City of Arts & Innovation

Mobility & Infrastructure Committee Memorandum

TO: **MOBILITY & INFRASTRUCTURE COMMITTEE** **DATE: MAY 12, 2022**

FROM: **PUBLIC WORKS DEPARTMENT** **WARDS: ALL**

SUBJECT: **RECEIVE AN UPDATE ON THE STORM DRAIN MAINTENANCE PROGRAM**

ISSUE:

The issue for consideration is to receive an update on the storm drain maintenance program.

RECOMMENDATION:

That the Mobility & Infrastructure Committee receive an update on the storm drain maintenance program.

BACKGROUND:

The Public Works Engineering Division – Environmental Services Section is responsible for the maintenance and overall care of storm drain catch basins and pipelines that make up the storm drain system throughout the City of Riverside (City). The City has over 5,000 catch basins and 190 miles of pipes that must be maintained on a routine basis. This is part of a broader stormwater program required by the State Water Board.

DISCUSSION:

While there are only about 30 days of rainfall in the area each year, urban runoff enters the storm drain system every day due to irrigation, washing, potable water flushing, etc. This runoff carries with it a variety of debris and pollutants, both seen and unseen. Some of these are contained within City catch basins and pipes which are routinely cleaned by storm drain maintenance crews. Geographic Information System (GIS) technology is used to map the storm drain system and assign work. At each catch basin, a GIS based informational survey is filled out with pertinent data about the catch basin and its condition. Crews clean catch basins and pipes using combination sewer cleaning trucks to vacuum out debris and hydro-jet pipes. There is a wide variety of debris/pollutants but most everything is within one of the following categories.

Trash

Trash, litter, and other objects are thrown into or dumped into storm drain catch basins regularly. These items accumulate inside catch basins until they are cleaned or flushed further down the system. In certain areas of the City, trash is a major issue causing blockages and affecting the quality of waters downstream of the storm drain system. During calendar year 2021, crews cleaned approximately 45,000 lbs of trash from the storm drain system.

Vegetation

Vegetation includes leaves, grass clippings, pine needles, branches, and other tree and plant materials. During certain times of year an entire catch basin can be filled with vegetation causing blockages. Pine needles and leaves can be especially problematic as they affect multiple areas of the City during the same time of year. During calendar year 2021, crews cleaned approximately 48,000 lbs of vegetation from the storm drain system.

Sediment

The City has a diverse topography with hills, valleys, arroyos, and various natural and man-made features. Many of these areas have sand, silt, and dirt coming off of them through erosion and sedimentation. Much of this sediment eventually reaches the storm drain system where it accumulates and can block the flow of runoff. One area that contributes a large amount of sediment into the system is the greenbelt. Irrigation water from the Gage Canal Company is utilized by local users for their irrigation needs and excess water enters the public right of way and carries with it sediment that makes its way into the storm drain system. During calendar year 2021, crews cleaned approximately 240,000 lbs of sediment from the storm drain system.

Challenges/Goals

Staff has identified the following areas to be worked on this year and subsequent years:

1. GIS/Mapping Updates – The vast majority of the storm drain system is identified in the City's GIS system but there are areas where updates are needed. It is critically important to identify size, type, material, ownership, etc. of catch basins and pipes. As new infrastructure is constructed, GIS data must also be updated. Staff will continue to update the City's GIS data to ensure accuracy.
2. Equipment – The City has ordered an additional combination sewer cleaning truck to be used for the maintenance of the storm drain system. Equipment and parts shortages have delayed delivery of this vehicle, but staff hopes it will arrive within the next couple months. Staff is also working to procure a pipeline inspection camera system to inspect storm drain lines and hopes to submit this to the City Council soon.
3. Field Office/Equipment Storage – Combination sewer cleaning trucks and other equipment used to clean the storm drain system are large and difficult to store. Within the past year and half, the storm drain maintenance group has moved to the Regional Water Quality Control Plant (RWQCP). Staff is working to obtain a field office and equipment storage structures to protect equipment and provide staff with proper accommodations to perform their work.
4. State Trash Amendments – The State Water Board requires that all California cities prevent trash from entering the storm drain system. The City has prepared an Implementation Plan whereby state requirements will be met. In some areas, the City will install trash capture devices to capture trash before it enters the storm drain system. Staff is working to identify areas where this will be most effective.

STRATEGIC PLAN ALIGNMENT:

The programs described in this report align with **Strategic Priority 4 – Environmental Stewardship** and **Strategic Priority 6 – Infrastructure, Mobility, and Connectivity**. They also support **Goal 4.2** - Sustainably manage local water resources to maximize reliability and advance water reuse to ensure safe, reliable and affordable water to our

community; and **Goal 6.2** - Maintain, protect and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

Furthermore, storm drain maintenance aligns with each of the five Cross-Cutting Threads:

1. **Community Trust** – Maintaining the storm drain system serves the public interest and supports clean water in the community and proper flow of water during significant rain events.

2. **Equity** – This program supports clean water throughout the City ensuring that all residents can enjoy the beneficial uses of local waterways.

3. **Fiscal Responsibility** – Provides a quality public service to all residents in a fiscally responsible way.

4. **Innovation** – This program has heavily incorporated GIS programs and other innovative technologies to assign and track maintenance activities.

5. **Sustainability & Resiliency** – Proper maintenance of the storm drain system contributes to the sustainability of the City's and region's local waterways.

FISCAL IMPACT:

There is no fiscal impact from receiving this update.

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Approved by:	Kris Martinez, Assistant City Manager
Approved as to form:	Phaedra A. Norton, City Attorney

Attachment: Presentation