



Storm Sewer and Sanitary Sewer Annual Reports



November 5, 2018

Introduction

Storm Sewer System

- 1,100 miles of pipes
- 4,500 miles of curb & gutter
- 26,000 manholes
- 33,000 laterals
- 32,200 inlets
- 1,510 outfalls
- 30 pump stations

Sanitary Sewer System

- 2,030 miles of pipes
- 10 miles of force mains
- 45,000 manholes
- 202,000 laterals
- 18 pump stations



Storm Sewer Key Initiatives

■ Storm Water Quality

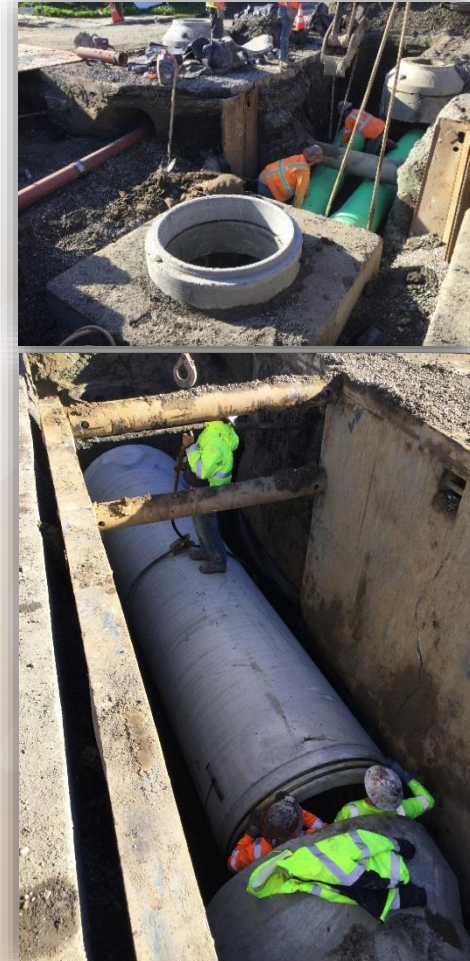
- Trash / Debris
- Toxins / Sediments
- Green Infrastructure

■ Master Planning

- Capacity Assessment

■ System Rehabilitations

- Outfalls
- Pump Stations
 - ✓ Alviso – Construction
 - ✓ Charcot – Future
- Repair and Rehabilitation



*Alviso Storm Sewer
– Capacity Improvement project*

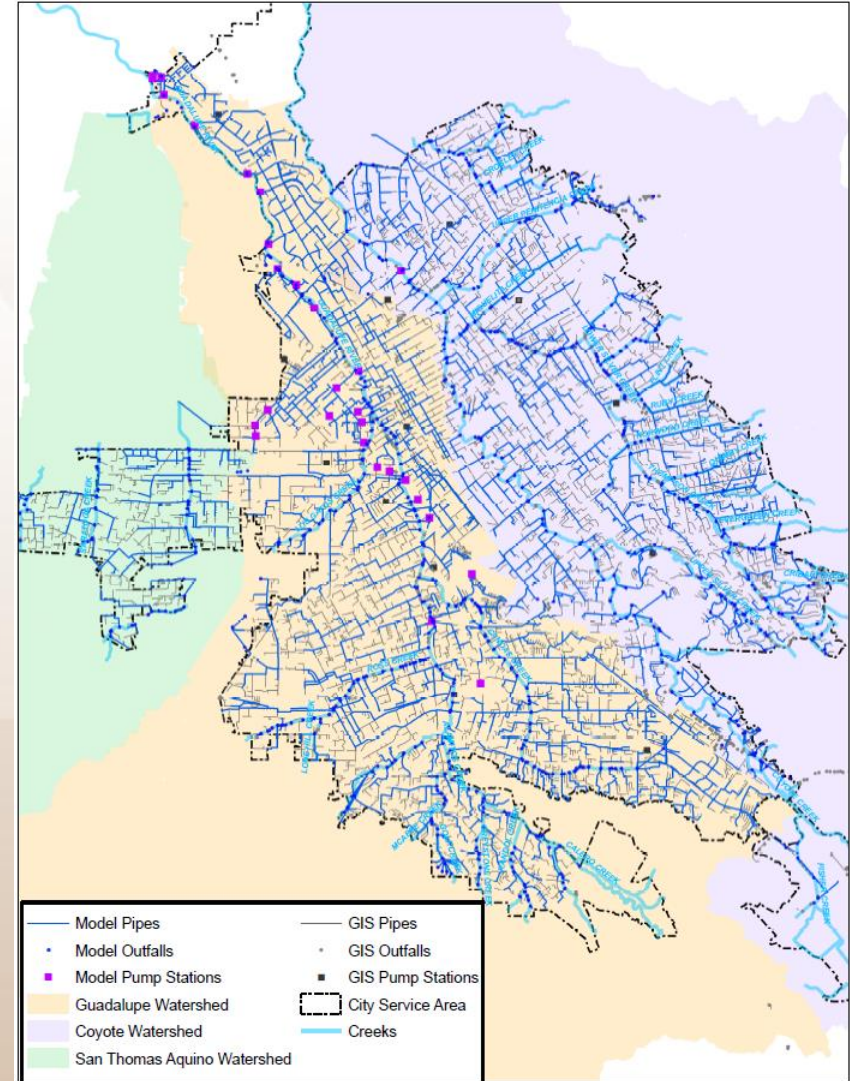
Storm Drain Master Planning

■ Citywide Master Plan

- Completion in 2017

■ Hydrologic and Hydraulic Model

- All Large pipes, 540 miles
- Outfalls and 30 Pump Stations
- Low Impact Developments and Hydromodifications
- 180 miles of river and creeks
- 7,000 sub-watersheds
- Flow Data for 80 locations
- Coordination with SCVWD and Alameda County on Modeling Methodologies



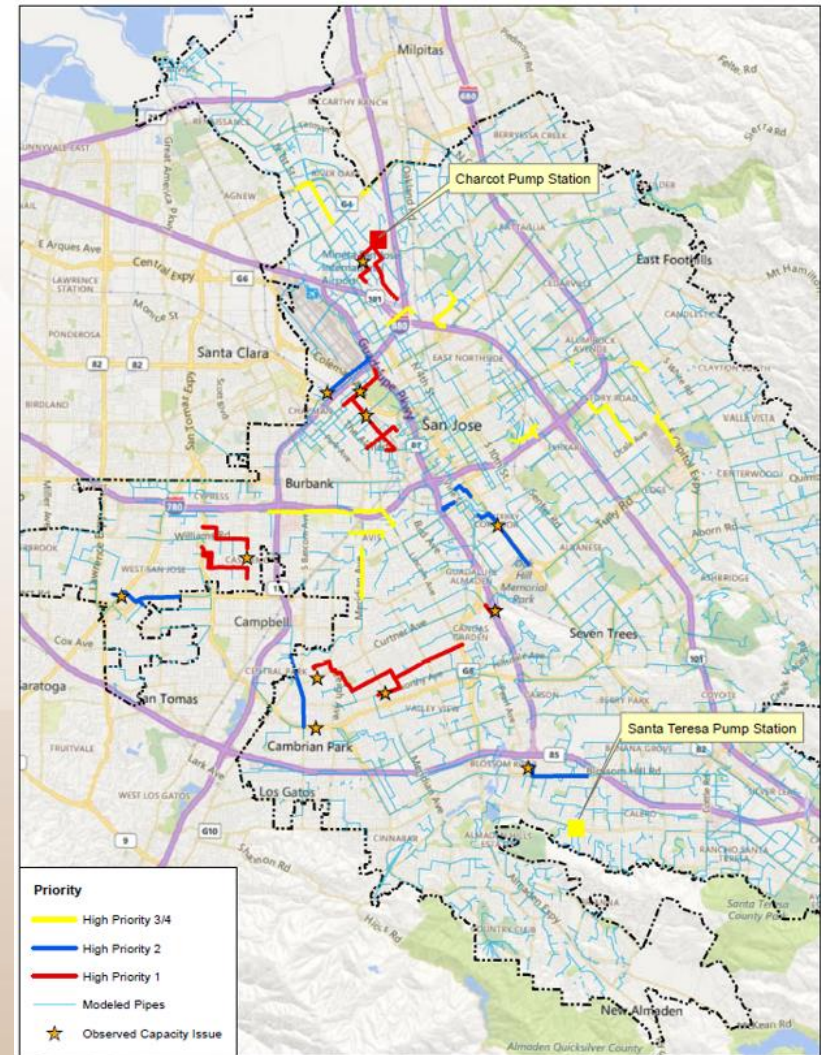
Storm Drain Master Planning

■ High Priority Projects

- Known flooding areas for 3-year rainfall events
- 26 miles of pipes; 22 outfalls;
- 2 Pump Stations
- Estimate for upsizing only - \$232 M

■ Next Steps

- Refine creek and river model
- Identify project alternatives
- Analyze potential regional facilities
- Incorporate green infrastructure for regulatory compliance



Alviso Storm Pump Station

- Existing Station: 30 cfs
- New Station: 110 cfs
- Awarded in October 2017 for \$13.1 million
- June 2019 completion



Large Trash Capture



Large Trash Capture Installation

- Regional Stormwater Permit mandated trash load reductions
- Phases I - V completed
- 26 large trash capture devices installed to date
- Phase VI – Spring 2019
- Cleaned 1-2 times/year

Green Streets Pilot Projects



Park Ave Green Street

- Mandated by current Regional Stormwater Permit
- Current projects:
 - ✓ Park Avenue – completed
 - ✓ Chynoweth – completed
 - ✓ Horace Mann & Washington Green Alleyways – construction

2018-19 Winter Storm Season Preparation

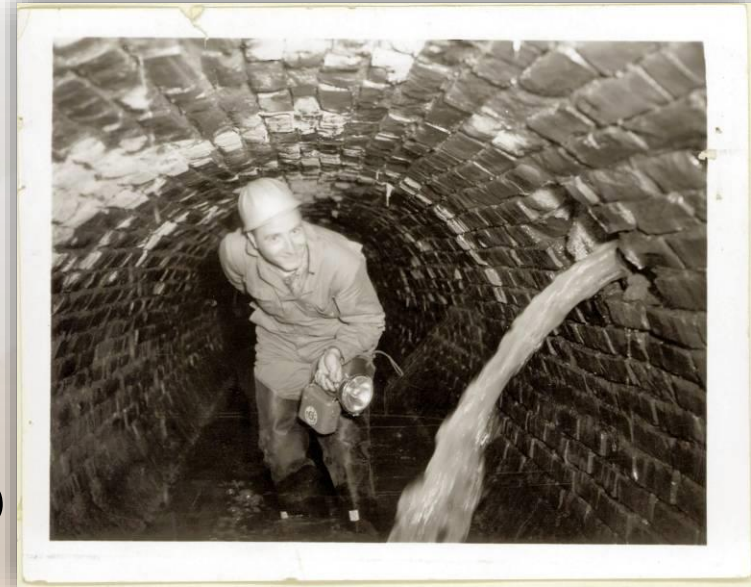
- Coordination with SCVWD
- Pump Station Maintenance
- Cahill PS Rehabilitated
- Charcot Temporary Pumps
- Storm Inlet Cleaning
- Debris Basin Cleaning
- Portable and Temporary Pumping
- Storm Monitoring and Incident Management



Temporary Pumping at Charcot near Coyote Creek

Sanitary Sewer Key Initiatives

- Capacity Master Planning
 - Decrease SSO's
 - Support General Plan 2040
 - Watershed Protection / Regulatory Compliance
- Condition Assessment
 - Decrease SSO's
 - Risk Based Approach (55% complete)
- System Rehabilitations
 - Decrease SSO's
 - Neighborhood Sewer Focus
 - Capacity Improvements



60-inch Brick Sewer

Sanitary Sewer Overflow Data

Sanitary Sewer Overflow Totals													
	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
FY 11/12	17	6	12	10	25	17	15	19	19	22	20	10	192
FY 12/13	12	12	14	8	22	12	19	14	18	10	8	6	155
FY 13/14	7	6	7	9	9	13	7	7	9	10	9	8	101
FY 14/15	8	4	4	9	11	15	18	8	7	4	7	2	97
FY 15/16	5	4	4	2	8	5	6	11	4	1	5	0	55
FY 16/17	4	6	5	4	5	7	4	8	7	3	3	2	58
FY 17/18	1	1	1	3	5	2	0	0	0	2	1	6	22

Goals

- ✓ Focus on GP 2040 capacity demands to support economic development
- ✓ Increased investment into the systems to address infrastructure backlogs
- ✓ Prioritized Capital Improvement Programs to:
 - Lower operational costs
 - Ensure capacity / Prevent spills
 - Improve water quality



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