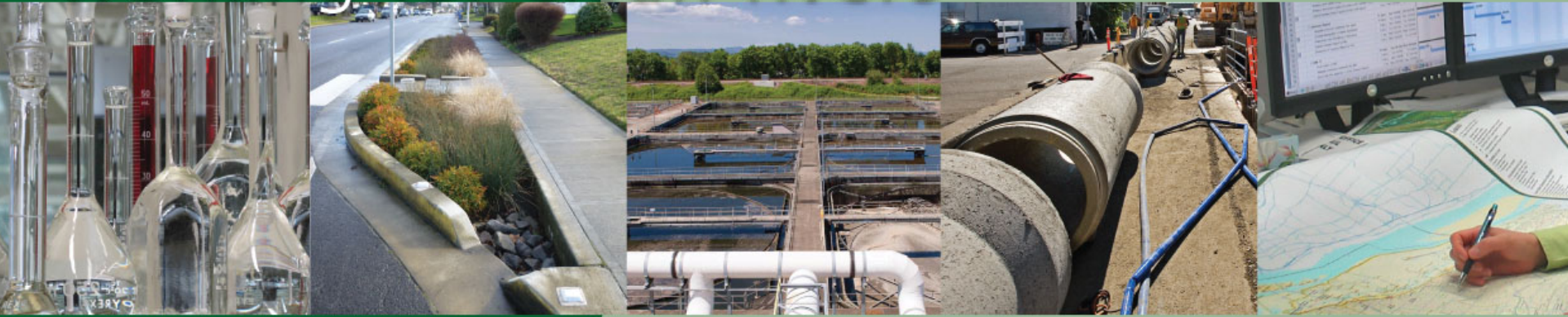


working for clean rivers

April 18, 2018



Council Item 369

Large-Scale Sewer System Rehabilitation Program (LSSRP)

Scott Gibson, P.E., Principal Engineer

Patty Nelson, P.E., Senior Engineer
Program Manager



ENVIRONMENTAL SERVICES
CITY OF PORTLAND

NICK FISH, COMMISSIONER
MICHAEL JORDAN, DIRECTOR

Program Requirements

- The City owns, operates, and maintains over 2,500 miles of sanitary and combined sewer pipe
- More than one-third of those pipes are 80 years old or older
- Replacement value of these sewers is estimated at \$6.5 billion
- Pipe failure results in permit violations, property damage and risks to human health



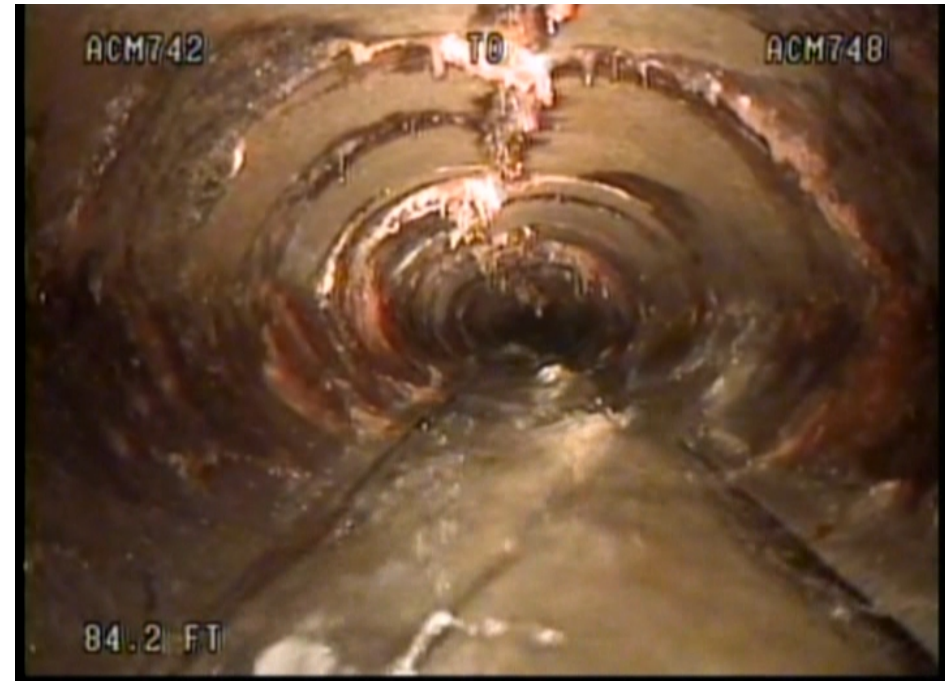
Program Requirements

- The Large Diameter Sewer System Rehabilitation Program (LSSRP) designs and constructs improvements to the aging sewer system
- The LSSRP has been systematically repairing failing pipe since 2011



Risk-Based Approach

- Sewers condition assessments completed
- Risk of failure assessed and cost of repair estimated
- Pipes are selected based on the cost benefit analysis
- Highest cost/benefit pipes are prioritized



Work Ahead Over Next 5 Years

- Small Diameter
 - 38,000 LF Pipe
 - \$21 million construction cost
- Large Diameter Trunks
 - 36,000 LF Pipe
 - \$57 million construction cost
- Downtown Old Town
 - 43,000 LF Pipe
 - \$45 million construction cost



Professional Services Required

- Design
- Hydraulic Modeling
- Geotechnical engineering
- Environmental assessment
- Specialized pipe investigations
- Survey
- Sewer condition assessment
- Cost Estimating
- Project scheduling
- Structural engineering
- Public Involvement
- Permitting



- Rehabilitation technology assessment
- Constructability review
- Utility location & Coordination
- Urban Forestry
- Program & Project Support



Selection Process

- Qualifications based process
- Four firms selected
 - CH2M HILL Engineers
 - Kennedy/Jenks Consultants
 - Murraysmith
 - WSP USA, Inc
- Associated subconsultants provide related services



DMWESB Participation

- Established at Task Order level
- Goal 30% per contract
- DMWESB Services typically include:
 - Design
 - Public involvement support
 - Contaminated media management
 - Geotechnical engineering
 - Surveying
 - Drafting
 - Hydraulic modeling



Questions



Thank you

