Update on Evaluation of I/I Reduction Concepts

March 1, 2018

King County WTD
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King County
Department of Natural Resources and Parks
Wastewater Treatment Division

Agenda

I. Background
- I/I in regional system
- I/I program history
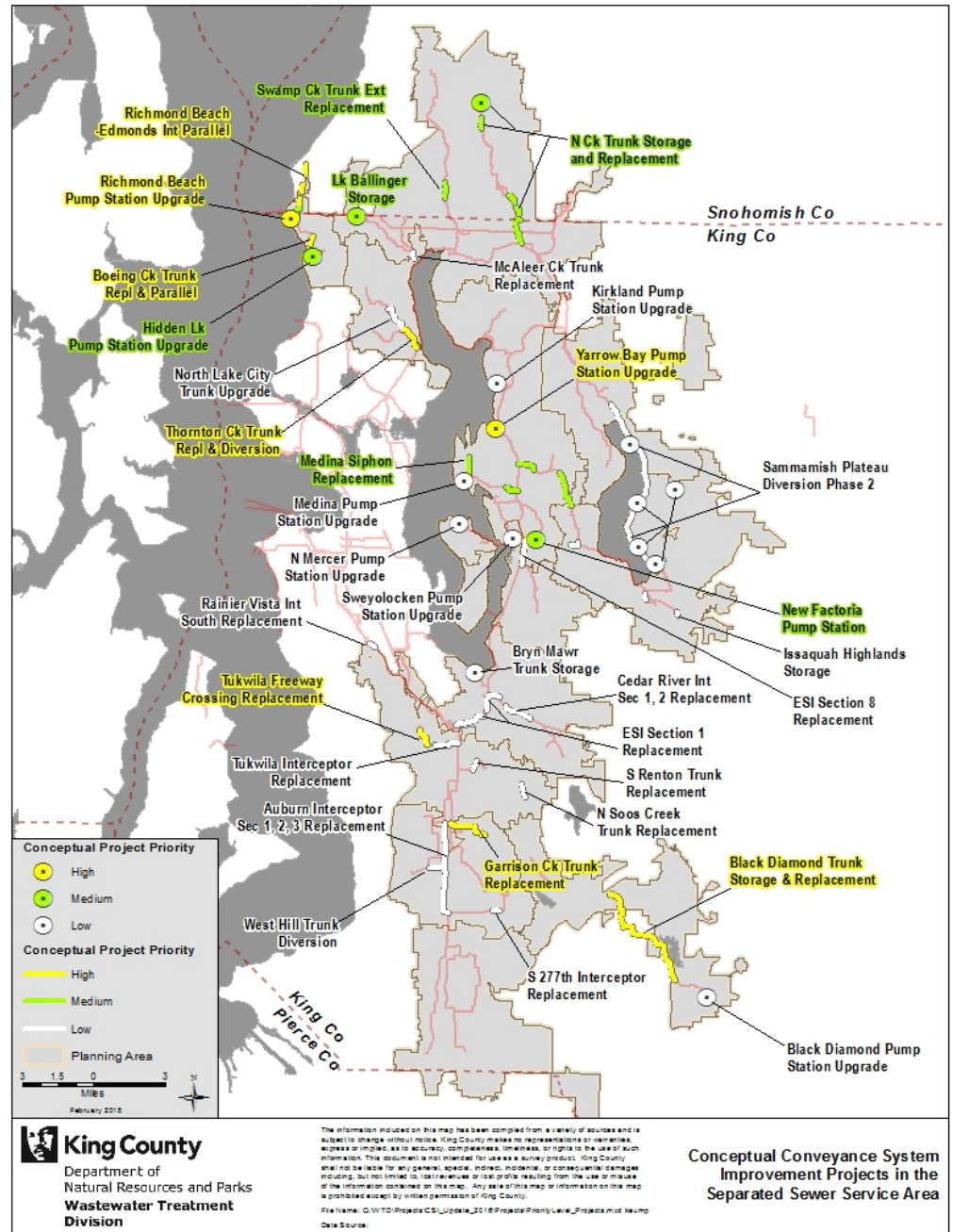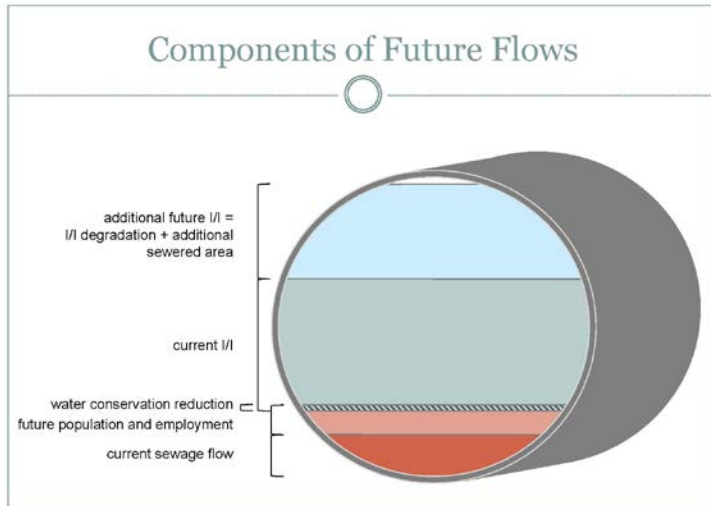
II. Overview of current current I/I program work
- Project objective

II. Introduction to potential I/I programs
- Frameworks
- Evaluation criteria

I/I in the regional wastewater system

- Approximately 70% of peak flow is I/I
- 50-70% I/I is from private side sewers
- Approximately $1.7 billion (2016$) in CSI Projects through 2060

Components of Future Flows

additional future I/I = I/I degradation + additional sewered area

current I/I

water conservation reduction
future population and employment

current sewage flow

Conceptual Conveyance System Improvement Projects in the Separated Sewer Service Area

Regional I/I Program History

- 1999 – Program created as part of RSWP.

- 2001-2002 – Current levels of I/I defined for each local agency.

- 2003-2004 – 10 pilot projects in 12 local agency jurisdictions to demonstrate the effectiveness of collection system rehabilitation projects, test technologies, and gain cost information.

- 2004 – Final draft model standards, procedures, policies, and guidelines developed for use by local agencies to reduce I/I in there systems.

- 2005 – Thorough benefit-cost analysis completed to determine the cost effectiveness of I/I reduction.

- 2007 – 2009 – Selection of initial I/I project areas

- 2011 – 2013 – Initial I/I reduction project in Skyway Water and Sewer District constructed

- 2015 – MWPAAC I/I Task Force

- 2016 to present evaluation of I/I reduction concepts

Overview of Current I/I Program Work

Evaluation of I/I Reduction Concepts
- Information 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

Introduction to Potential I/I Programs

- Program options
- Frameworks
- Evaluation criteria
- Testing of evaluation criteria

Program Options (Table 1 of Handout)

- Approach to Common Side Sewer Standards
  - Regional BMP sharing for voluntary use
  - Focused standardization and voluntary implementation
  - Scalable BMP program

- Standard Regional Inspection Training
  - Training modules online for voluntary use
  - Training modules + videos, hands-on sessions for voluntary use
  - Training certification

- Regional I/I Support
  - Resource sharing between agencies
  - County provided resources
  - County provided resources and vendors

- Regional Side Sewer Inspection Program
  - Point of Sale
  - General

- Side Sewer Grant/Loan Program
  - independent vs. In tandem with other program

Program Options Discussion (Table 1 of Handout)

Initial discussion questions:

- Does the E&P want to consider all the options listed?

- Are there other options to be included?

- Should options be removed from consideration?

Potential Program Frameworks

- Purpose: Provide enough detail on potential program to inform evaluation and a decision on whether to proceed with studying implementation.
- Contents:
  - Description and case studies
  - Program benefits/risks
  - Legal authorities that may be required
  - New procedures that may be required
  - Potential cost implications
  - Potential incentives/penalties
  - Partners for implementation
  - Potential funding
  - Methods for assessing effectiveness

Test Case - Framework Discussion (Table 2 of Handout)

Developed point of sale private side sewer inspection program framework.

Initial discussion questions:

- Is the description of the program adequate?

- Is the level of detail of the assumptions and features enough to aid in the comparison process?

- Are there other categories for consideration that you would like to see?

Draft Evaluation Criteria (Table 3 of Handout)

Developed Six Criteria to rate and compare programs:

- Effectiveness
- Legal implications
- Property owner impacts
- Local agency impacts
- WTD impacts
- Equity and social justice

Draft Evaluation Criteria Discussion (Table 3 of Handout)

Initial discussion questions:

- Are the measurement and rating definitions in sufficient detail for assessing I/I program options?

- Are there additional criteria that should be included for consideration?

Test Case – Criteria Applied (Table 4 of Handout)

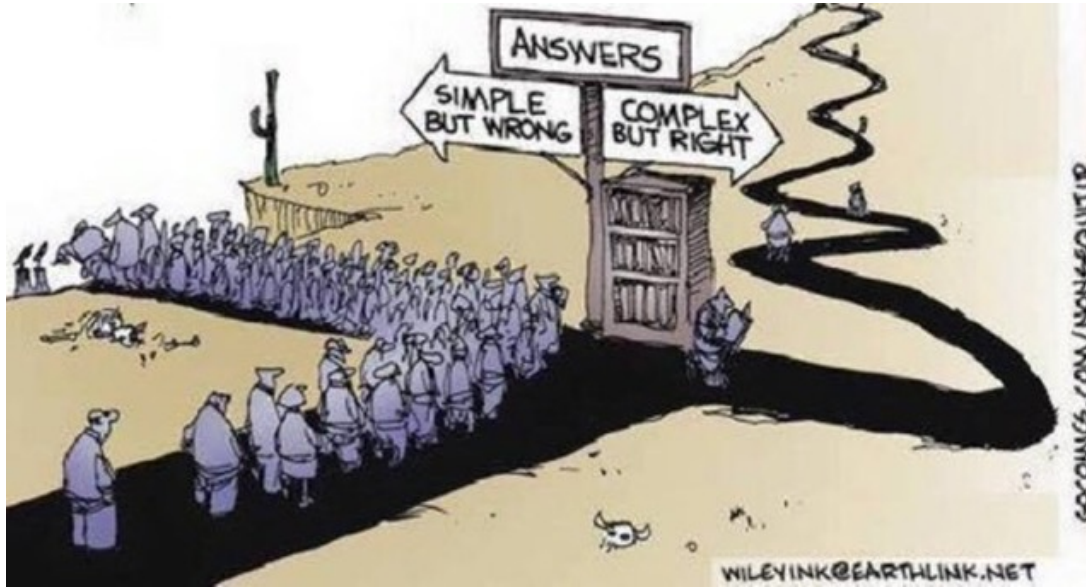Applied draft criteria to point of sale private side sewer inspection framework

Initial discussion questions:

- Are the rationales in column 3 in enough detail to support the rating?

- Do you agree with the draft ratings?

Next Steps

- Next meeting – continued discussion of evaluation criteria and application to programs
- Complete evaluation of I/Programs
  - Frameworks for each program
  - Apply criteria to each program
  - Discussion of program(s) to move forward for implementation

Questions?

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