

Storm Water Presentations

1. Corrugated Metal Pipe & Infrastructure Update

Beth Gentry, Sr. Civil Engineer

2. Storm Water Management and Drainage Funding Report

Marisa Soriano, Storm Water Program Manager



Corrugated Metal Pipe (CMP) Status Update

March 2, 2021



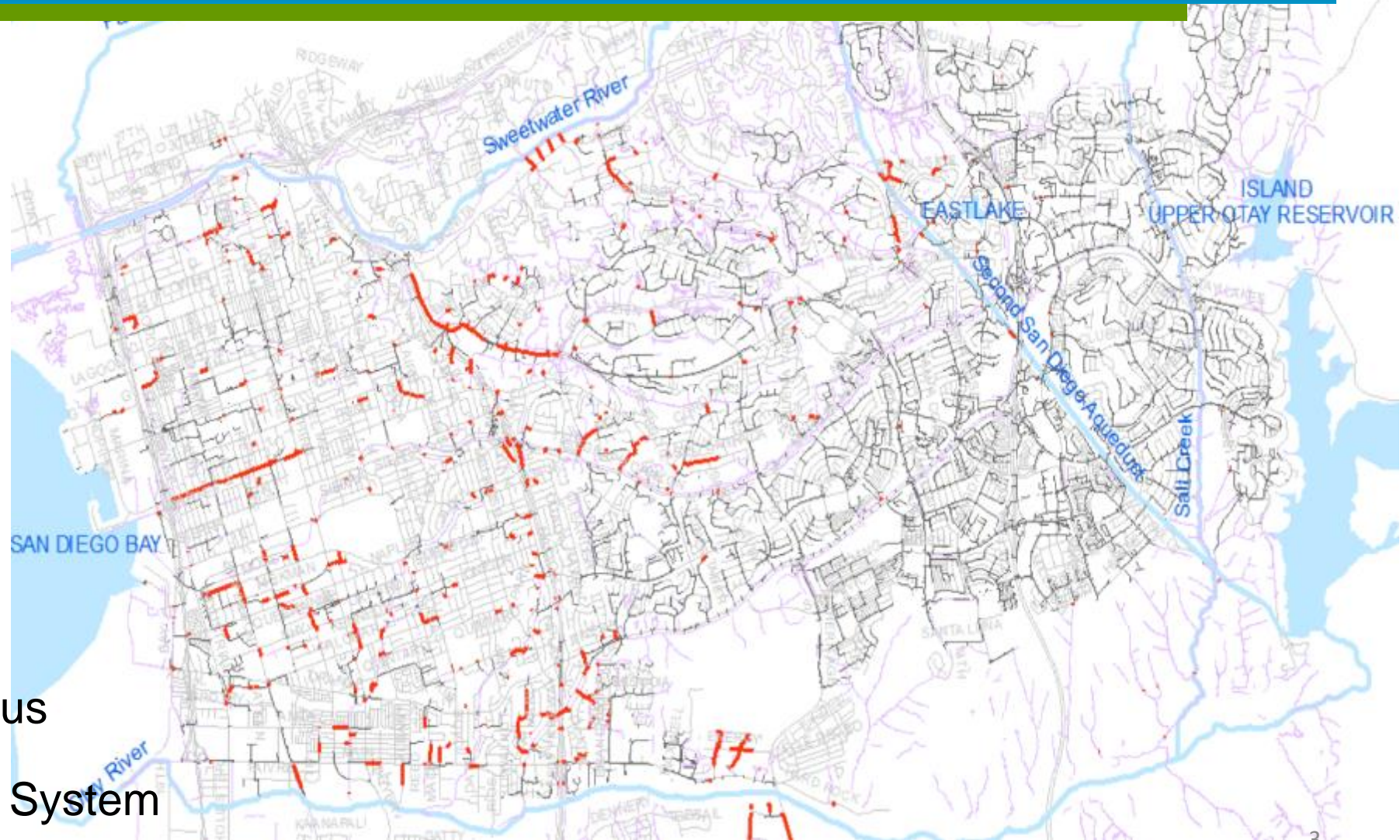
**Engineering and Capital
Projects Department**

**Beth Gentry
Sr. Civil Engineer**

Chula Vista City Council

Overview

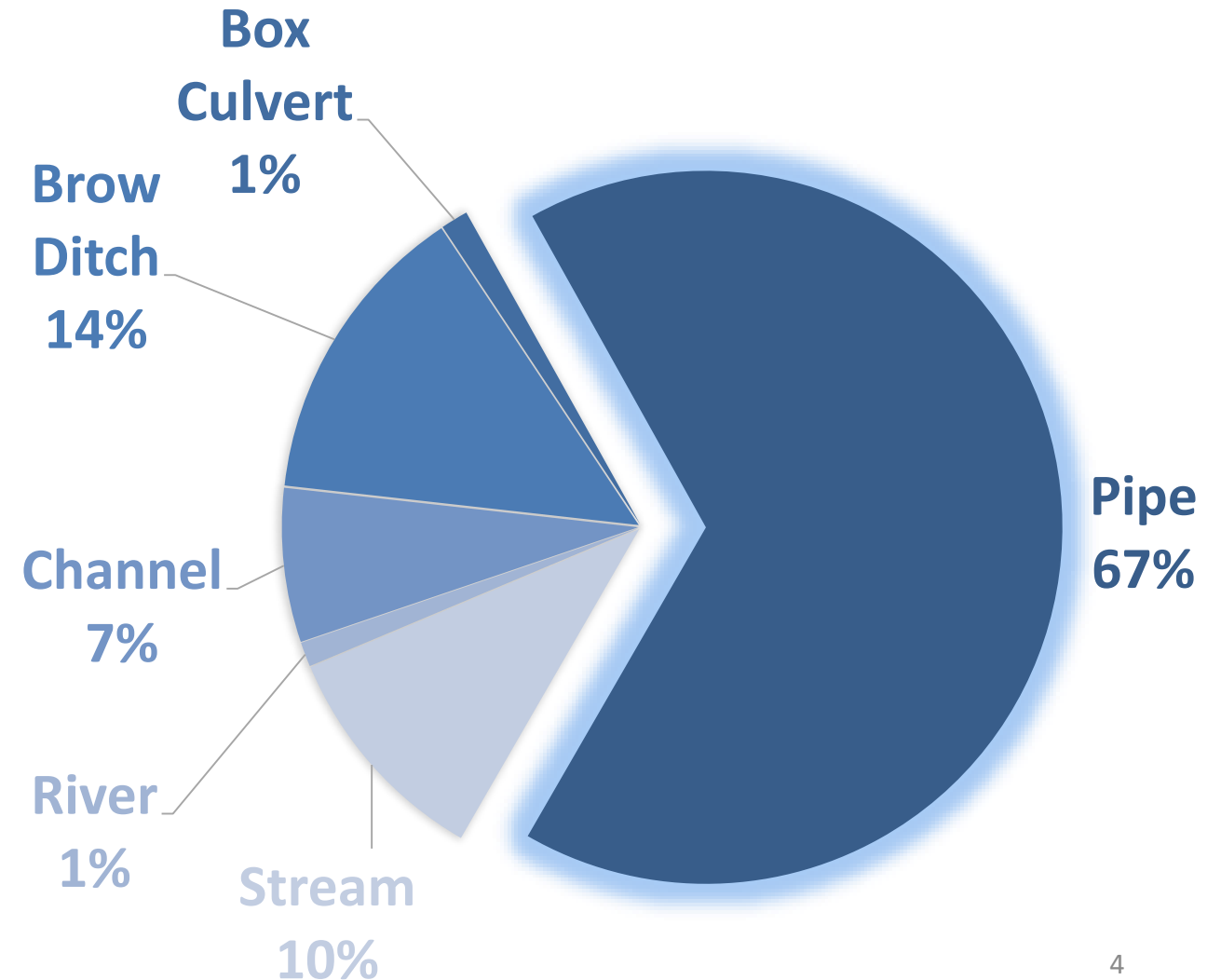
- Drainage System
 - Overview
 - Drainage Pipe
- CMP
 - Condition
 - Funding Sources
 - Rehabilitation Status
- Condition of Drainage System



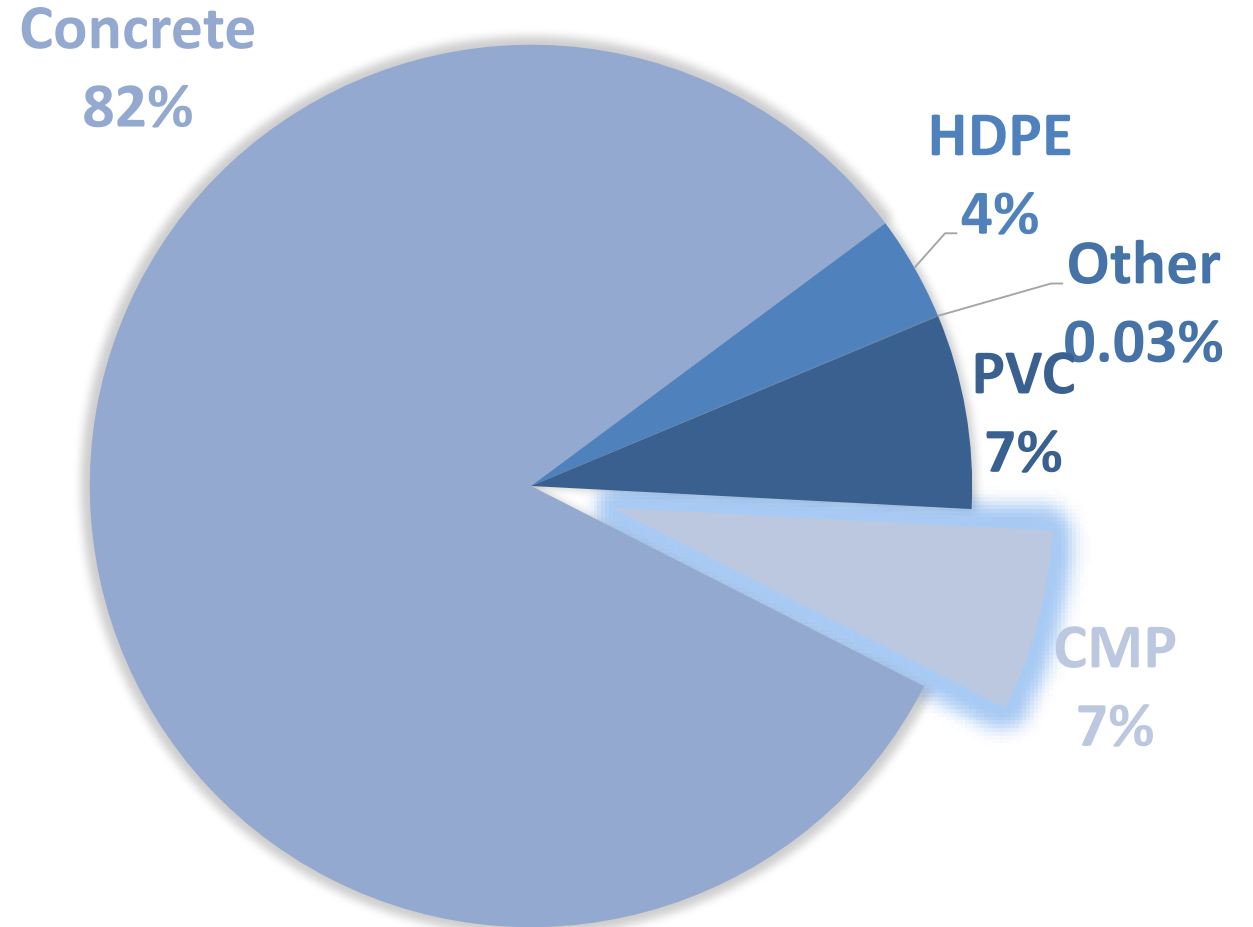
Drainage System



Brow Ditch



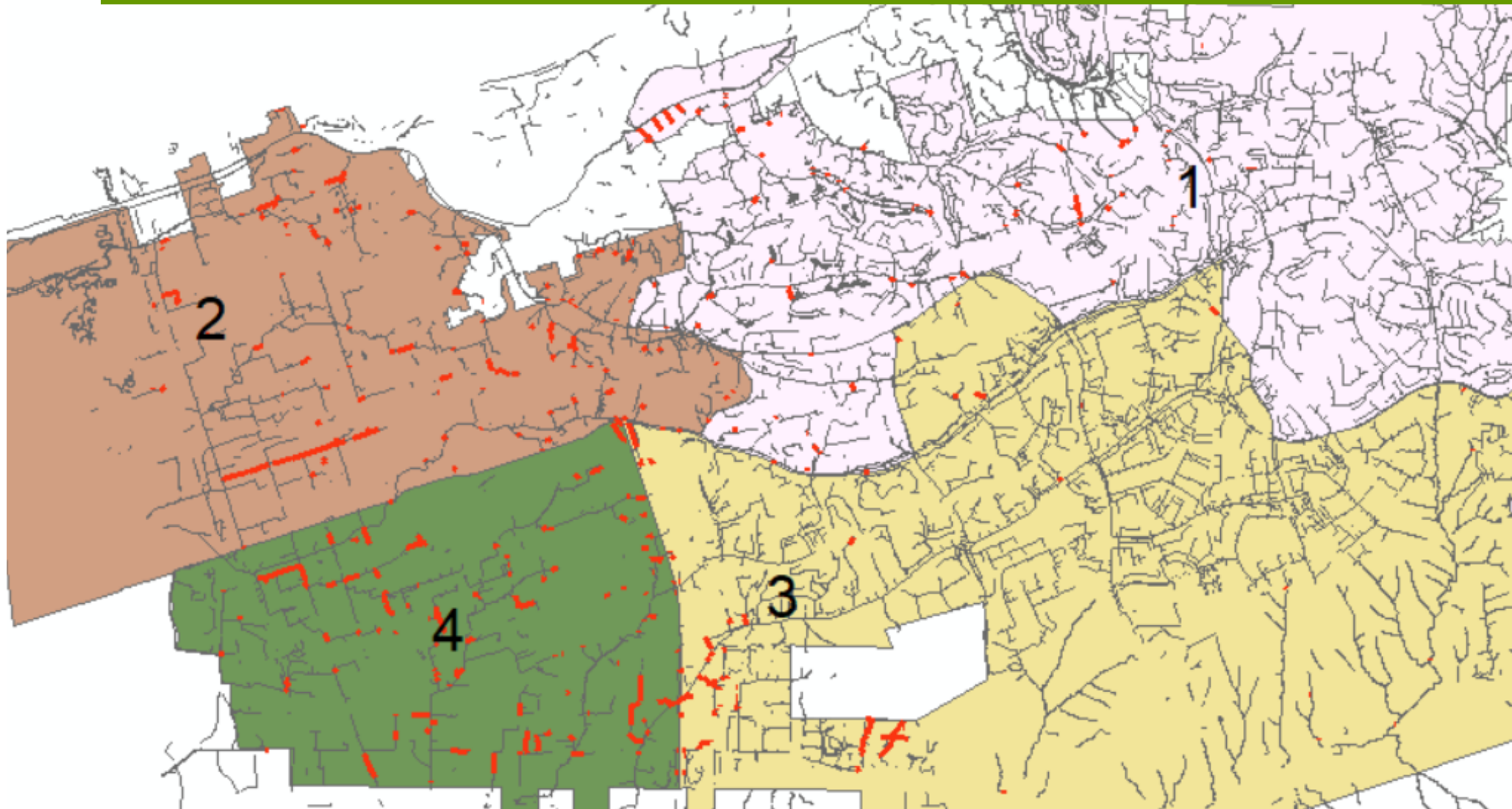
Drainage Pipe



CMP = Corrugated Metal Pipe
PVC = Polyvinyl Chloride Pipe

Corrugated Metal Pipe (CMP)

CMP Locations



CMP – 2019 Failure

Energy Way

>\$2M Emergency Repairs

66-72" dia. CMP

1975 installation



CMP - Vulnerability



- 1950's Initial Installation
- Susceptible to Corrosion
- Lifespan 40-60 years
- 1998 Subdivision Manual prohibited CMP installation

CMP – Typical Funding Sources

Inside the Public Right of Way (ROW)

- Transnet
- Gas Tax



Outside the ROW

- Measure P
- General Fund



CMP Projects Summary

Description	Inside the ROW (Other Funding)	Outside the ROW (Measure P)
# CIP Projects	17 Projects	3 Projects
Total Amount in CIPs	\$12.2M	\$9.8M
Needed Amount*	NA	\$3M
Total Amount	\$12.2M	\$12.8M

*Does not include CMP in satisfactory condition

CMP – Rehabilitation (Lining)

Before



After



CMP Rehabilitation Needs

Inside the Public ROW

Condition of CMP	Length (budget)
Critical (DRN0217)	3,100 feet (est. \$3.2M)
Satisfactory	3,900 feet



Outside the Public Right of Way (ROW)

Condition of CMP	Length (estimate)
Critical (Funding Needed)	3,500 feet (est. \$3M)
Satisfactory or Unknown	3,600 feet (TBD)



Approximately 75% of CMP has been rehabilitated or is in the process of rehabilitation.
5% in Critical Condition & Immediate needs. The remaining is satisfactory and requires monitoring

Drainage Maintenance

Deferred Maintenance – Types

Vegetation Management



Deferred Maintenance Types:

- Erosion Repairs
- Damaged Infrastructure (e.g., cracks, broken pipes, etc.)
- Vegetation Management
- Asset Inspections
- Environmental Permitting

Ratings for Condition of Asset

- Maintenance Ranking – Estimating the maintenance needs of the structure
- Structure Ranking – Estimating the magnitude of asset's structural integrity (based on informal observations)

Good	Ok	Action Required	Urgent Action Req'd	Critical
1	2	3	4	5

Deferred Maintenance: Erosion Example

Erosion



Structural = 4 to 5

Channel Damage



1	2	3	4	5
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Deferred Maintenance: Cracks Example



- Major cracks / spalling & exposed rebar
- Telegraph Canyon Channel
- Concrete lined channel
- Built 1978

Structural = 4

1	2	3	4	5
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Key Points

CMP:

- Most of the CMP has been rehabilitated
- Remaining CMP
 - Critical Inside the ROW: 3100 feet (Funded DRN0217: \$2.78M)
 - Critical Outside the ROW: 3500 feet (Funding Needed - Measure P, GF: \$3M)
 - Satisfactory CMP: 7500 feet (re-inspected regularly)

Drainage System

- Deferred Maintenance: erosion, structural damage, vegetation, permitting, inspections, etc. (funding needed)

Questions

Beth Gentry, Sr. Civil Engineer
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STORM WATER MANAGEMENT AND DRAINAGE FUNDING REPORT AND PUBLIC OUTREACH

March 2, 2021 Council Meeting

Marisa Soriano, Storm Water Program Manager
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OVERVIEW OF PRESENTATION:

- Storm Drain Fee
- Storm Water Management Program/
NPDES Permit
- Funding

PURPOSE OF THE STORM DRAIN FEE

OBJECTIVE 1: Maintenance of the City's storm drain system.

OBJECTIVE 2: Compliance with the Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) Permit.



STORM DRAIN VS. SANITARY SEWER



REPAIR OF STORM DRAIN FACILITIES



CLEANING & REMOVAL
OF POLLUTANTS



OBJECTIVE 1

MAINTENANCE OF THE CITY'S STORM DRAIN SYSTEM

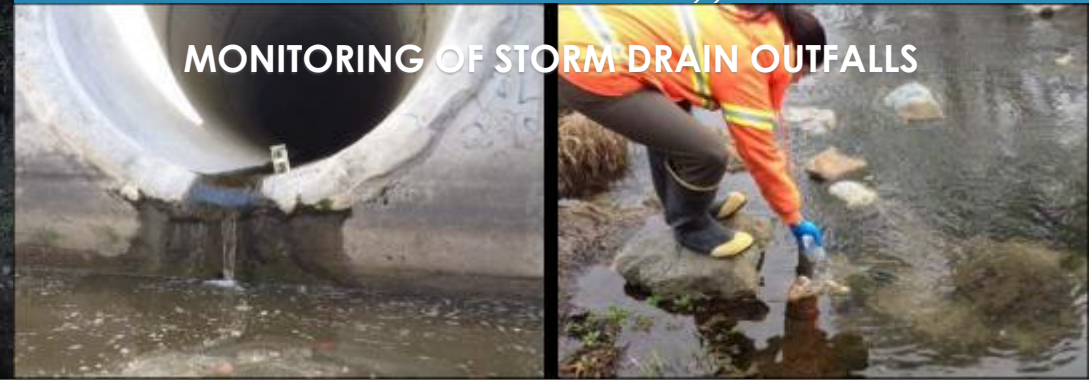
STREET SWEEPING



DRAINAGE INSPECTIONS



MONITORING OF STORM DRAIN OUTFALLS



OBJECTIVE 2

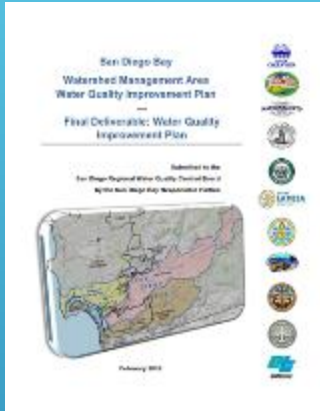
COMPLIANCE WITH THE NPDES PERMIT



- Clean Water Act (33 USCA Section 1251, et seq.)
- Porter-Cologne Water Quality Control Act (California Water Code Section 13020, et seq.), and
- San Diego Regional Water Quality Control Board requirements (NPDES Permit No. CAS 0109266 and any subsequent amendments thereto)
- Chula Vista Municipal Code (CVMC) Chapter 14.20, Storm Water Management and Discharge Control, is the overarching ordinance for regulating storm water and non-storm water discharges within the City

COMPLIANCE WITH THE NPDES PERMIT

WHAT DOES IT ENTAIL?



SD Bay WQIP



MS4 Outfall
Monitoring
Program



Trash Amendments



Inspections



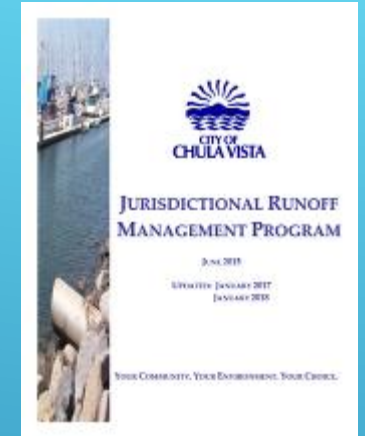
Public Education



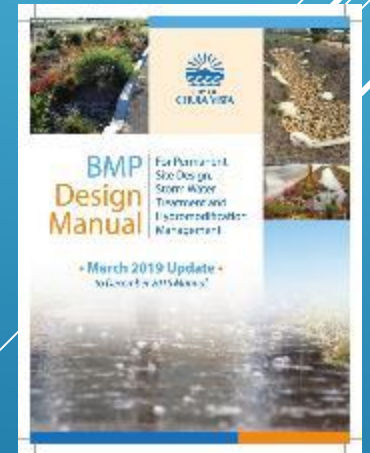
Enforcement of City's
Storm Water Ordinance



Annual Reporting



JRMP



Development Planning



CONSEQUENCES OF NOT COMPLYING WITH THE NPDES PERMIT

- The City of Chula Vista can be subject to violations and **finest of up to \$10,000/day/violation** if it does not comply with the MS4 Permit and can be subject to **3rd party lawsuits**.
- Over \$4.3 million in fines were assessed by the San Diego Regional Water Quality Control Board (SDRWQCB) to cities in violation of the MS4 Permit in the San Diego region.
- Even though not all violations were monetary, it is important to note that each recorded violation resulted in an adjustment or improvement of Storm Water Program component(s), increased training, documentation, reporting, and/or hiring of additional staff or support. All this additional requirements equate to additional costs and potential additional burden to the General Fund, since MS4 Permit requirements are not federally or state funded.

CITY OF CHULA VISTA COMPLIANCE HISTORY WITH THE NPDES PERMIT

The City of Chula Vista has not been fined by the Regional Board for NPDES Permit Violations, but has been audited by the Regional Board and had corrective actions that included:

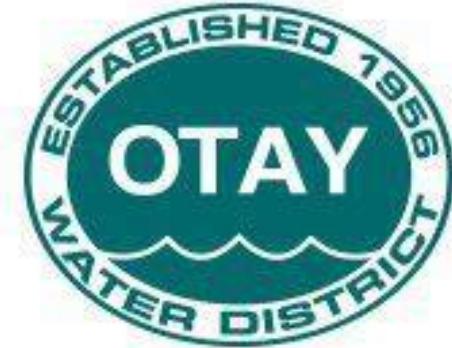
- Additional staff training
- Program document updates

To comply with these requirements, City staff spent additional time and resources that represented additional costs to the budget.

If the City is fined and program adjustments must be made, it would be a significant strain on the General Fund to address these issues since Storm Drain Revenue Fund earnings are constant.

WHO PAYS THE STORM DRAIN FEE?

Chula Vista Municipal Code Chapter 14.16 states:
The owner or occupant of any parcel of real property that is connected to the City's wastewater system and to a water system maintained by the Sweetwater Authority, the Otay Municipal Water District, or the California American Water Company shall pay a Storm Drain Fee that will be collected in the Storm Drain Revenue Fund.



STORM DRAIN FEE RATE

The Fee is collected with the Sewer Service Charges and is computed as follows:

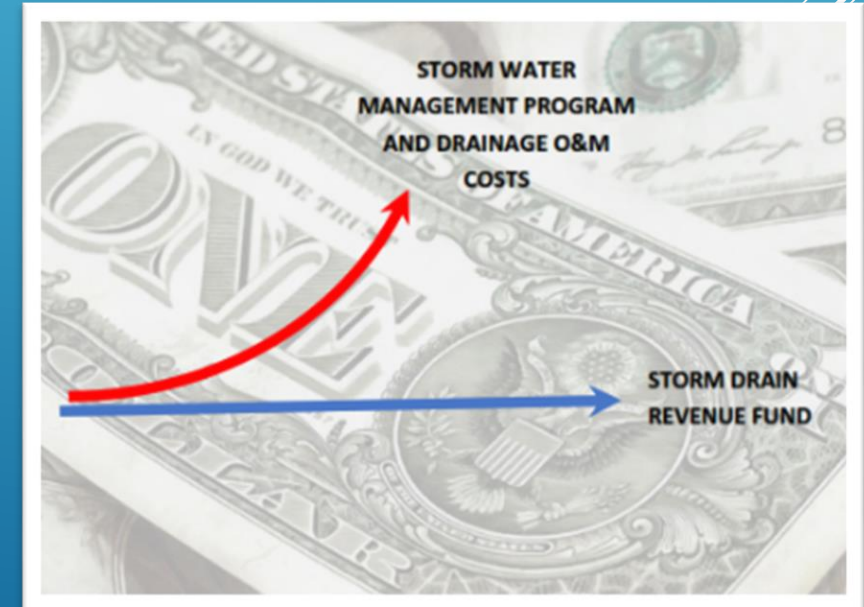
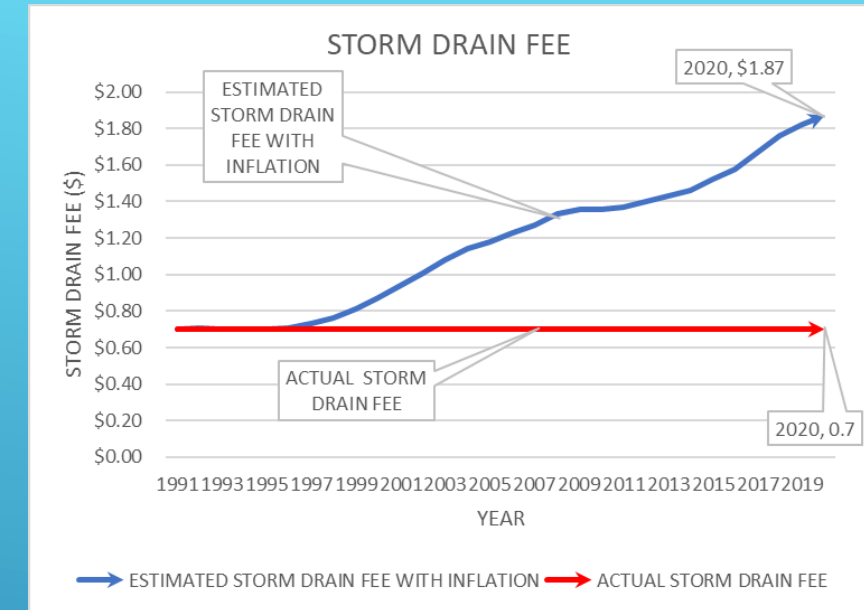
Single Family	Multi-Family, Commercial, Industrial
Monthly.....\$0.70	Monthly.....\$0.06/HCF Maximum per Month.....\$500.00

The City does not collect storm drain fees from all pollutant generating properties, however, the City must enforce Storm Water BMPs throughout the City.

A part of the proposed *Storm Water Management and Drainage Funding Report* is to explore this gap in potential funding.

IMPORTANT FACTS ABOUT THE FEE

- ▶ The rate that was established in 1991 was not indexed to inflation.
- ▶ The rate has not changed for almost three decades.
- ▶ According to the U.S. Bureau of Labor Statistics, prices in San Diego, CA were 167.47% higher in 2020 versus 1991.
 - ▶ If adjusted, the estimated 2020 storm drain fee would be \$1.87



COST OF THE STORM WATER MANAGEMENT PROGRAM

	FY 2020
Storm Drain Revenue Fund	\$671,198
Storm Water Management Program Costs	\$2.4M
Deficit	-\$1.7M



WHAT DO OTHER CITIES DO TO FUND THEIR STORM WATER PROGRAMS?

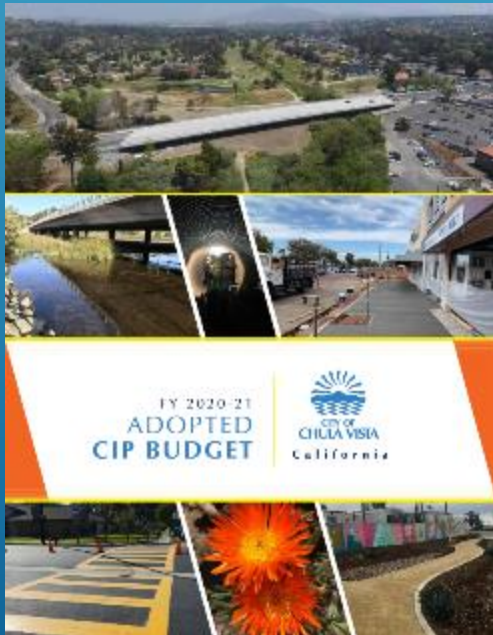
City	Storm Drain Fee SFD/ month
Del Mar	\$12.52
Coronado	\$3.80
San Diego	\$0.95
Chula Vista	\$0.70

City	Alternative Funding Mechanism
Carlsbad, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Marcos, Santee, Vista	General Fund, Grants, Trash Fees, Parking Violation Fees, DIF fees

FUNDING SOURCES FOR THE CITY'S STORM WATER MANAGEMENT PROGRAM

Guaranteed Continuous Source

- Storm Drain Fee



NOT Guaranteed

- Gas Tax
- General Fund
- Grants
- Measure P Funds
- TransNet Funds



STORM WATER MANAGEMENT AND DRAINAGE FUNDING REPORT

- ▶ Define the needs of the City's Storm Water Management Program and the public drainage system;
- ▶ Identify the expenses associated with the successful operation of the Storm Water Management Program;
- ▶ Determine funding and revenue sources;
- ▶ Re-evaluate the Storm Drain Fee;
- ▶ Provide a multi-year Financial Plan; and
- ▶ Make recommendations for a rate structure including an assessment of customer impact, if the Storm Drain Fee is adjusted.



QUESTIONS?

Marisa Soriano

Storm Water Management Section

E-mail: msoriano@chulavistaca.gov

TONIGHT'S COUNCIL ACTION:

Resolution of the City Council of the City of Chula Vista
Amending the Fiscal Year 2020/2021 CIP Program
Budget by Establishing a New Capital Improvement
Project, “Storm Water Management and Drainage
Funding Report and Public Outreach” (DRN0218); and
appropriating \$100,000 from the General Fund
Reserves to CIP DRN0218
(4/5 Vote Required)