Wastewater Lift Station Program

July 20, 2021 Mike Haley, Interim Engineering Supervisor Steve Hitch, Interim Engineering Manager



Agenda

- Program background
- Current challenges
- Proposed solutions





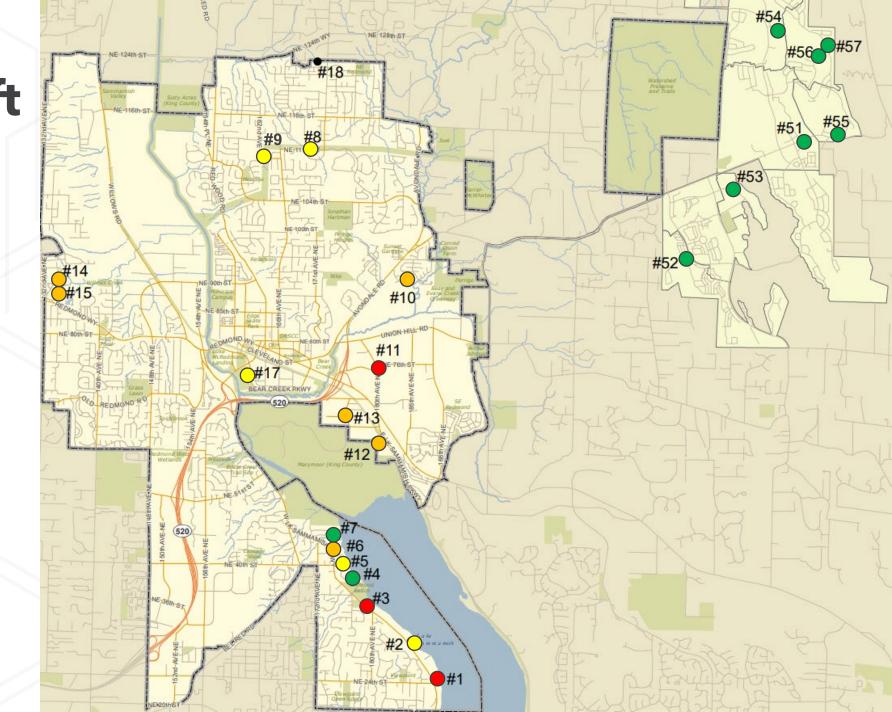
Aging Wastewater Lift Stations

2009 Status

Last Upgrade

- 1970s
- 1980s
- 1990s
- 2000s
- No station yet

30 Year Life Cycle



Current Program Approach



Replace

- 30 year life
- Replace all equipment
- Safety, energy, code, operations upgrades





- New station or
- Rebuild and . . .
- Add capacity
- Developer contributions



Abandon

- New gravity bypass
- Eliminate station and associated maintenance

Progress

<u>Completed:</u>

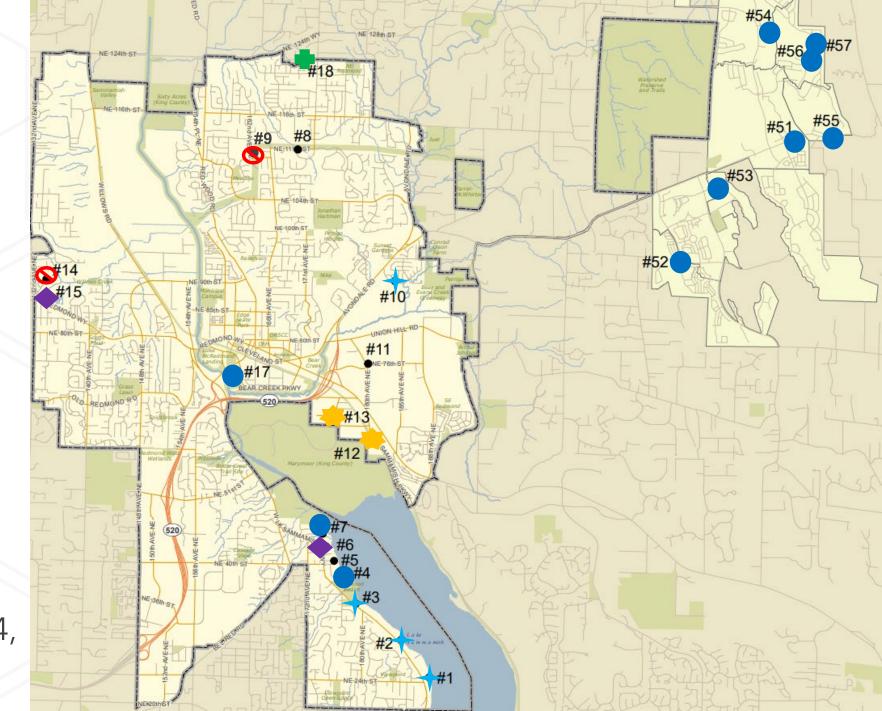
- Section Abandon: 9, 14
- + Replace: 1,2,3,10
- New: 18

Remaining:

- Construction (Expand): 12, 13
- Design: 6, 15
- Planning: 5, 8, 11

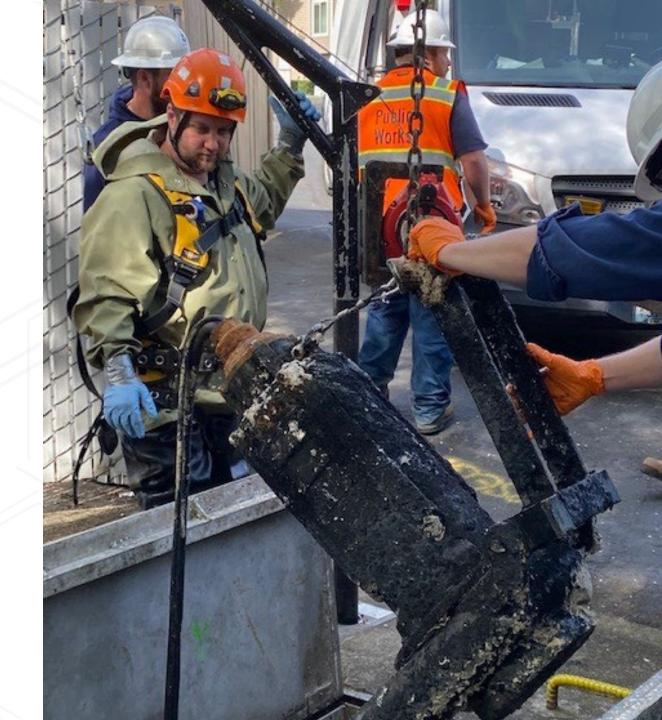
Newer:

4, 7, 17, 51, 52, 53, 54, 55, 56, 57

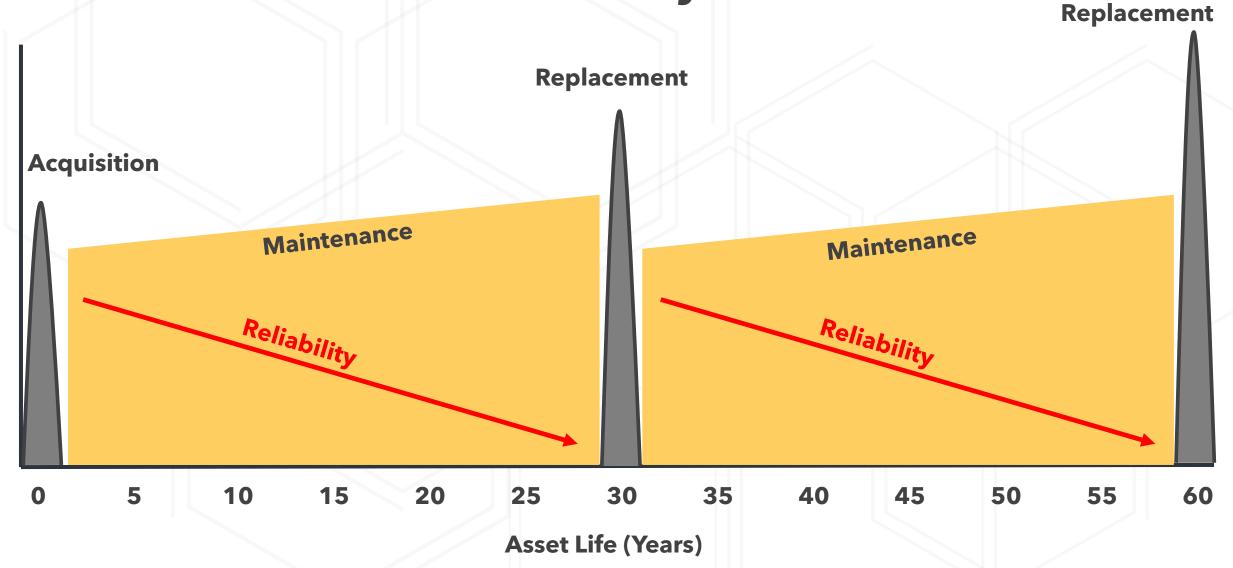


Current Challenges

- Budgets are tight
- Construction costs are climbing
- Full replacement cost \$2-4M
- Full replacement take 3-5 years
- Equipment reliability is declining

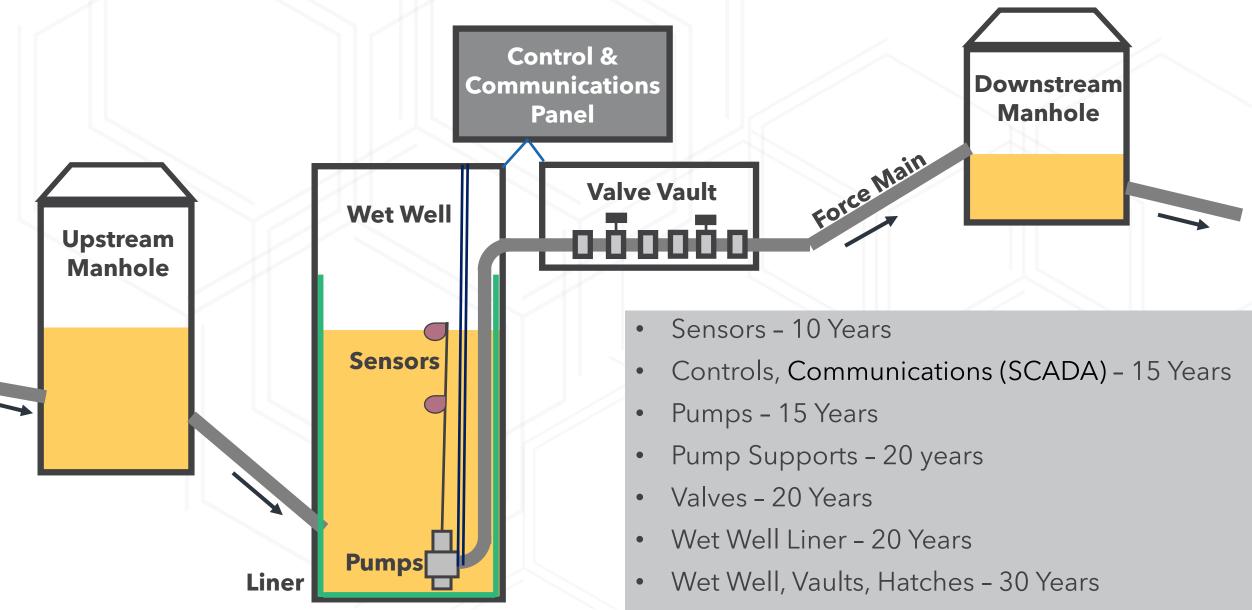


Wastewater Lift Station Life Cycle

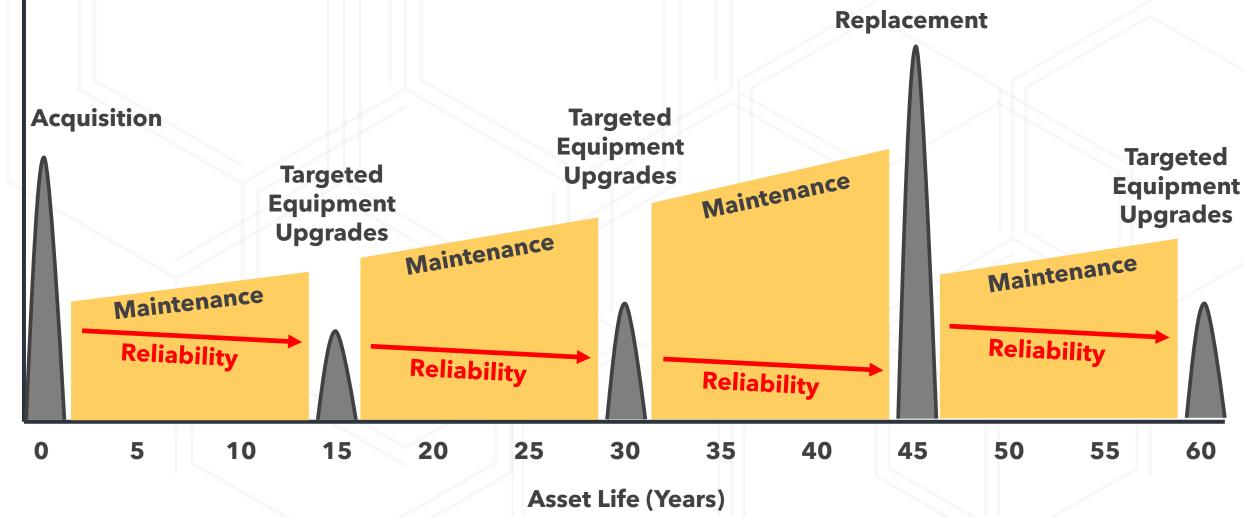


Cost

Wastewater Lift Station Equipment Life



Lift Station Life Cycle (Strategic Asset Management)



Cost

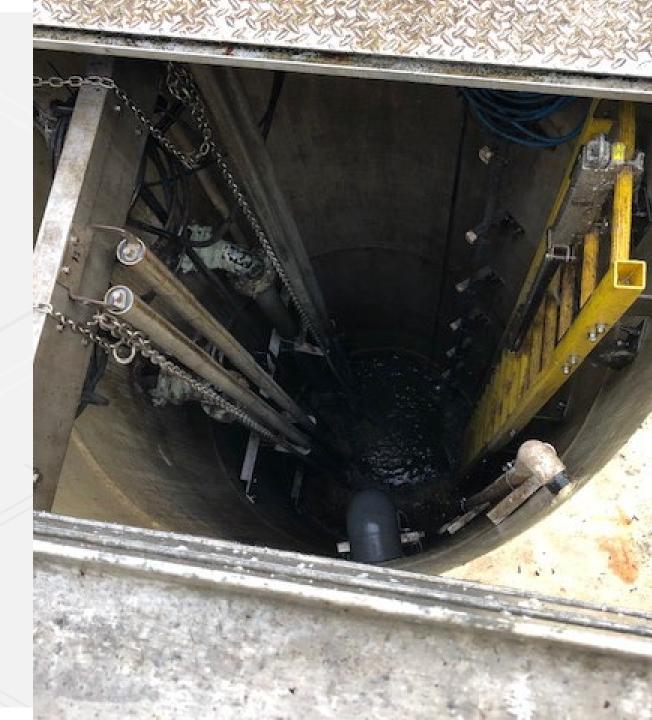
Full Replacement vs. Targeted Equipment Upgrades

Current CIP					Proposed CIP Revision			
Station	Туре	Year	Total Cost	Cost Through end of 2022	Station	Туре	Year	Cost Through end of 2022
LS 5	Rebuild	2025	\$3.6M	\$750,000	LS 5	Targeted	2022	\$901,500
LS 6	Rebuild	2023	\$3.6M	\$3,200,000	LS 6	Targeted	2022	\$1,302,400
LS 8	Rebuild	2026	\$2.0M	\$0	LS 8	Targeted	2022	\$319,200
LS 11	Rebuild	2026	\$2.3M	\$0	LS 11	Targeted	2022	\$1,117,200
LS 15	Abandon	2022	\$2.3M	\$1,130,800	LS 15	Targeted	2022	\$1,388,900
			\$13.8 M	\$5,080,800				\$5,029,200

• Prior council action transferred funds from LS 15 to LS 12.

Proposed Solutions

- Revise CIP (8/17/2021)
- Construct Targeted Equipment Upgrades to LS 5,6,8,11,15 (2022)
- Wastewater Lift Station Strategic Asset Management Plan (2022)
- Revise CIP with next budget

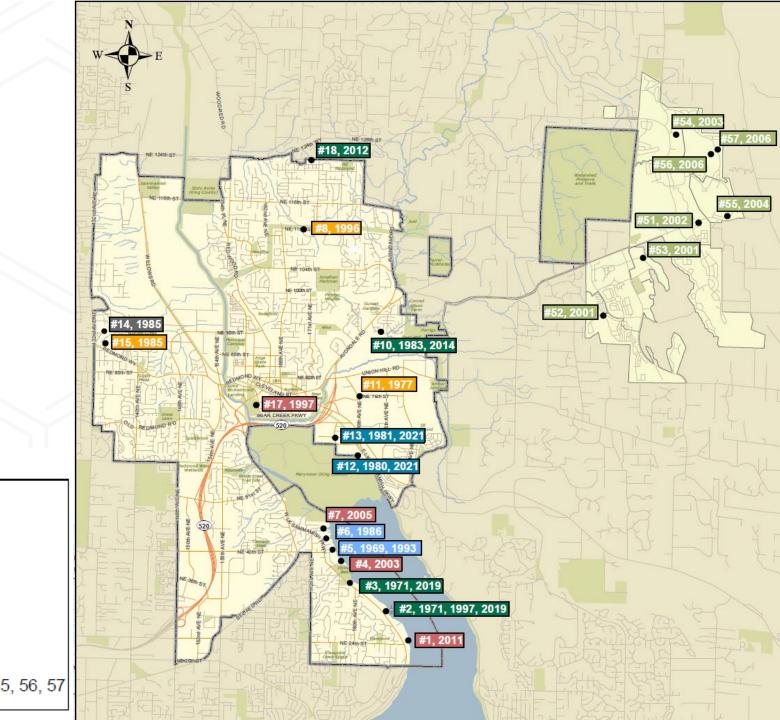


Thank you

Any Questions?



Wastewater Lift Stations by Age



Legend

Status by	Color and Year Built/Rebuilt	Lift Stations		
	In Design	5, 6		
	Under Construction	12, 13		
	Needs Equipment Upgrade	8, 11, 15		
	Older Lift Stations	1, 4, 7, 17		
	Lift Station converted to Gravity	14		
	New Lift Stations	2, 3,10,18		
	Novelty Hill Lift Stations	51, 52, 53, 54, 55		