareness

Three challenges:

1. Get the word out that there’s a real risk
2. Get residents to agree to an inspection
3. Get plumbers to call before clearing
Get the Word Out

Online and radio ads

Bill stuffers

TV news

Equipment tag
Get inspection access

We need to schedule an appointment.

PSE's service partner, Hydromax USA, needs to examine your sewer pipes. This is a precautionary measure to ensure that a natural gas line was not inadvertently installed through your sewer pipe. A gas line in a sewer can be hazardous if ruptured by a cutting tool while clearing a blocked sewer.

There is no charge for this 90-minute examination, which may require access through a toilet that would be removed and reinstalled. Hydromax employees carry identification badges bearing their names, photos and ID numbers.

Please call Hydromax USA at 1-800-371-3886 within the next few days to schedule an appointment. Phone lines are open from 8 a.m. to 7 p.m. Monday through Friday.

pse.com/sewersafety
Get plumbers to call

Direct mail

Online and radio ads

Email campaign

Hello,

A sewer cross bore is the inadvertent placement of a gas line through a sewer pipe. Cross bores can occur during trenchless construction and, though rare, present real potential hazards. If mechanical sewer cleaning tools cut an intersecting gas line, fire or explosion can result. To learn more, visit PSE.com/SewerSafety. And call PSE at 1-888-225-5773 before clearing a blocked sewer line. We’ll send a gas first responder to locate our gas line and work with you to avoid a hazard. We usually respond within an hour and will not charge you for this service.
Inspection Program Partnership

Single Vendor

Post Construction Inspections (New Construction & Legacy)

Robust Data Management
Cross Bore Program Sewer Inspections

Proximity Clearance

Video & GPS Data

Lateral Launch Camera

Push Camera

Lateral Launch Camera

[Images of equipment and workers]
Finding Pipe...in the Pipe
CROSS BORE DISCOVERIES

- Found over 650 cross bores since 2001

*Data updated as of 03.31.2015
**Cross Bores & Outreach Link**

### Cross Bores Found vs Blocked Sewer Calls

![Graph showing the number of cross bores found and blocked sewer calls from January 2014 to March 2015.]

### 2014 Results

<table>
<thead>
<tr>
<th></th>
<th>New Construction</th>
<th>Legacy</th>
<th>Blocked Sewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inspections</td>
<td>8250</td>
<td>2400</td>
<td>418 (calls)</td>
</tr>
<tr>
<td>Cross Bores</td>
<td>26</td>
<td>27</td>
<td>60</td>
</tr>
</tbody>
</table>
Lessons Learned

- Complex sewer systems
  - Combination of Storm and Sewer
  - Multiple laterals
  - Lack of cleanouts
- Cross bores live with dense populations
  - Urban residential concentration
- Customers and non-customers
- Highest risk
  - Blocked sewers (outside of foundation)
  - New installations (1st year)
Lessons Learned: Public Awareness

- The media can respond responsibly to a proactive message.
- It takes a lot to get customers to act.
- Most plumbers will not call before they clear.
- Most residents accept inspections without complaint.
Looking Down the Pipe

- Payment for some plumber standby time
- Cross bore bounty
- Messaging to empower customers to request plumbers or drain cleaners to call PSE
- Safer clearing protocol
- Online database of cleared parcels for plumbers and the public
Questions?

Thank you