

Storm Sewer and Sanitary Sewer Annual Reports



Presented by:

- *Michael O'Connell*
- *Mathew Nguyen*

November 4, 2019

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
- 31 pump stations



Sanitary Sewer System

- 2,030 miles of pipes
- 10 miles of force mains
- 39,380 manholes
- 202,000 laterals
- 18 pump stations



Storm Sewer Key Initiatives

■ Storm Water Quality

- Trash / Debris
- Toxins / Sediments
- Green Stormwater Infrastructure

■ Master Planning

- Capacity Assessment
- GSI Integration Opportunity

■ System Rehabilitations

- Outfalls
- Pump Stations
 - ✓ Alviso – Completed
 - ✓ Charcot – Preliminary Phase
- Basic Repair and Rehabilitation



Alviso Storm Pump Station Project

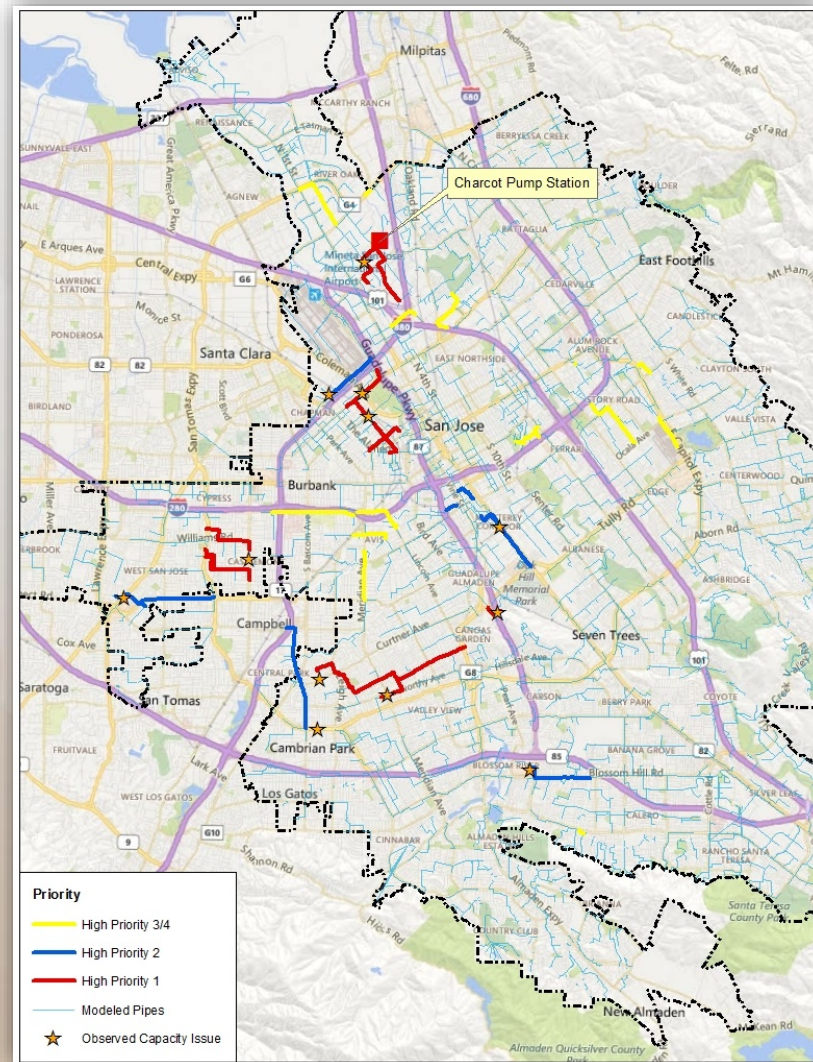
Storm Drain Master Planning

■ Citywide Master Plan – Phase I

- Completed in 2017
- All large pipes, outfalls, pump stations, LID, river and creek
- Coordination with Valley Water and Alameda County on modeling methodologies

■ High Priority Projects

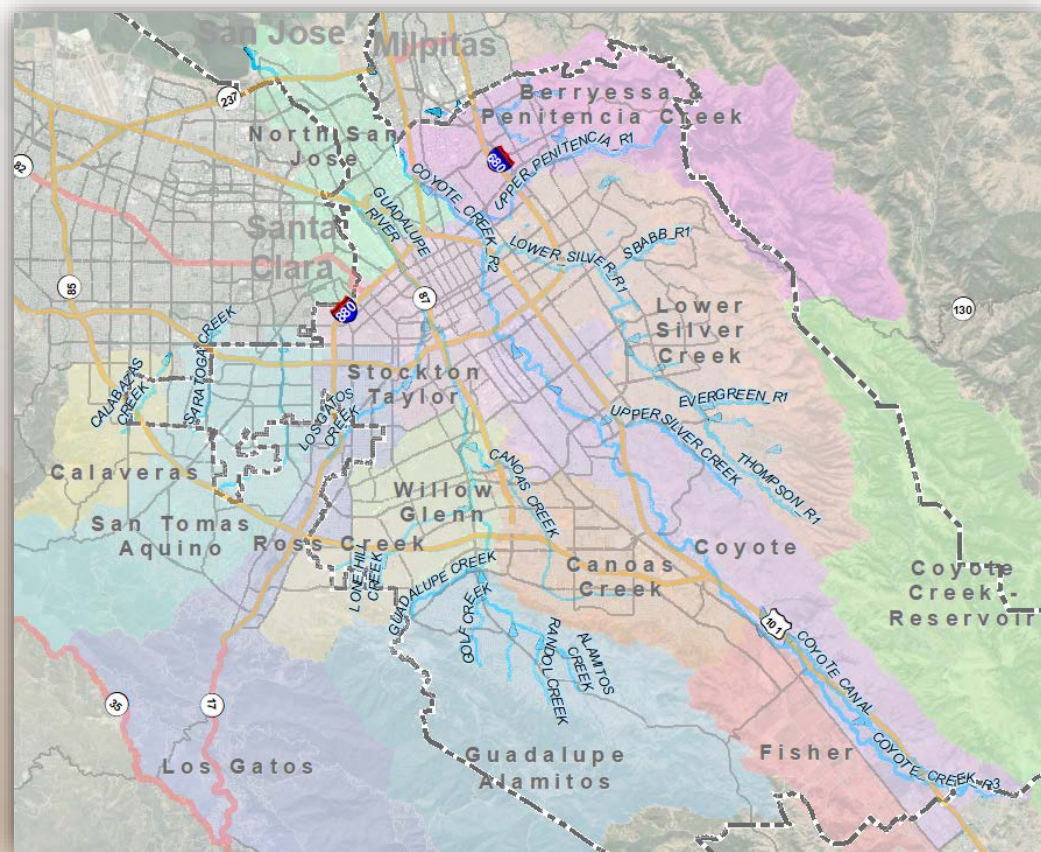
- Known flooding areas for 3-year rainfall events
- 26 miles of pipes; 22 outfalls; 2 pump stations
- Estimated 22 projects - \$215 M



Storm Drain Master Planning

■ Next Steps – Phase II Master Plan

- Refine the model to include smaller pipes
- Incorporate creek and river information
- Prioritize base on Phase I Master Plan and historical flooding information
 - North San Jose – Charcot Area
 - Stockton / Taylor Area



Alviso Storm Pump Station

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



Alviso Storm Pump Station

Large Trash Capture



Large Trash Capture Installation

- Regional Stormwater Permit mandated trash load reduction
- Phases I - VI completed
- 32 large trash capture devices installed to date
- Cleaned 1-2 times/year

Green Streets Pilot Projects

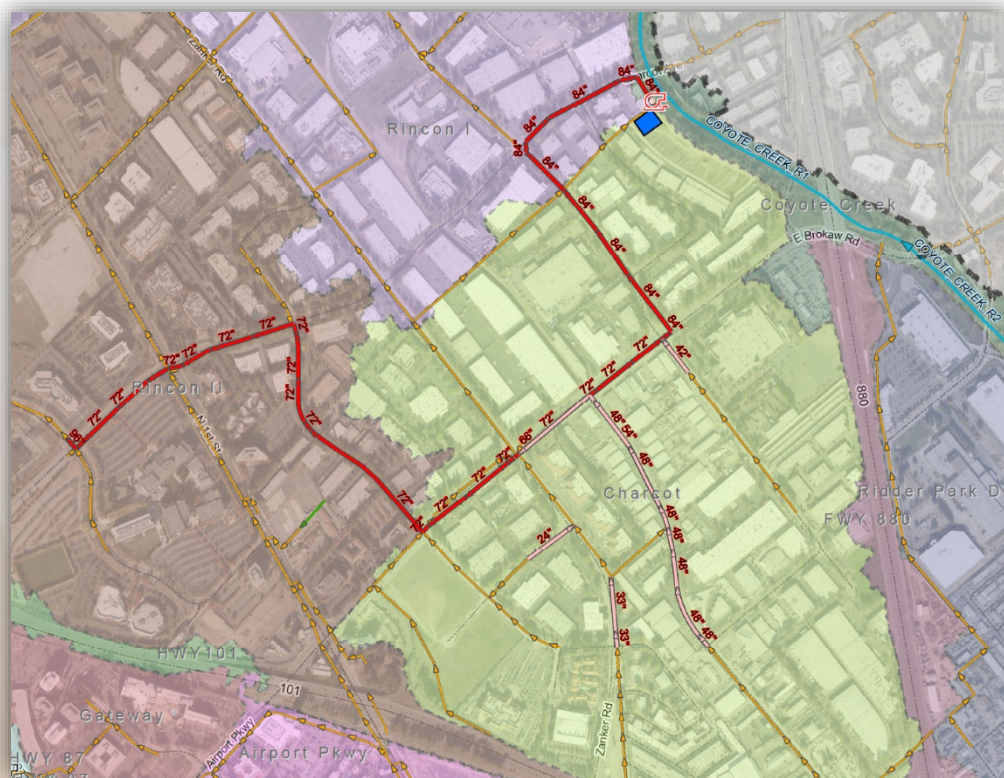


*Horace Mann & Washington
Green Alleyways*

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

Charcot Area System Improvement

- Measure T funding of \$35M
- Low ground, high creek water level and insufficient system capacity
- Preliminary Phase
- Alternatives may incorporate GSI into system capacity improvement



2018-19 Winter Storm Season Preparation

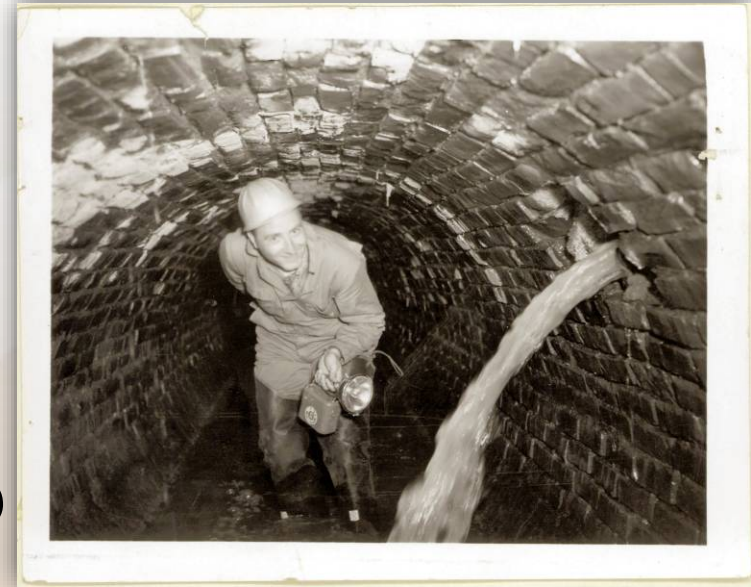
- Coordination with Valley Water
- Pump Station Maintenance
- Cahill PS Rehabilitated
- Charcot Temporary Pumps
- Storm Inlet Cleaning
- Debris Basin Cleaning
- Portable and Temporary Pumping
- Storm Monitoring and Incident Management



Temporary Pumping at Charcot near Coyote Creek

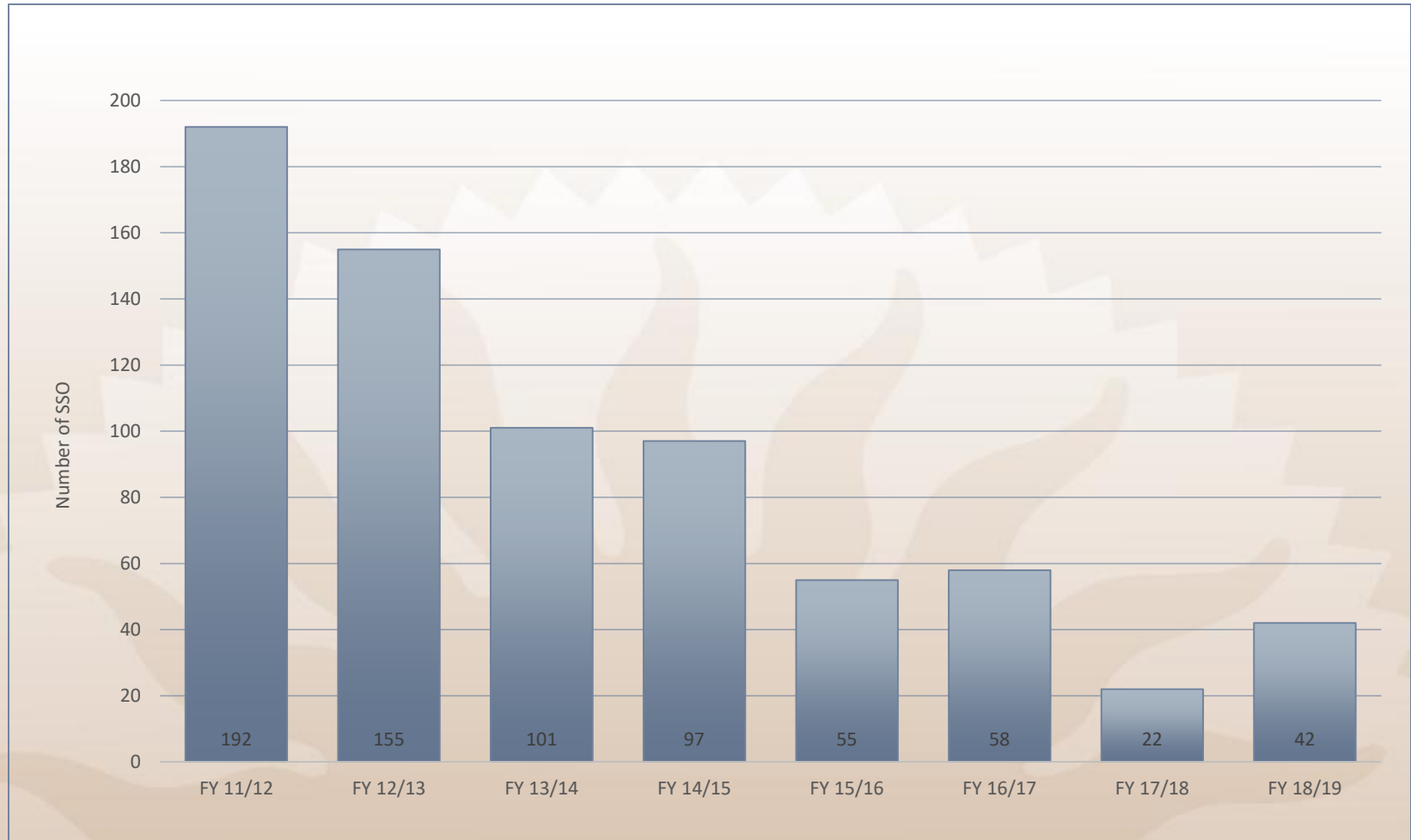
Sanitary Sewer Key Initiatives

- Capacity Master Planning
 - Decrease SSO's
 - Support General Plan 2040
 - Watershed Protection / Regulatory Compliance
- Condition Assessment
 - Decrease SSO's
 - Risk Based Approach (78% complete)
- System Improvement & Rehabilitations
 - Decrease SSO's
 - Neighborhood Sewer Focus
 - Capacity Improvements



60-inch Brick Sewer

Sanitary Sewer Overflow Data



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 system reliability

Recommendation

Accept the Storm Sewer and Sanitary Sewer Annual Reports highlighting investments, activities and capital improvements to the City's storm sewer and sanitary sewer collection systems for Fiscal Year 2018-2019

Michael O'Connell

Mathew Nguyen

November 4, 2019