Citizen Rate Review Committee

Stormwater

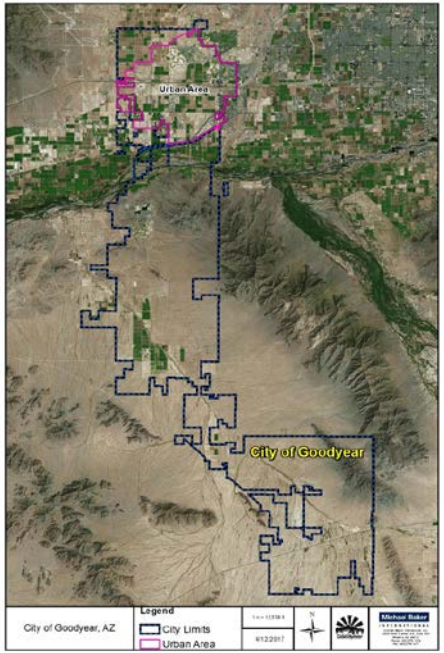
CITY OF Goodyear

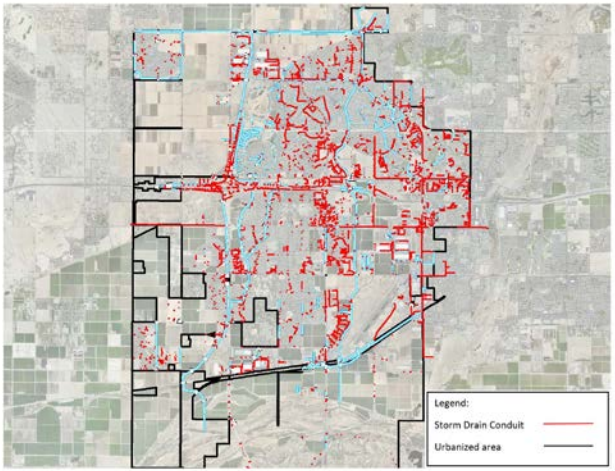
BLACK & VEATCH

Stormwater Program

SAFETY • RELIABILITY • IMPROVEMENT

- Jurisdiction
  - Urban area
- Public system
- Permit compliance
- Maintenance and repair





Stormwater Program

SAFETY • RELIABILITY • IMPROVEMENT

- Roles and Responsibilities
  - Public Works
  - Engineering
  - Parks and Recreation
- Current funding mechanism
- Future funding opportunity

Stormwater Program

SAFETY • RELIABILITY • IMPROVEMENT

- Black and Veatch
  - Cost of service study
- Willdan
  - Fee development
- Mark Fountain, PE, CFM, ENV SP
  - Water Resources Regional Planning Leader
- Leah Gaffney, PE
  - Senior Planning Engineer

5-Year Stormwater Management Program Plan Cost of Service

BV 404891 / GY 22001173

Future Program Development Approach

1. **Current Program Definition**

- Document ALL stormwater activities
- Identify responsible departments & resource needs

2. **Program Goals and Gap Analysis**

- Define future program goals
- Identify future program needs
- Recommend improvements

3. **5-year Stormwater Program Plan**

- Document future activities
- Assign roles & responsibilities
- Develop an implementation schedule
- Develop a 5-yr O&M and 5-yr CIP cost projections

Current Stormwater Program

PERSONNEL RESOURCES

- **Current Responsible Parties (4)**
  - Deputy Public Works Directory
  - Environmental Program Manager
  - Stormwater Supervisor
  - Stormwater Inspector

- **Supporting Departments (12)**
  - City Manager Offices – Neighborhood Services
  - Communications
  - Development Services
    - Building Safety
    - Code Compliance
  - Engineering
    - Construction
    - Plan Review
    - Streets
  - Human Resources - Training
  - Information Technology - GIS
  - Parks & Recreation
    - Ball Parks
    - Parks
    - Right-of- Way

Current Stormwater Program

SYSTEM MAINTENANCE

Activity	Responsible Department
Routine Asset Inspections	- Stormwater Management (SW)
Reactive Asset Maintenance	- SW, Engineering, Parks & Rec.
Asset Emergency Repairs	- SW, Engineering, Parks & Rec.

- Most asset maintenance and repairs contracted out, except improved basins in Parks
- Stormwater asset maintenance/repairs not planned, assigned or budgeted
- Stormwater Management has limited budget ($75,000 in 2020)
- Often falls to Engineering of Parks & Rec to “find” budget for major repairs
    - i.e. ongoing collapsed storm sewer in Bullard Wash

Current Stormwater Program

WATER QUALITY – MS4 PERMIT COMPLIANCE

Activity	Responsible Department
Public Education & Outreach	- SW, Communications, Neighborhood Services
Public Involvement	- SW, Communications, Volunteer Services
IDDE Program	- SW, Code Compliance, Engineering, Building Safety
Construction site runoff control	- Engineering Plan Review & Inspections
Post-construction Stormwater Management in New & Redevelopment	- SW, IT-GIS, Engineering
Pollution Prevention & Good Housekeeping	- SW, City facilities, Streets
Internal Training	- SW, Human Resources
Tracking & Annual Reporting	- SW

Stormwater Management Future Program Goals

SAFETY • RELIABILITY • IMPROVEMENT

To protect public health & safety and promote clean waterways in the City of Goodyear through:

- Maintaining the drainage system to adequately convey storm runoff and minimize localized flooding and flood damage,
- Establishing a proactive asset management program to investigate drainage system operations and identify future improvement needs, and
- Implementing effective stormwater pollution prevention programs in compliance with the MS4 permit.

Gap Analysis Findings

Program Strengths

- ✓ Commitment to define the Stormwater Program
- ✓ MS4 permit compliance
- ✓ Focus on coordination and training of supporting departments
- ✓ Initiation of routine asset inspections
- ✓ Recent updates to the IDDE and Good Housekeeping programs

Priority Areas for Improvement

- ❑ Clear designation of roles and responsibilities
- ❑ Routine asset inspections & maintenance
- ❑ System planning initiatives
- ❑ Construction site inspection program
- ❑ Quantity of dedicated staff
- ❑ Asset inventory accuracy and completeness

Recommendations for Future Stormwater Program

GENERAL

- Create dedicated System Maintenance and Water Quality Groups
- Increase number of dedicated personnel
- Clarify and document roles and responsibilities within Stormwater Management and for supporting departments
- Implement a Stormwater Utility for sustainable funding

Recommendations for Future Stormwater Program

SYSTEM MAINTENANCE

- Establish Stormwater Superintendent position to lead the System Maintenance Group
- Increase as-needed maintenance contract budget
- Establish a routine maintenance program for Bullard Wash and unimproved roadside basins
- Expand proactive and post storm-event asset inspections

Recommendations for Future Stormwater Program

WATER QUALITY

- Establish a Compliance Inspector position to support the implementation of the new IDDE Manual and Good Housekeeping initiatives
- Designate a dedicated SWPPP Inspector
- Increase focus on private asset inspections and enforcement of Maintenance Agreements
- Establish an Outreach/Training Coordinator position to support expanded public and internal educational programs

Recommendations for Future Stormwater Program

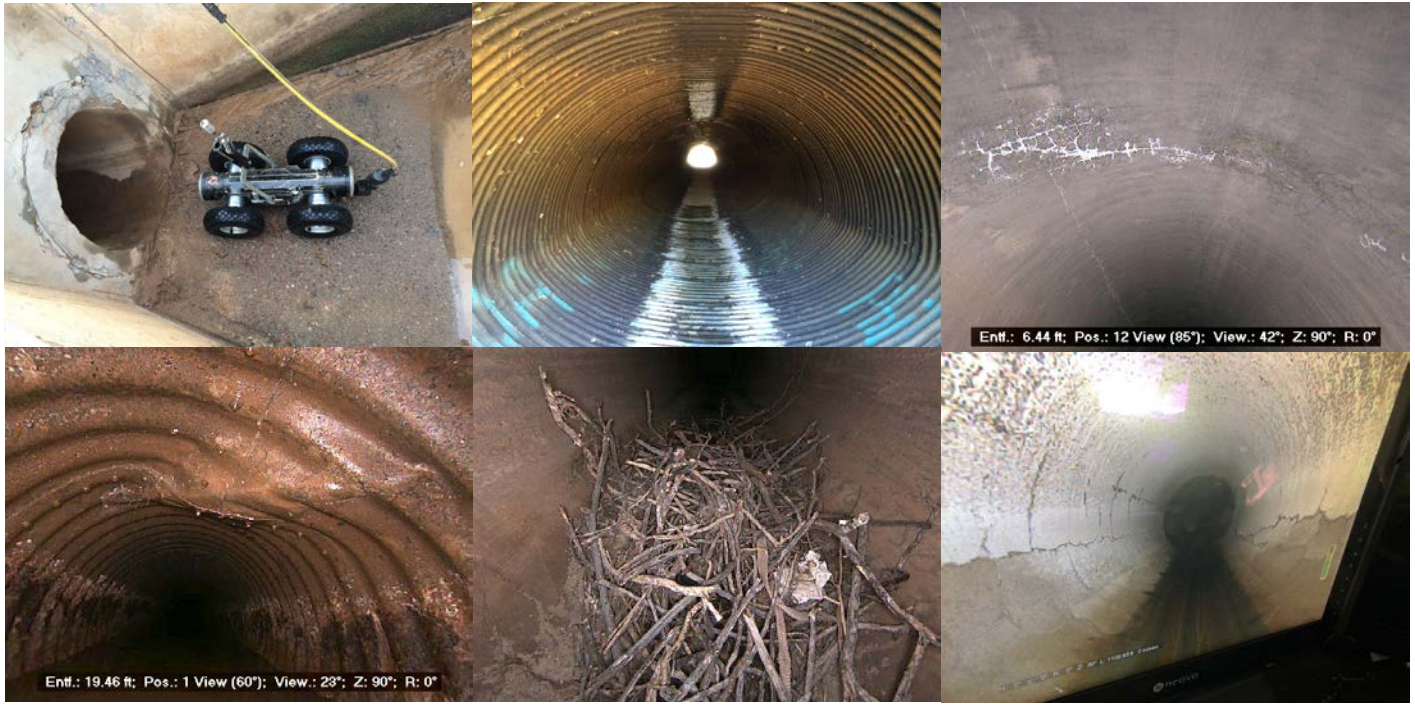
SYSTEM PLANNING

- Implement a Condition Assessment Program
  - Service Prioritization by Level of Protection
  - Leverage Best Management Practices from BV Asset Management
- Develop a City-wide Area Drainage Master Study
  - Potential Partnership with FCDMC

Source: EPA Guidance on Asset Management Best Practices

Condition Assessment Program

INTRODUCTION



Condition Assessment Roadmap

RECOMMENDATIONS

Current Action Items: Ensure Data Accuracy & Integrity

- Presented in tiers to reflect a sequential process

Condition Assessment Program

- Prioritization approach
  - Zone 1 – Zone 6

Figure 3-2 Goodyear Zone 1 Map

Zone 1 is Grid Sections 1-44 and contains 930 assets. It covers approximately 43.8 mi² of area within the city's boundaries.

Condition Assessment Roadmap

CURRENT ACTION ITEMS: ENSURE DATA ACCURACY & INTEGRITY

TIER 1:

- Verify existing data
- Resolve data gaps
- Establish data management procedures
- Self-perform quality assurance
- Contract Services

Table 2-3 Stormwater Structures Sub-Type and Owner

Subtype	Total # of Structures	Goodyear Owned	County Owned	State Owned	Federal Owned	Private Owned	Avondale Owned	Unknown Owner
BLANK	2	0	0	0	0	1	0	1
Unknown	154	34	0	11	5	104	0	0
Catch Basin	4,737	2,007	5	472	1	2,163	59	30
Headwall	2,732	504	15	96	5	2,073	4	35
Lift Station	3	0	0	1	0	2	0	0
Scupper	746	578	21	2	0	142	3	0
Spillway	679	91	0	22	0	566	0	0
Manhole	2,099	906	0	158	0	995	38	2
Discharge Point	2,048	378	1	155	0	1,472	30	12
Pipe Start Point	334	40	2	16	0	273	0	3
Tie Point	384	48	26	37	0	271	1	1

Condition Assessment Road Map

CURRENT ACTION ITEMS: ENSURE DATA ACCURACY & INTEGRITY

TIER 2:

- Create separate layers for Channel and Conduit/Pipeline assets
- Create separate layers for regulated outfalls and other discharge points
- Record active maintenance & storage volume for all basin assets

Table 2-6 Stormwater Channels Material Type and Owner

Material Type	Total # of Assets	Total Length (mi)	Goodyear Length (mi)	Avondale Length (mi)	County Length (mi)	State Length (mi)	Federal Length (mi)	Private Length (mi)	Unknown Length (mi)
RGRCP[1]	67	5.30	2.05	0.00	0.00	0.93	0.00	2.12	0.20
Native	391	50.46	11.05	0.43	2.44	2.04	0.00	30.37	4.14
Rip Rap	317	3.32	0.45	0.00	0.12	0.11	0.00	2.64	0.00
Grouted Rip Rap	64	1.05	0.00	0.00	0.00	0.00	0.00	1.04	0.00
Grass	6	1.33	0.00	0.00	0.00	0.00	0.00	1.33	0.00
HDPE[1]	2	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Concrete	453	17.18	1.67	0.00	0.00	8.50	0.00	7.01	0.00

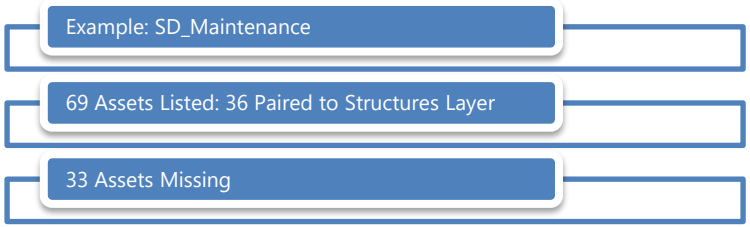
1. Channels with the Material Type identified as RGRCP or HDPE should be field verified to ensure asset sub-type and material data are logged appropriately. It is assumed that channels without a native designation are engineered and improved channels.

Condition Assessment Road Map

CURRENT ACTION ITEMS: ENSURE DATA ACCURACY & INTEGRITY

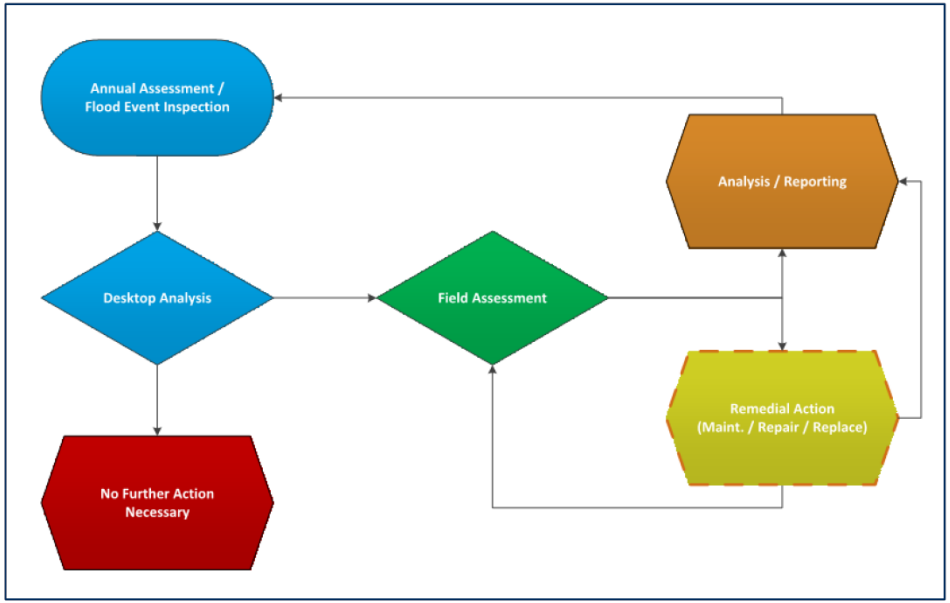
TIER 3:

- Track inspection results & maintenance activities in GIS
- Coordinate updates of GIS asset data with updates to Lucity
- Inform Capital Improvement Plan for recommendations of system rehabilitation or repair



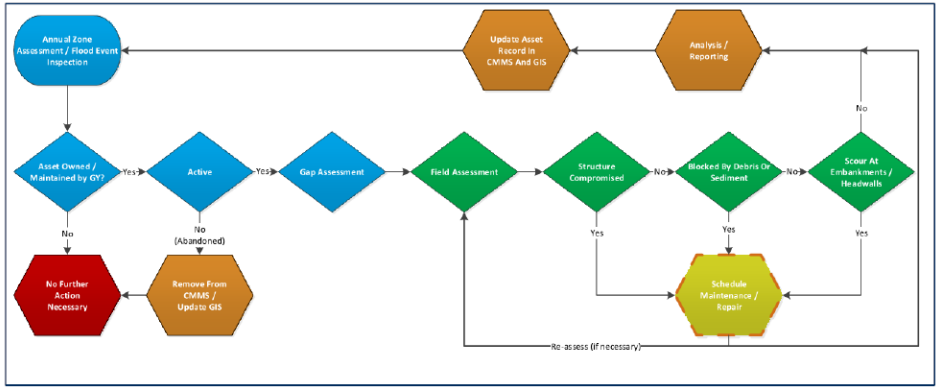
Condition Assessment Cycle

Annual Condition Assessment Cycle



Detailed Asset Example

Structures Assessment Flow Chart



Condition Assessment Program

NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES (NASSCO)

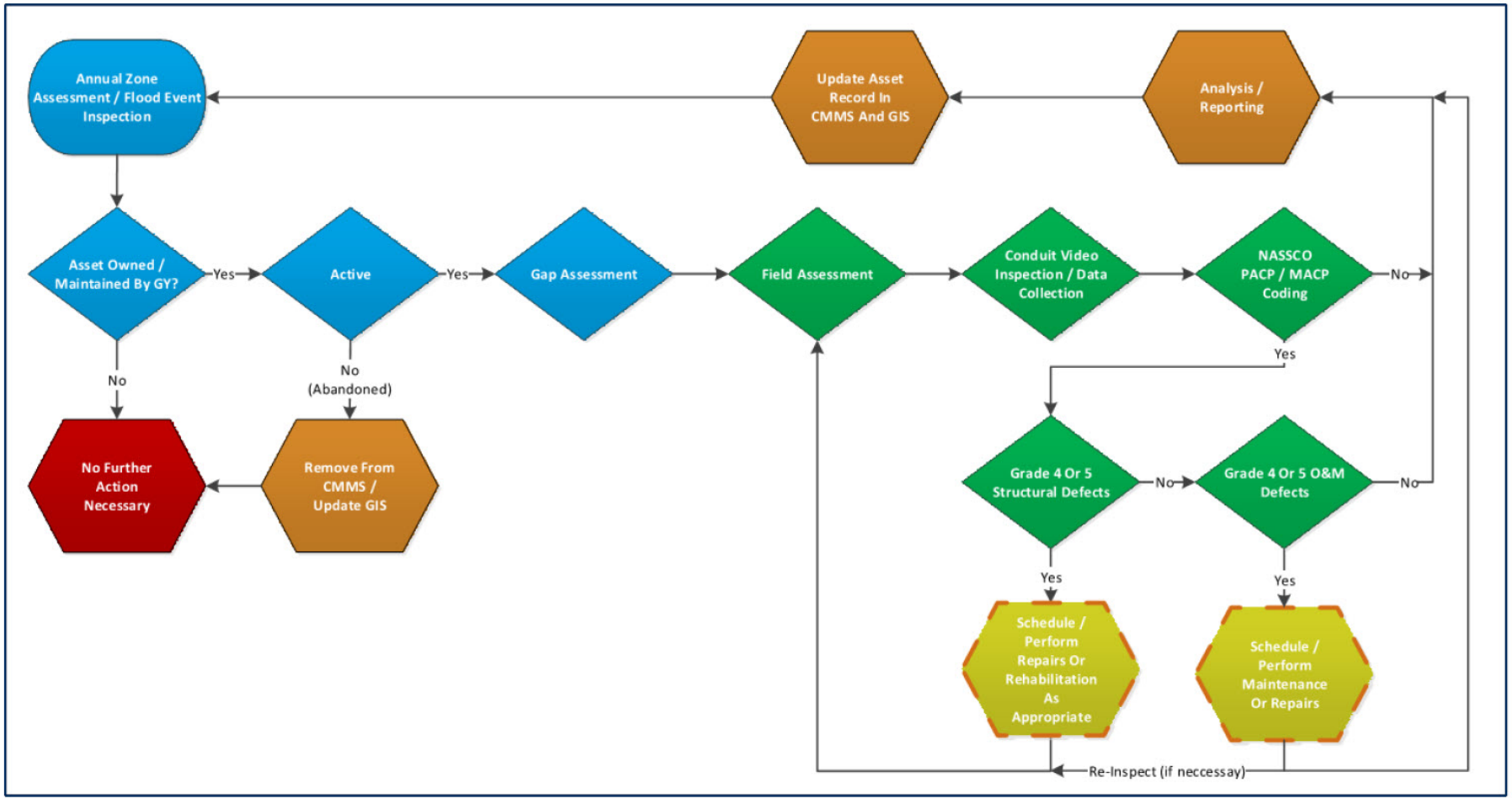
NASSCO
NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES

Components:

- Pipeline Assessment Certification Program (PACP)
- Manhole Assessment Certification Program (MACP)
- Lateral Assessment Certification Program (LACP)

Conduit Assessment Flow Chart

Detailed Asset Example



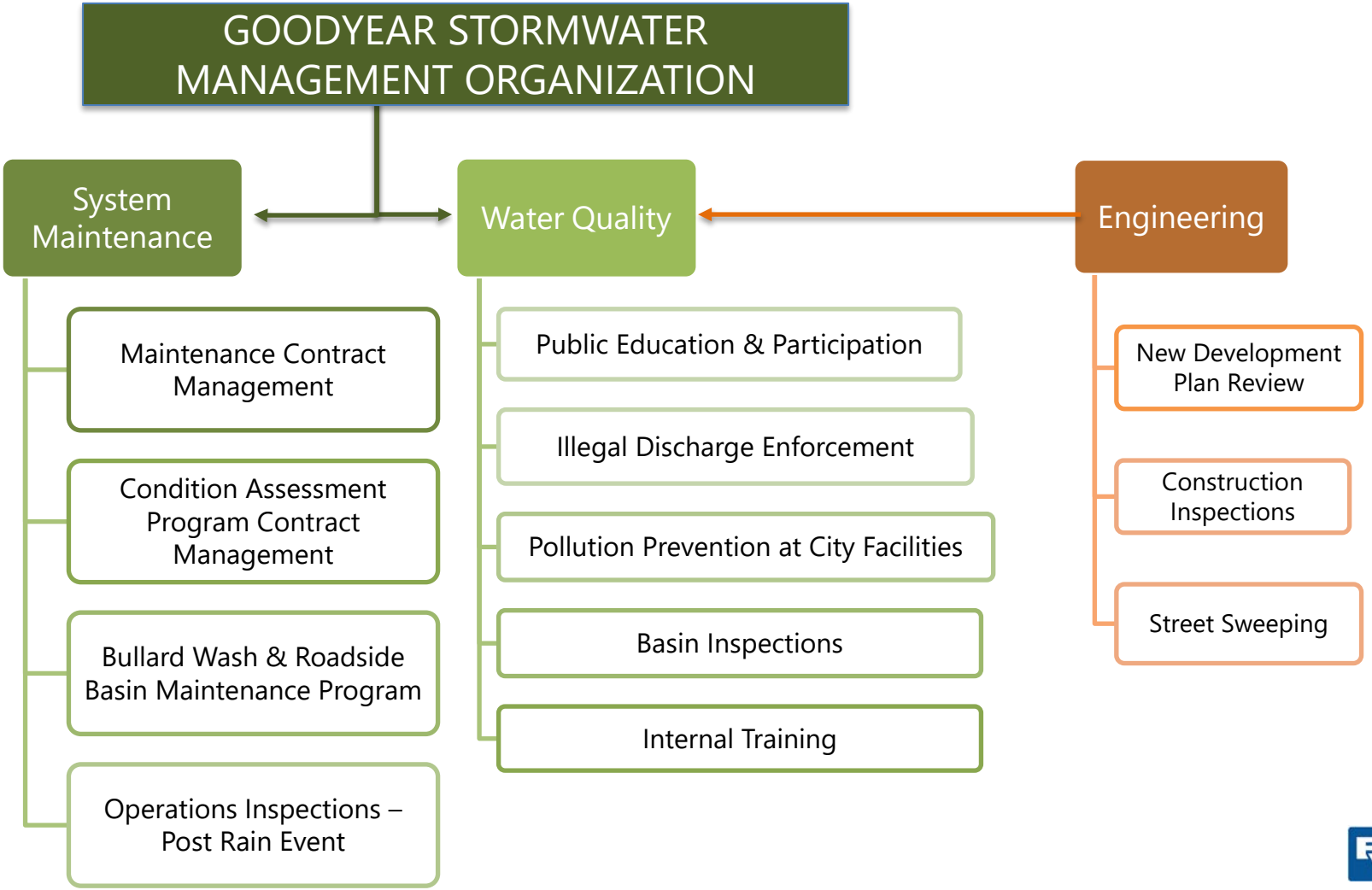
Condition Assessment Program

PROGRAM IMPLEMENTATION RECOMMENDATIONS

Road Map:

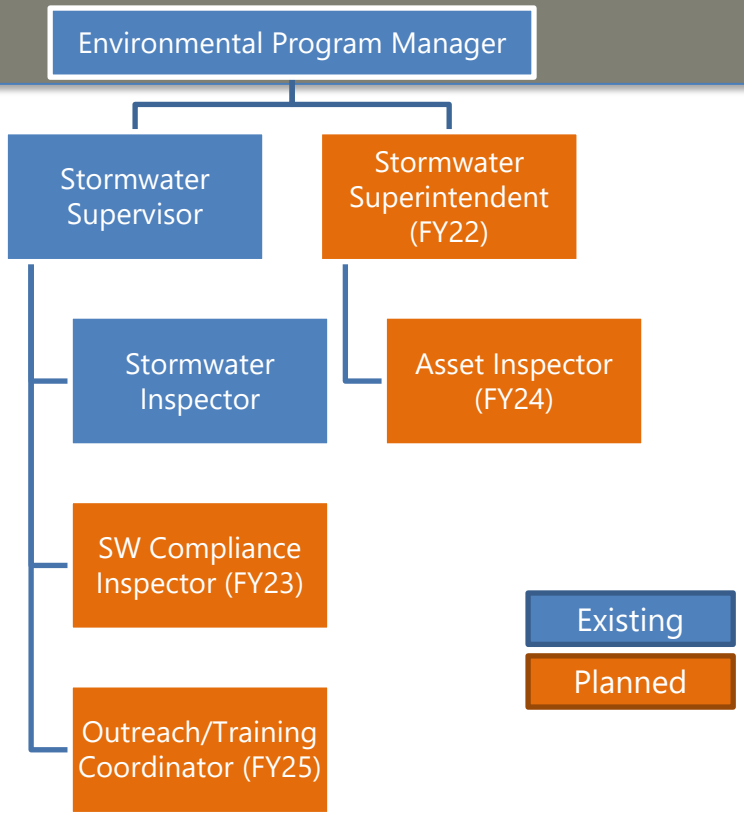
- Desktop Analysis
- Field Assessments
- Remedial Actions
- Inspection Services
- Analysis / Reporting
- Annual Program Review

5-Year Stormwater Program Plan


GOODYEAR STORMWATER MANAGEMENT ORGANIZATION
System Maintenance
Water Quality
Engineering
Maintenance Contract Management
Condition Assessment Program Contract Management
Bullard Wash & Roadside Basin Maintenance Program
Operations Inspections – Post Rain Event
Public Education & Participation
Illegal Discharge Enforcement
Pollution Prevention at City Facilities
Basin Inspections
Internal Training
New Development Plan Review
Construction Inspections
Street Sweeping

5-Year Program Staffing Plan

PROPOSED



5-Year O&M Program Implementation Plan

Activity	FY22	FY23	FY24	FY25	FY26
System Maintenance – Stormwater Superintendent					
Additional As-needed Maintenance Contracts					
Bullard Wash / Roadside Basin Maintenance Program Management					
Increase Pre/post event Asset Inspections with new Asset Inspector					
Water Quality – Stormwater Supervisor					
Education/Outreach					
Additional budget for outreach materials/giveaways					
Public Outreach Plan by new Outreach/Training Coordinator					
IDDE Program Implementation					
Increase focus on IDDE Program with new Compliance Inspector					
New Code Compliance Software					
Construction site runoff – Engineering-	*Dedicated SWPPP Inspector in Engineering, CSP Permit Fee Funded*				
Post-construction Stormwater Management in New & Redevelopment					
Increase inspections & enforcement w/ new Compliance Inspector					
Good Housekeeping					
Increase focus on SWPPP Program with new Compliance Inspector					
Internal Training					
Public Outreach Plan by new Outreach/Training Coordinator					
System Planning – Stormwater Superintendent					
Condition Assessment Program Management					
City-wide Area Drainage Master Study					
Stormwater Utility Fee - Finance					
Stormwater Utility Implementation					

5-Year O&M Costs (2020$)

Program Area	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
Current Activities (2020)	$485,000	$485,000	$485,000	$485,000	$485,000	$485,000
System Maintenance		$312,200	$292,800	$302,538	$288,114	$288,114
Water Quality			$133,138	$79,514	$152,867	$144,843
System Planning		$255,000	$405,000	$255,000	$255,000	$255,000
Stormwater Utility Fee		$50,000	$25,000	$25,000	$225,000	$50,000
TOTAL	**$485,000**	**$1,102,200**	**$1,340,938**	**$1,147,052**	**$1,405,981**	**$1,222,957**

Non-escalated cash values, 2020$

Capital Improvement Program

- Stormwater specific projects
  - Bullard Wash & Roadside Basins
  - Future Condition Assessment findings
  - Future Area Drainage Master Study projects
  - Areas of flooding complaints
- Support for city-wide projects
  - Civil drainage and development

Program Area	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
City-wide projects	1,295,000	2,140,000	1,350,000	150,000	2,765,000	500,000
Stormwater specific				1,590,000	1,590,000	1,590,000
TOTAL	**1,295,000**	**2,140,000**	**1,350,000**	**1,740,000**	**4,355,000**	**2,090,000**

Non-escalated cash values, 2020$

Questions