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ASSET MANAGEMENT

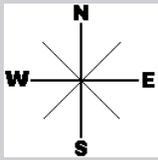
JAY KRAUSS, GENERAL MANAGER

SAMMAMISH PLATEAU WATER



PRESENTATION OUTLINE

- **SAMMAMISH PLATEAU WATER'S APPROACH**
- **FIELD USE AND FINANCIAL ANALYSIS**
- **OUR RESULTS AND SUGGESTIONS**



Seattle

Bellevue

Sammamish Plateau Water

SAMMAMISH PLATEAU WATER WILL PROVIDE SAFE, EFFICIENT, AND RELIABLE WATER AND SEWER SERVICES BY BEING A LEADER IN THE PLANNING AND THE PRACTICE OF FISCAL AND ENVIRONMENTAL STEWARDSHIP

OUR APPROACH

- **ALIGNMENT OF SYSTEMS**
- **ASSET MANAGEMENT PROCESS VS. “PLAN”**
- **INTERNAL DEVELOPMENT VS. CONSULTANTS**
- **CROSS FUNCTIONAL DEVELOPMENT**
- **CREATE AN ASSET MANAGEMENT CULTURE FROM MIDDLE**

ESSENTIAL SYSTEM ALIGNMENT

GIS

CMMS

Budget

Capital Plans

Operating
Plan

FUNCTIONAL CLASSIFICATIONS

WATER

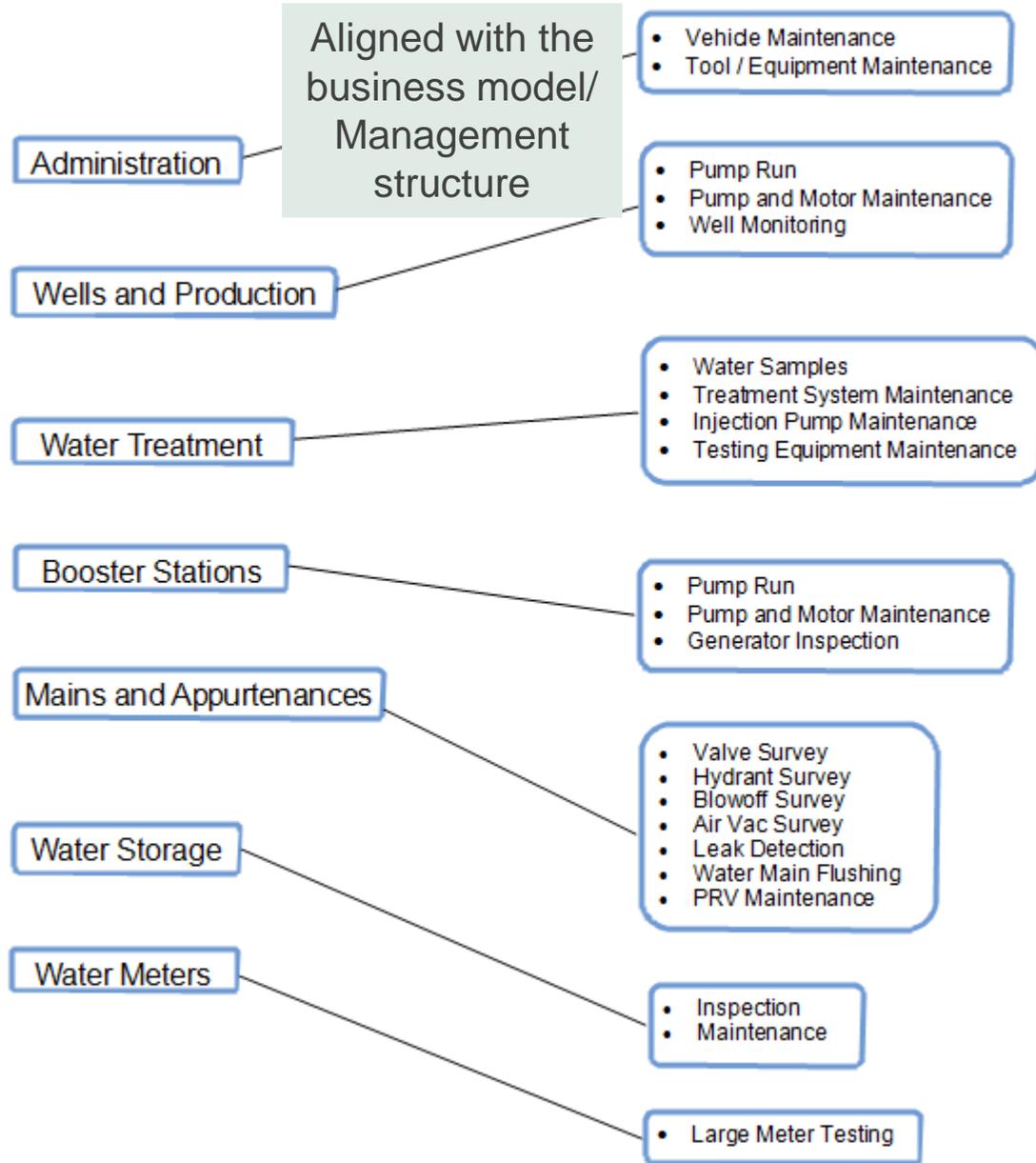
- **ADMINISTRATION**
- **WELLS AND PRODUCTION**
- **WATER TREATMENT**
- **BOOSTER STATIONS**
- **STORAGE**
- **MAINS AND APPURTENANCES**
- **METERS**
- **SCADA**

SEWER

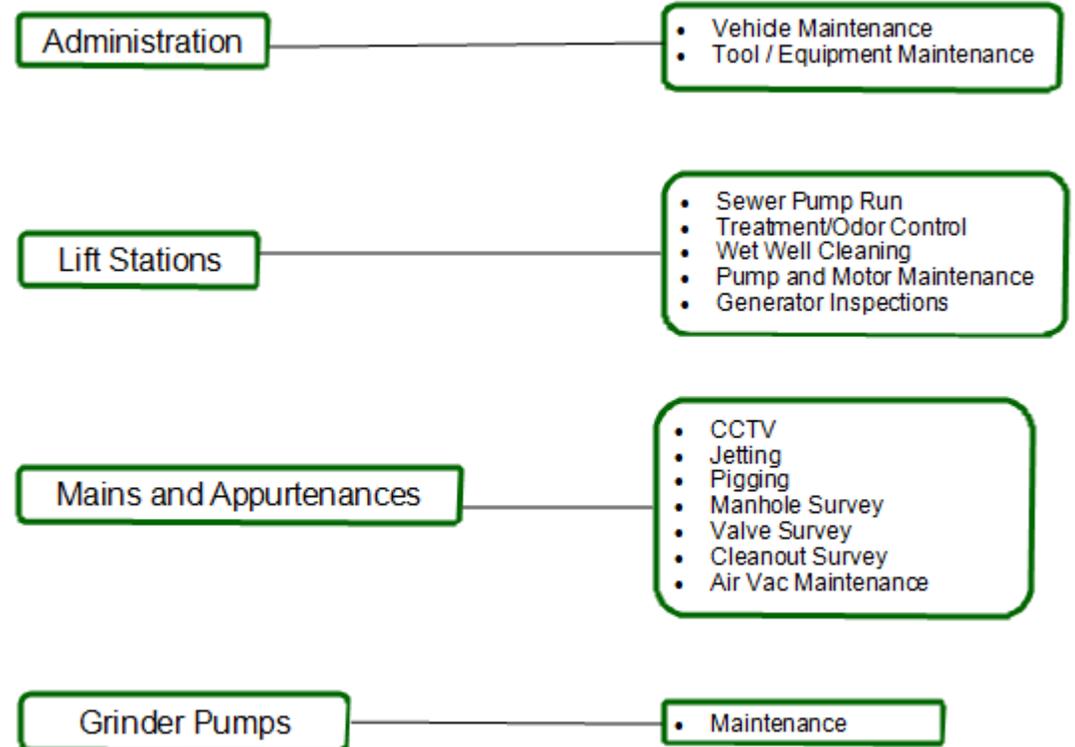
- **ADMINISTRATION**
- **LIFT STATIONS**
- **MAINS AND APPURTENANCES**
- **GRINDER PUMPS**
- **SCADA**

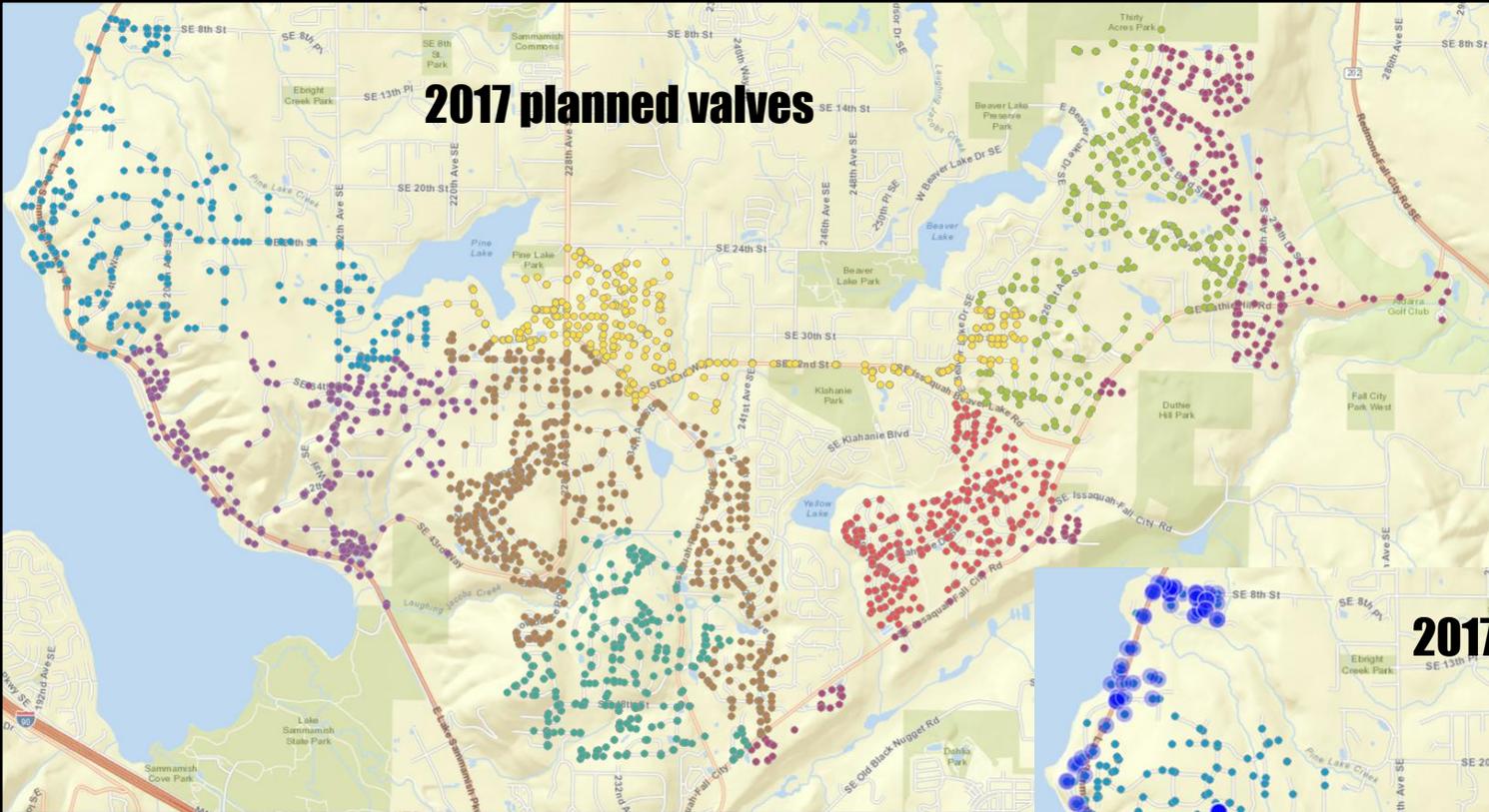
SP WATER OPERATIONS PLAN

Water Preventive Maintenance Program



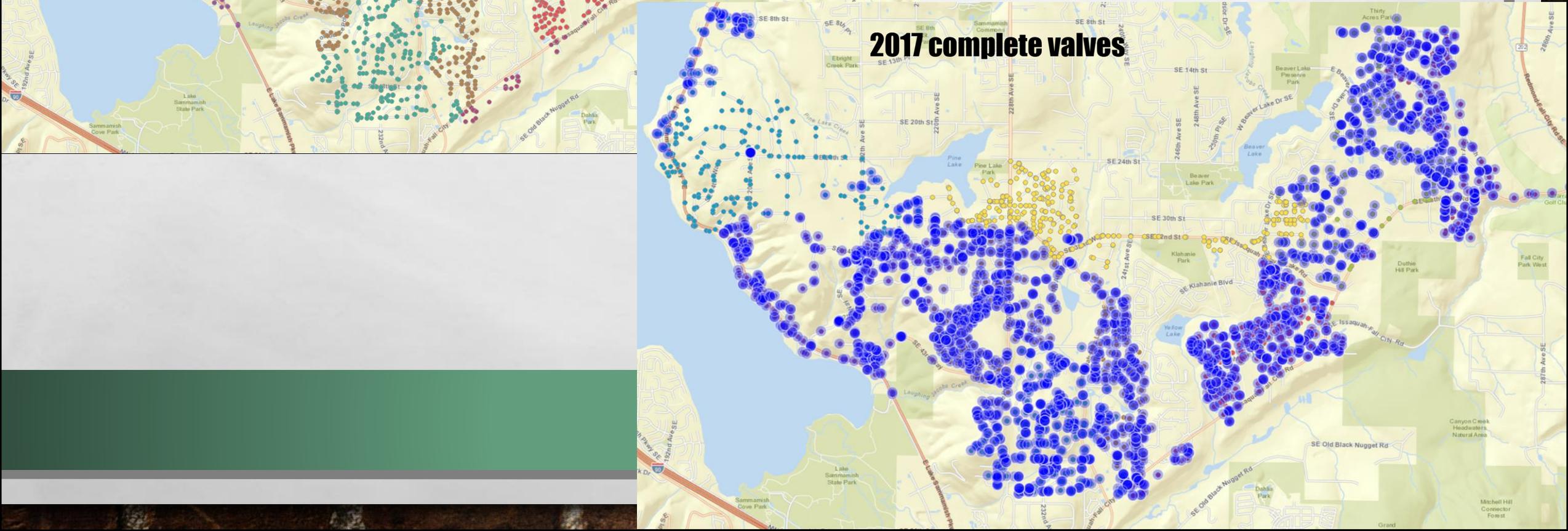
Sewer Preventive Maintenance Program





2017 planned valves

USING CMMS AND GIS FOR WATER VALVE PREVENTATIVE MAINTENANCE



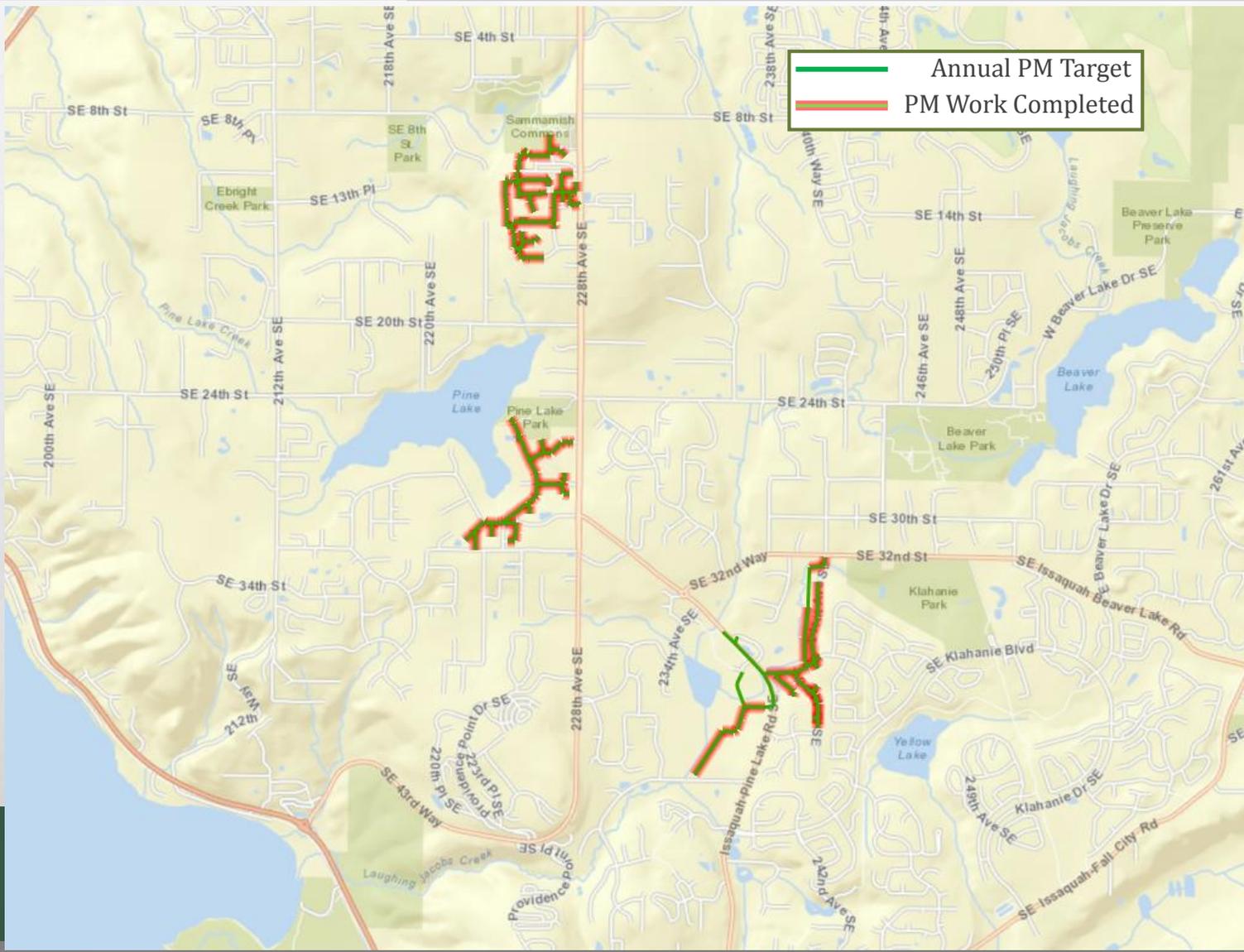
2017 complete valves

2017 Sewer Operations PM Summary

Budgeted PM Hours	Annual PM Target	PM Work Completed	Units Maintained per Hour	Total Planned Maintenance Hours	% PMs Complete	PM FTE Count	YTD Labor Hours
800	34,873	26,968	71.0	380	77%	0.2	412

Sewer Mains and Appurtenances

CCTV



**USING CMMS
AND GIS FOR
SEWER
TELEVISION**

OPERATIONS DASHBOARD

2017 Water Operations PM Summary

	Budgeted PM Hours	Annual PM Target	PM Work Completed	Total Planned Maintenance Hours	% PMs Complete	PM FTE Count	YTD Labor Hours	
Water Admin	Total	575	117	397	113%	0.2	472	
Wells and Production	Total	1,120	1,874	1,066	54%	0.5	1,300	
Water Treatment	Total	2,470	1,514	1,952	65%	0.9	2,779	
Booster Stations	Total	460	862	431	43%	0.2	525	
Storage	Total	20	18	211	78%	0.1	259	
Water Mains and Appurtenances	Total	5,130	419,364	14,854	2,390	4%	1.1	3,229
Meters	Total	3,000	86	95	1,162	110%	0.0	1,529
Total		12,775	423,835	17,478	6,536	4%	3.1	10,092

2017 Sewer Operations PM Summary

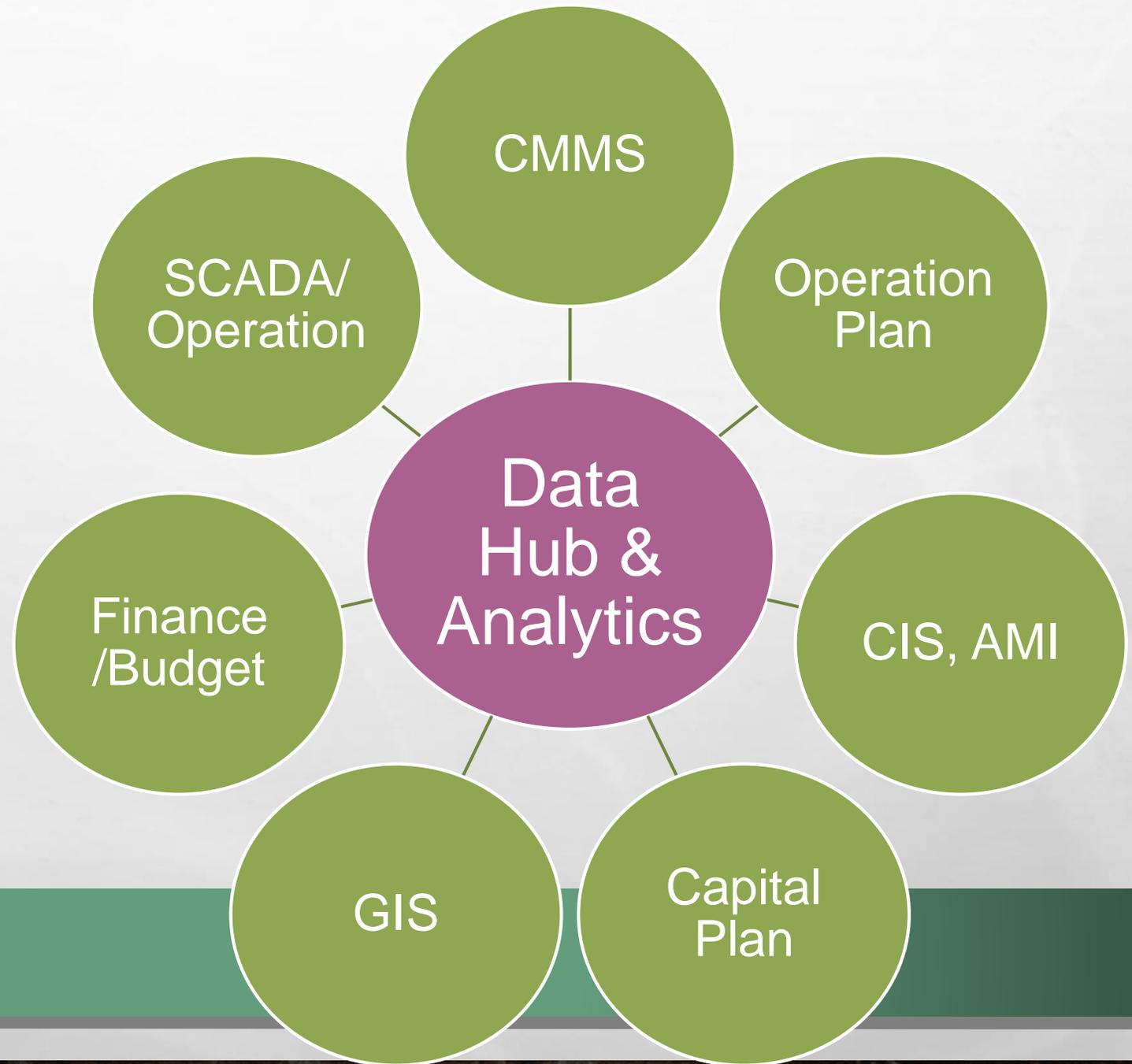
	Budgeted PM Hours	Annual PM Target	PM Work Completed	Total Planned Maintenance Hours	% PMs Complete	PM FTE Count	YTD Labor Hours	
Sewer Admin	Total	850	69	69	442	100%	0.2	487
Lift Stations	Total	2,940	1,137	933	2,145	82%	1.0	2,689
Sewer Mains and Appurtenances	Total	3,545	186,573	127,973	1,655	69%	0.8	2,866
Grinder Pumps	Total	800	242	252	389	104%	0.2	906
Total		8,135	188,021	128,880	4,630	69%	2.2	6,948

2017 Sewer Operations PM Summary

	Budgeted PM Hours	Annual PM Target	PM Work Completed	Total Planned Maintenance Hours	% PMs Complete	PM FTE Count	YTD Labor Hours	
Sewer Mains and Appurtenances	CCTV	800	34,873	26,968	380	77%	0.2	412
	Jetting	1,000	99,131	87,033	650	88%	0.3	825
	Pigging	280	51,080	12,959	60	25%	0.0	84
	Manhole Survey	800	904	824	187	91%	0.1	992
	Valve Survey	-	-	-	1	-	0.0	3
	Cleanout Survey	50	162	-	-	0%	-	3
	I&I Program	300	217	166	101	76%	0.0	269
	FOG	275	168	-	155	0%	0.1	157
	Air Vac Maintenance	40	38	23	122	61%	0.1	122
Total		3,545	186,573	127,973	1,655	69%	0.8	2,866

- REAL TIME DATA FROM CMMS AND GIS
- PM PROGRESS IN RELATION TO OPERATIONS PLAN
- ALLOWS FOR TRACKING LABOR HOURS SPENT IN DIFFERENT WORK ORDER TYPES (PLANNED VS. REACTIVE)
- ESTABLISHES BASELINES FOR FUTURE PLANNING

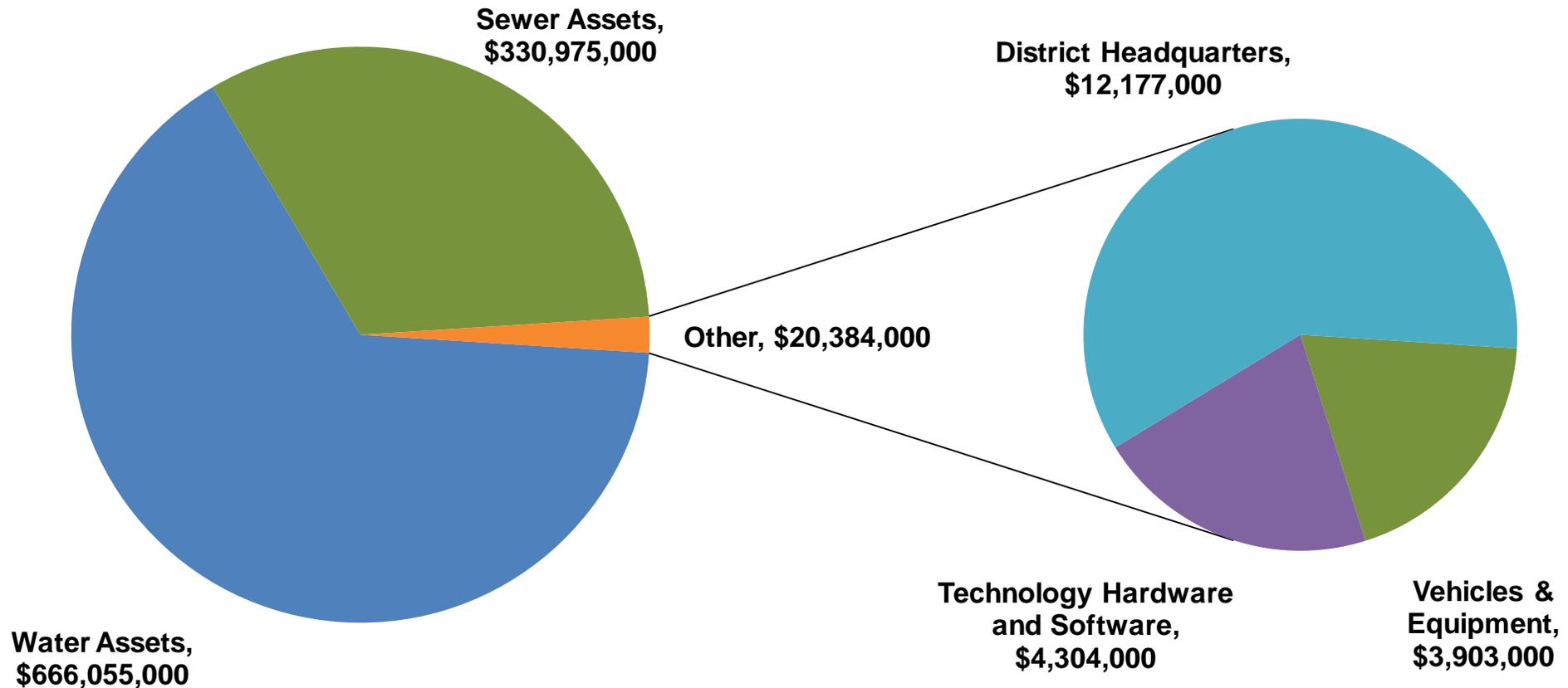
Our Enterprise Platform



STEWARDSHIP AND SUSTAINABILITY

- THE DISTRICT ANNUALLY RECALCULATES THE COST OF REPLACING THE SYSTEM, AS WELL AS THE RESERVE CONTRIBUTION NEEDED FOR TIMELY REPLACEMENT. SYSTEM REPLACEMENT VALUES ARE SUMMARIZED BELOW:

2017 Total Replacement Value of District Assets: \$1,017,414,000



STEWARDSHIP AND SUSTAINABILITY

- ◆ SUSTAINABILITY WITH ASSET MANAGEMENT (INDUSTRY BEST PRACTICE)
- ◆ RESERVES SET ASIDE FOR FUTURE INFRASTRUCTURE REPLACEMENT

CAPITAL REPLACEMENT RESERVE FORMULA

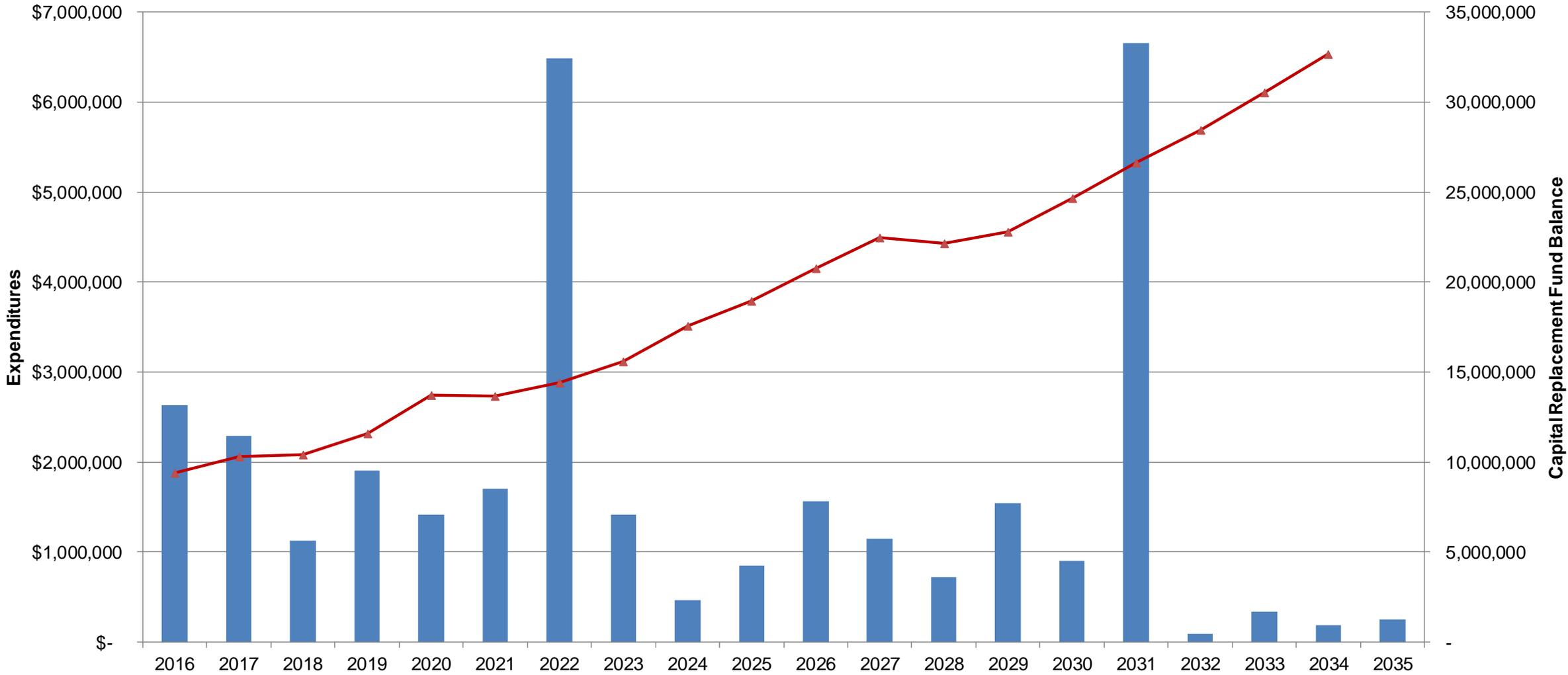
$$\begin{aligned} & \text{ASSET VALUE / USEFUL LIFE} \\ & \times \text{REPLACEMENT VALUE ASSUMPTION} \\ & = \text{ANNUAL REPLACEMENT CONTRIBUTION} \end{aligned}$$

- YOU CAN KEEP TAXES OR RATES LOW, BUT CAN YOU AFFORD THE LONG-TERM COST OF UNFUNDED REPLACEMENT LIABILITIES?

20-YEAR CAPITAL REPLACEMENT CASH FLOW PROJECTION

Total Water Projected Replacement Reserve Expenditures and Cashflow 2016-2035

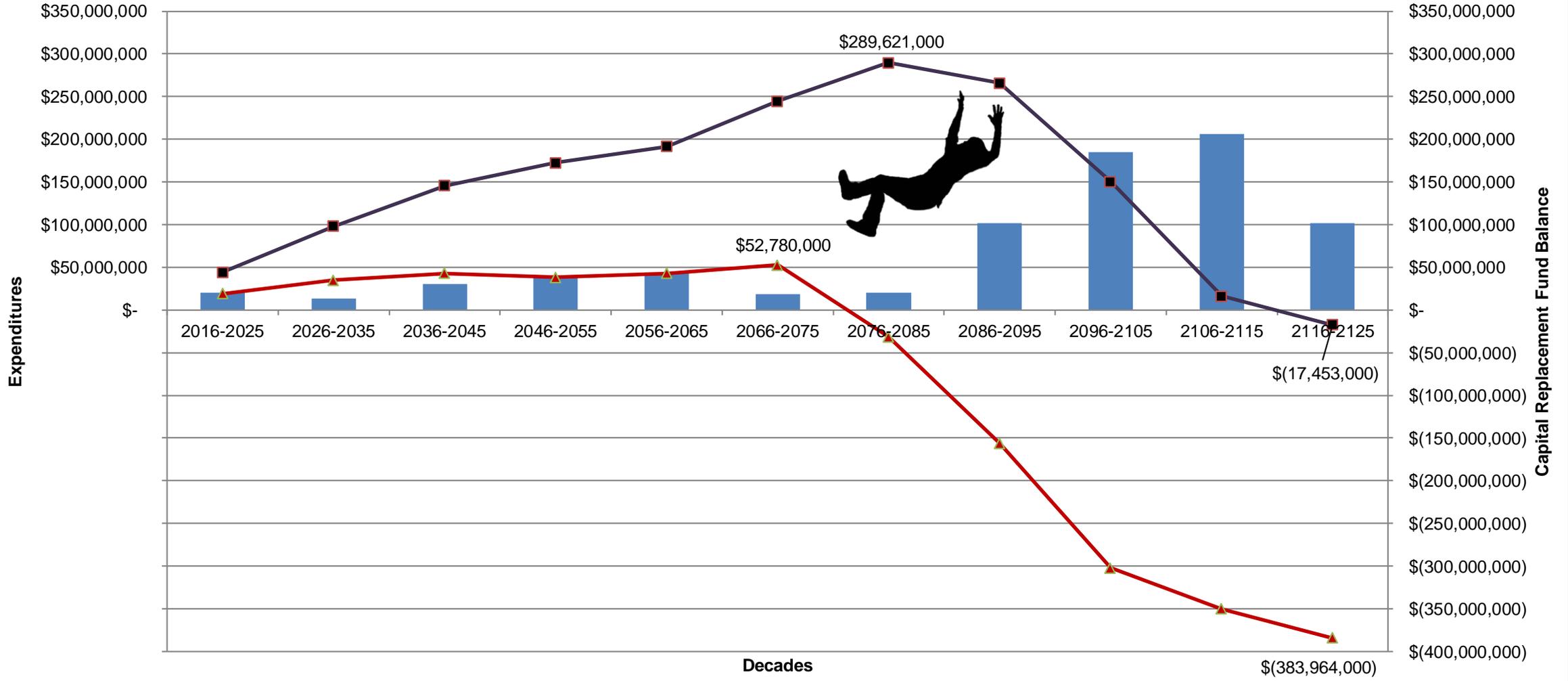
■ Total Replacement Costs by Year
 ▲ Water Capital Replacement Fund Balance Using 125% of Original Costs Target



ASSET MANAGEMENT LONG-TERM PERSPECTIVE

Total Water Projected Replacement Reserve Expenditures and Cashflow at the End of Each Decade

- CP - Future Renewal/Replacement
- Water Capital Replacement Fund Balance Using Asset Management Target
- Water Capital Replacement Fund Balance Using 125% of Original Costs Target



OUR RESULTS

- A “working” asset management plan
- Asset management culture
- Rates aligned with long-term goals
- O&M Optimization
- Business case for capital spending
- Informed elected officials
- Infrastructure strategy
- Performance expectations
- Satisfied customers
- Continual improvement
- Live fiscal model
- We can tell the story

WORDS OF WISDOM

- **MAKE IT A PROCESS NOT A PLAN**
- **INVOLVE INFORMATION TECHNOLOGY ON THE FRONT END – THEY MAKE THINGS WORK**
- **NOT ONE PERSON CAN DO IT – IT TAKES A TEAM**
- **USE ASSET MANAGEMENT TO INFORM ELECTED OFFICIALS**
- **SOONER OR LATER SOMEONE WILL PAY FOR UNFUNDED LIABILITY**
- **NOT CROSS FUNCTIONAL DYSFUNCTIONAL**