



**City of
SeaTac**

Stormwater Rate Study Results

October 8, 2013

Council Study Session

Presented By:

**John Ghilarducci, FCS Group, Matt Fontaine, Herrera Environmental
& Don Robinett, Stormwater Compliance Manager**



7525 – 166th Ave. NE, Suite D-215, Redmond, WA 98052 ■ 425-867-1802

Background – Drivers for Rate Study

Surface Water Plan (SWP)

- New National Pollutant Discharge Elimination System requirements
- Asset Management Program (new)
- Stormwater Capital Improvement Program (SWCIP)
- Rates for City roads

Additional Issues

- Staff Reconciliation
 - ✓ Reconciliation will save general fund >\$60,000 in 2014

Background – Drivers for Rate Study

■ Asset Management – Background

- ✓ City Stormwater assets
 - 72 miles drainage pipe
 - 3916 catch basins/manholes
 - 32 stormwater treatment and flow control structures
- ✓ Stormwater assets valued at over \$26.9 million
- ✓ Utility is responsible for assets
- ✓ Goal – assess and repair/replace before failure

Background – Drivers for Rate Study

■ Examples

Sinkholes from failed CMP



Joint Separation



Background – Drivers for Rate Study

■ Examples

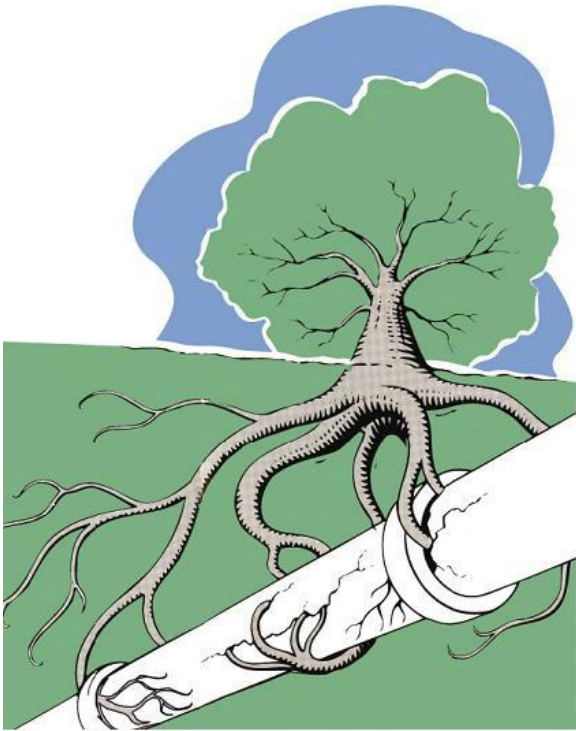
Bottom of pipe
eroded away



Background – Drivers for Rate Study

■ Examples

Tree roots penetrating pipes



Collapsing pipes



Background – Drivers for Rate Study

■ Managing Stormwater Assets

Current Approach

Reactive
Waits for failures to occur
Emergency repairs
Uncontrolled traffic impacts
Level of service declines
Higher risk of failure
Limited funds capital projects
Higher construction costs
- Emergency mobilization
- Damages

Asset Management Program

Proactive
Assess and replace before failure
Scheduled construction
Controls traffic impacts
Level of service is maintained
Lower risk of failure

NPDES Inspections - Planned Process Efficiencies

- Integrate asset evaluation into existing inspections
 - ✓ NPDES inspections
 - Catch basin inspections
 - Field screening
 - ✓ Asset management inspections
 - Need unobstructed/cleaned storm system
 - Video evaluation
 - ✓ Combined processes
 - Step 1 - Catch basin inspection and storm system cleaning
 - Step 2 – Illicit discharge field screening combined with asset management evaluation
 - Reduces trips to the field and demands on staff time

Existing Rates

Rates Set in 1999

Class	Impervious Surface Percentage	Rate
Residential (R)	NA	\$82.80/parcel/year *
Very Light (VL)	0 – 10%	\$49.50/acre/year
Light (L)	10 – 20%	\$168.50/acre/year
Moderate (M)	20 – 45%	\$349.00/acre/year
Moderately Heavy (MH)	45 – 65%	\$674.00/acre/year
Heavy (H)	65 – 85%	\$855.00/acre/year
Very Heavy (VH)	85 – 100%	\$1,120.00/acre/year

* \$82.80 per year = \$6.90 per month.

Rate Scenario Summary

- 1. Current. No rate increases during the study period**
 - Maintain existing programs
 - Minimal capital construction
 - Uncontrolled traffic and construction impacts
 - Anticipated regulatory non-compliance by 2018
 - No additional utility equipment, staffing, or projects
- 2. Limited SWP Implementation**
 - Proactive asset management
 - Funded stormwater CIPs
 - Program expansion to comply with NPDES requirements
 - Staffing reconciliation
 - 1 FTE in 2015, 1.7 FTE 2019
- 3. Current plus Emergency Repair. (Current Scenario Plus)**
 - Capital funding available to repair system failures
- 4. Full SWP Implementation (Limited SWP Plus)**
 - Funds stormwater portion of the transportation improvement plan
 - + 1 FTE in 2015 (half time tech and half time education and outreach)
 - Asset management program and full depreciation funding

Rate Scenarios

	Rate in 2014	Rate in 2018	Maintenance/Staffing	Capital	Regulatory Compliance	System Replacement
Current Rates	\$82.80/yr	\$82.80/yr	<ul style="list-style-type: none"> No Change 	<ul style="list-style-type: none"> Reactive Unable to fund large capital projects 	<ul style="list-style-type: none"> Compliance until 2018 	<ul style="list-style-type: none"> No Asset Management program Reactive
Limited SWP Implementation	\$99.63/yr	\$141.21/yr	<ul style="list-style-type: none"> Proactive Asset Mgt Necessary equipment Minimum staffing increases 	<ul style="list-style-type: none"> Fully funds SWCIP No debt financing 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Proactive Asset Mgt Fully funded /no debt financing
Current Plus Emergency Repair	\$126.84/yr	\$134.16/yr	<ul style="list-style-type: none"> Current Rates Scenario Plus Emergency Capital Funds 	<ul style="list-style-type: none"> Current Rates Scenario Plus Funding available for repair & replacement 	<ul style="list-style-type: none"> Compliance until 2018 	<ul style="list-style-type: none"> Reactive Emergency contingency fund for repair & replacement
Full Implementation of SWP	\$106.68/yr	\$182.40/yr	<ul style="list-style-type: none"> Limited SWP Scenario Plus .5 Technician + .5 Public Education Coordinator 	<ul style="list-style-type: none"> Limited SWP Scenario Plus Fund roads projects Assumes debt financing 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Proactive Asset Mgt Fully funded Assumes debt financing

Recommended Rate Scenario

	Rate in 2014	Rate in 2018	Maintenance/Staffing	Capital	Regulatory Compliance	System Replacement
Current Rates	\$82.80/yr \$6.90/mo	\$82.80/yr \$6.90/mo	<ul style="list-style-type: none"> No Change 	<ul style="list-style-type: none"> Reactive Unable to fund large capital projects 	<ul style="list-style-type: none"> Compliance until 2018 	<ul style="list-style-type: none"> No Asset Management program Reactive
Limited SWP Implementation	\$99.63/yr \$8.30/mo	\$141.21/yr \$11.77/mo	<ul style="list-style-type: none"> Proactive Asset Mgt Necessary equipment Minimum staffing increases 	<ul style="list-style-type: none"> Fully funds SWCIP No debt financing 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Proactive Asset Mgt Fully funded /no debt financing
Current Plus Emergency Repair	\$126.84/yr	\$134.16/yr	<ul style="list-style-type: none"> Current Rates Scenario Plus Emergency Capital Funds 	<ul style="list-style-type: none"> Current Rates Scenario Plus Funding available for repair & replacement 	<ul style="list-style-type: none"> Compliance until 2018 	<ul style="list-style-type: none"> Reactive Emergency contingency fund for repair & replacement
Full Implementation of SWP	\$106.68/yr	\$182.40/yr	<ul style="list-style-type: none"> Limited SWP Scenario Plus .5 Technician + .5 Public Education Coordinator 	<ul style="list-style-type: none"> Limited SWP Scenario Plus Fund roads projects Assumes debt financing 	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Proactive Asset Mgt Fully funded Assumes debt financing

Summary of Financial Plan

Recommended Service Level

Revenue Requirements	2013	2014	2015	2016	2017	2018
Revenues						
Rate Revenues Under Existing Rates	\$ 1,690,162	\$ 1,683,986	\$ 1,703,902	\$ 1,724,108	\$ 1,744,608	\$ 1,765,407
Non-Rate Revenues	7,596	7,240	7,603	13,809	17,167	29,834
Total Revenues	\$ 1,697,758	\$ 1,691,227	\$ 1,711,505	\$ 1,737,917	\$ 1,761,775	\$ 1,795,240
Expenses						
Expenses - Fund 403	\$ 2,366,207	\$ 1,814,114	\$ 1,827,948	\$ 1,981,981	\$ 1,987,215	\$ 2,018,929
Add'l Salaries & Benefits	-	73,554	77,232	81,093	85,148	89,405
Depreciation & Asset Management	-	134,665	557,677	407,554	552,470	697,066
Existing Debt Service	-	-	-	-	-	-
New Debt Service	-	-	-	-	-	-
Rate Funded CIP	-	-	-	-	-	-
Total Expenses	\$ 2,366,207	\$ 2,022,333	\$ 2,462,856	\$ 2,470,628	\$ 2,624,833	\$ 2,805,401
Annual Rate Adjustment	0.00%	20.32%	26.85%	0.00%	4.88%	6.55%
Monthly Rate Per SFR	\$ 6.90	\$ 8.30	\$ 10.53	\$ 10.53	\$ 11.04	\$ 11.77
Rate Revenues After Rate Increase	\$ 1,759,276	\$ 2,017,560	\$ 2,464,088	\$ 2,491,205	\$ 2,618,138	\$ 2,788,245
Net Cash Flow After Rate Increase	(597,835)	(0)	(0)	25,478	(0)	(0)

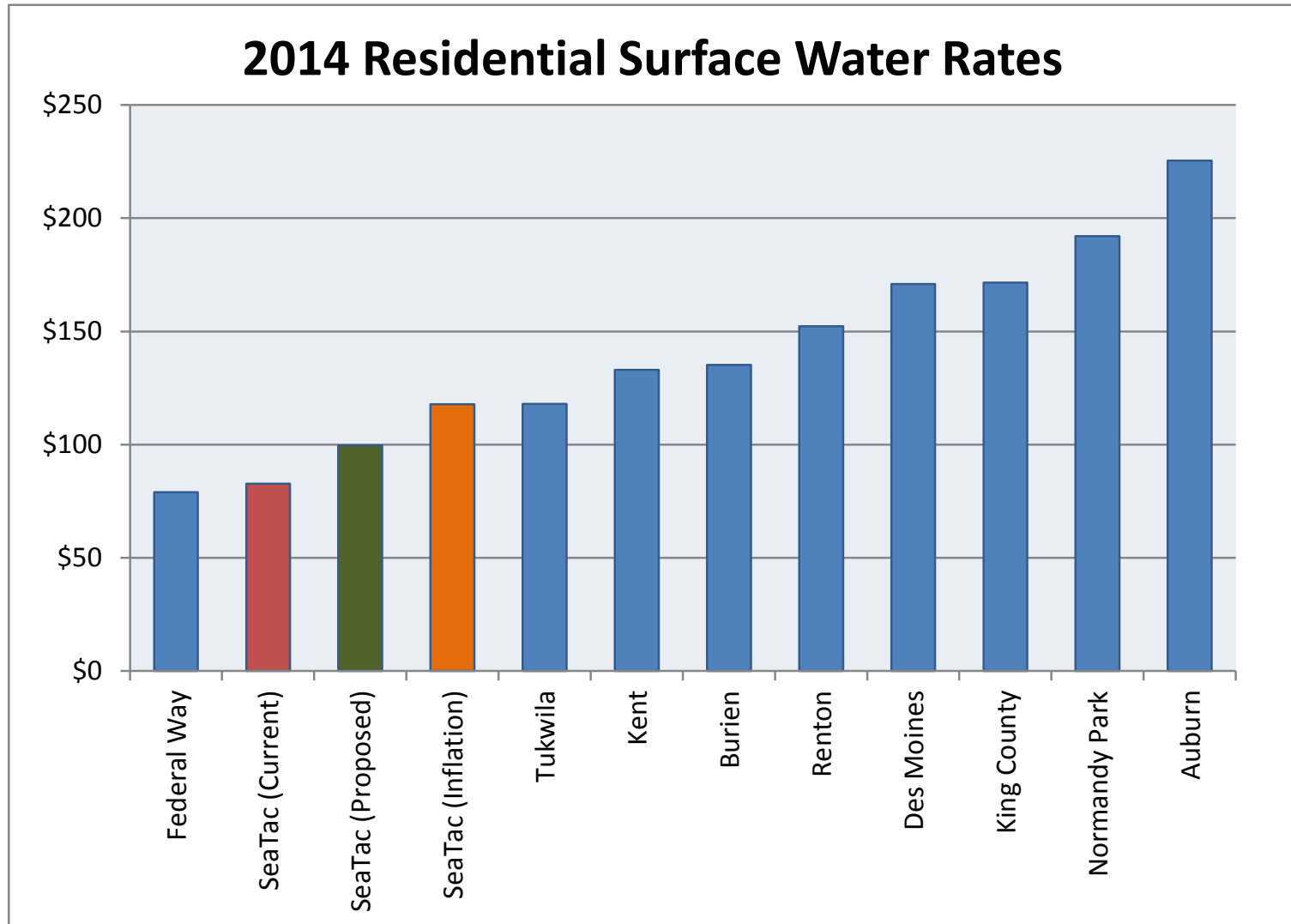
Yearly Rate per SFR	\$82.80	\$99.63	\$126.37	\$126.37	\$132.54	\$141.21
1 Acre Commercial Lot (65% Impervious Surface)	\$674.00	\$810.98	\$1028.70	\$1028.70	\$1078.87	\$1149.50

Recommended Scenario

Future Rate Schedule

Class	Impervious Surface Percentage	Annual Rate (per parcel/acre)					
		2013	2014	2015	2016	2017	2018
Residential (R)	N/A	\$ 82.80	\$ 99.63	\$ 126.37	\$ 126.37	\$ 132.54	\$ 141.21
Very Light (VL)	0 - 10%	\$ 49.50	\$ 59.56	\$ 75.55	\$ 75.55	\$ 79.23	\$ 84.42
Light (L)	10 - 20%	\$ 168.50	\$ 202.75	\$ 257.18	\$ 257.18	\$ 269.72	\$ 287.38
Moderate (M)	20 - 45%	\$ 349.00	\$ 419.93	\$ 532.67	\$ 532.67	\$ 558.65	\$ 595.22
Moderately Heavy (MH)	45 - 65%	\$ 674.00	\$ 810.98	\$ 1,028.70	\$ 1,028.70	\$ 1,078.87	\$ 1,149.50
Heavy (H)	65 - 85%	\$ 855.00	\$ 1,028.77	\$ 1,304.96	\$ 1,304.96	\$ 1,368.60	\$ 1,458.20
Very Heavy (VH)	85 - 100%	\$ 1,120.00	\$ 1,347.62	\$ 1,709.42	\$ 1,709.42	\$ 1,792.79	\$ 1,910.15

Comparison of Rates with Other Jurisdictions



Next Steps

- Integrate Council feedback – 10/22/13 CSS
- Present ordinance and agenda bill – 11/12/13 CSS
- Ordinance and agenda bill – 11/26/13 RCM
- Deadline for rate changes December 2nd

Other Issues / Questions

Key Policy Issues Addressed

1. Asset Management / System Replacement
 - City is considering an asset management program to assess system needs
 - Depreciation and replacement
2. Charging City Streets
 - City currently charges its streets 30% of the surface water rate
 - Evaluated alternative approaches
3. Reconciliation of Surface Water Funding
 - Reviewed FTE time devoted to stormwater activities vs. Utility funding of these positions
 - Reconciliation will save general fund >\$60,000 in 2014

Surface Water Plan (SWP) Background – Drivers for Rate Study

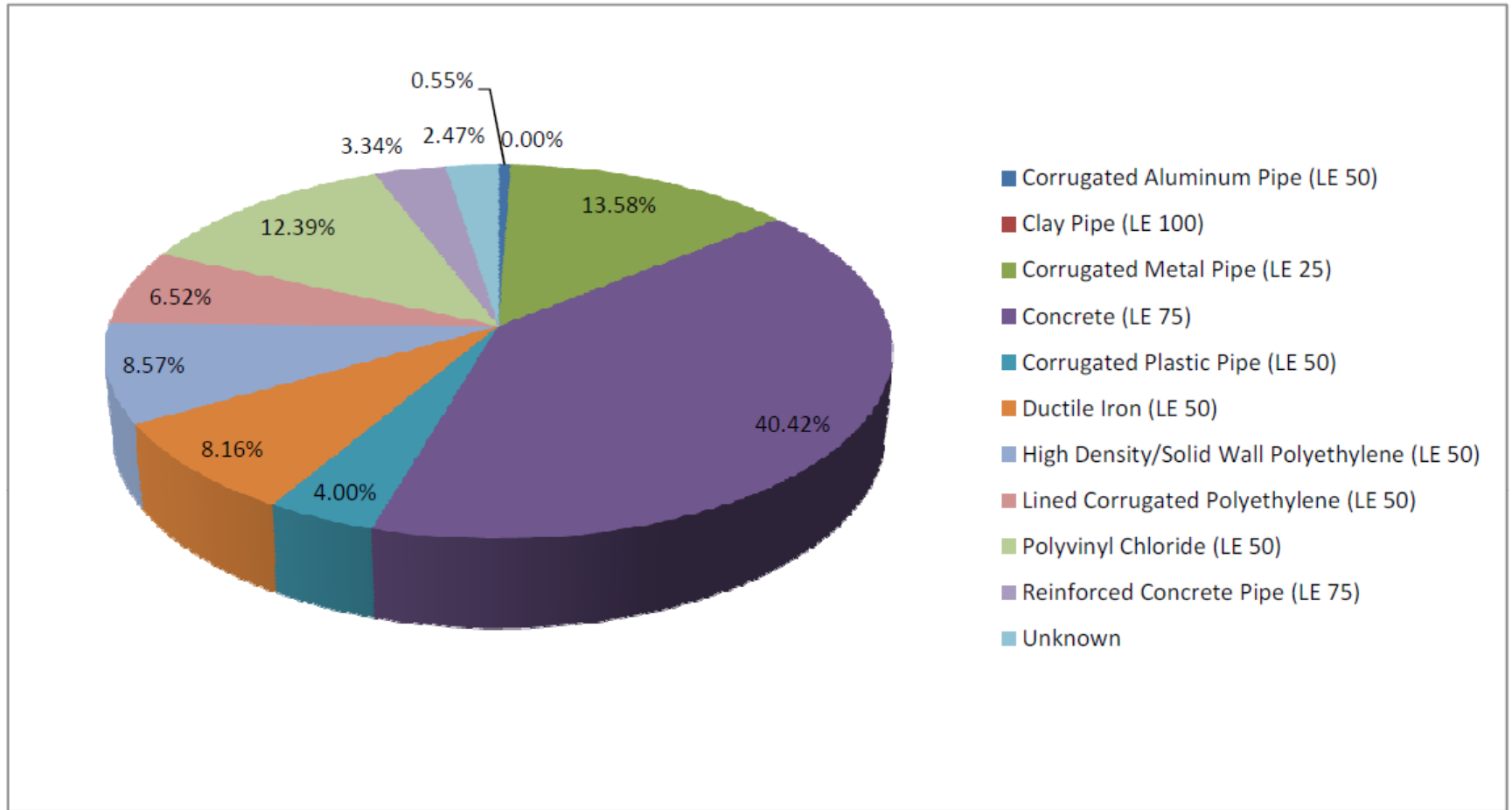
- Stormwater Capital Improvement Projects
 - ✓ Projects identified in SWP
 - ✓ Projects identified by staff and the public
 - ✓ Projects identified through Asset Mgt Program

- Expand Programs to meet NPDES requirements
 - ✓ Tools and equipment to inspect and maintain Low Impact Development BMPs
 - ✓ One additional seasonal maintenance staff in 2019

Key Assumptions

- Revenue and expense projections based on the 2013 budget
- Customer growth estimated to average 1.0% per year
- Labor (including benefits) costs assumed to increase 5% per year
- General operating expenses assumed to increase 2.07% per year
- Capital construction costs assumed to increase 3.16% per year
- Fund earnings assumed to be less than 1% per year until 2017, increasing to 2% per year in 2018.
- The following reserve minimum balance targets will be achieved and maintained:
 - 180 days cash operating expenses for Fund 403
 - 1% of assets for Fund 406

City Storm Pipe Breakdown



Above data has not been field verified.

PIPE MATERIAL SERVICE LIFE

(Culvert, Storm, Underdrain)

Average Years to Maintenance, Repair, or Replacement Due to Corrosion

Materials	Location East of West of Cascades	Water & Soil pH	Soil Resistivity (ohm-cm)	Service Life 1.52 mm thkn. CAP 1.63 mm thkn. CSP
Galvanized Steel CSP, CSPA, SSP/OHSR	East	4.5-6	1500-2000	30
	East	6-7	1500-2000	35
	East	7-10	1500-2000	40
	West	4.5-6	1500-2000	15
	West	6-7	1500-2000	20
	West	7-10	1500-2000	25
Aluminum CAP, CAPA SAP/OHSR	All Locations	4.5-10	>1500	75
Aluminized Steel CSP-Alzd. CSPA-Alzd. SSP/OHSR-Alzd.	East	5-9	>1500	65
	West	5-9	>1500	50
Concrete PCP, NRCP RCP, CIPCP	All Locations	4.5-10	>1500	75+
Polyethylene CPDT, CPP	All Locations	4.5-10	>1500	75

Factors Affecting Service Life of Storm Pipe

1. Pipe material is only an indicator of service life
2. Other factors affecting service
 - a. Corrosive Zone (salt and pH)
 - b. Water tables and hydrology
 - c. Slope
 - d. How it was installed
 - e. Proximity of vegetation
 - f. Presence of a liner or coating
 - g. Pipe location (traffic load)
 - h. Pipe diameter and thickness