



## CITY OF GLENDALE, CALIFORNIA REPORT TO THE CITY COUNCIL

### **AGENDA ITEM**

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Report: City of Glendale Response to June 21, 2022 County of Los Angeles Civil Grand Jury Report entitled “Water, Water Everywhere Leaking from the Pipes”.

1. Resolution Approving City of Glendale Response to June 21, 2022 Los Angeles Civil Grand Jury Report.

### **COUNCIL ACTION**

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**Item Type:** Action

**Approved for** September 13, 2022 calendar

### **EXECUTIVE SUMMARY**

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On June 21, 2022, the Los Angeles Civil Grand Jury (Grand Jury) released a Report entitled “Water, Water Everywhere Leaking from the Pipes” (Report), a copy of which is attached as Exhibit 1. California law requires that the City of Glendale (City) formally respond to each of the findings and recommendations in the Report within ninety days of its publication. The law requires that the response be approved by the Mayor and the City Council.

### **COUNCIL PRIORITIES**

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Infrastructure: Preparing a response to the Grand Jury Report provides an opportunity for Council and the public to learn more about the successes of the City’s Water Capital Improvement Program.

### **RECOMMENDATION**

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Approve the proposed response to the Grand Jury Report so that City staff can submit the City’s response to the Report, before to the September 30, 2022 deadline.

### **BACKGROUND**

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The Los Angeles County Civil Grand Jury selected “water pipe networks in the Los Angeles area” as a topic to study during their 2021-2022 session. The stated focus of the Report was to assess water pipe networks in the Los Angeles area and to review the policies and procedures employed by three local water utilities – Glendale Water & Power Department (GWP), the Los Angeles Department of Water & Power (LADWP), and the Whittier Water Utility, to maintain and replace the water pipe infrastructure. The Report states that the water pipe infrastructure is an area of concern, specifically citing

a LADWP significant pipe failure in 2020 causing approximately 20 million gallons of water to gush out of a broken water main and flood large parts of the University of California, Los Angeles campus and closing Sunset Boulevard.

Glendale was selected as a “representative medium sized utility” to review as part of the study. The members of the Grand Jury met in person with City staff on November 18, 2021 for approximately two hours to discuss the condition of the City’s water mains and City’s water main maintenance practices. During the meeting, staff answered questions and presented the Grand Jury with an overview of the City’s Ten-Year Capital Improvement Program (Exhibit 3). Staff also presented a chart of the metrics used to track the frequency and duration of water main breaks and their repairs, along with photos of a typical main break and a longer duration repair (Exhibit 4).

The Report states that Glendale uses “A to F” grades to rate the condition of its pipes and the type of leaks are “slow” and “not geysers”. To clarify, GWP uses a condition assessment process that prioritizes replacements based on age, condition, status of relining, and fire flow capacity to plan replacements as part of the GWP’s Pipeline Management Program. Additionally, because of the low corrosiveness of Glendale’s soils, the City’s water system typically suffers main breaks that are visible when water surfaces through the street, instead of low volume leaks that are hard to detect. This is further verified by the water system’s low percentage of un-accounted for water.

City staff also discussed the success of the Water Division’s Asset Management Program, and the Pipeline Management Program specifically. The 2016 Water Master Plan determined that a \$9 to \$12 million per year Capital Improvement Program was needed to maintain and rehabilitate the City’s water system. This program added to the investments made using the 2012 Water Revenue Bonds by funding the Water CIP as a PAYGO program through the 2018 Water Cost of Service Analysis. The program has been very successful. From 2013 to 2020, Water Division staff have managed and delivered over \$97 million of capital projects. Additionally, the Water Engineering Section has overseen the replacement of more than 43,000 feet of water mains with an average replacement of 1.6 miles per year between 2015 and 2020, which is nearly twice the industry average for the amount of mains that need replacement.

City staff partially disagrees with the findings and conclusions in the Report. The Report contains factual inaccuracies and misinterprets the key information which was provided to the Grand Jury when they met, in person, with GWP staff to discuss the City’s water pipes, GWP’s protocols on keeping said pipes safe, updated and functioning in the most efficient manner.

## **ANALYSIS**

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Below are a list of the Grand Jury’s findings and recommendations, and the City’s proposed response to each.

***Finding # 9-1: “The maintenance and installation practices of the water pipe infrastructures appear consistent throughout the industry.”***

**Response to Finding # 9-1:** The City agrees with this finding. There are different practices between water agencies, but in general they appear to be consistent.

***Finding # 9-2: “The 2020 Sunset/UCLA pipe break may have been caused, in part, by a lack of communication between the various services using the underground right of way in the public streets.”***

**Response to Finding # 9-2:** The City partially disagrees with this finding due to its conclusory nature regarding statements in a written report<sup>1</sup> about a main break at another utility that did not specifically indicate that the issue was related to a “lack of communication”.

1. “LA City Council, Council File No. 20-1076 - Sunset Boulevard / UCLA / Water Main Break /August 23, 2020”, Martin L. Adams, General Manager and Chief Engineer, Los Angeles Department of Water & Power.

***Finding # 9-3: “PVC water mains have the lowest break rates of any pipe material.”***

**Response to Finding # 9-3:** The City disagrees with this statement. The report referenced by the Grand Jury<sup>2</sup> makes this conclusion across a dataset for the industry as whole. Taking this statement out of context can give the impression that PVC pipe would have a lower break rate than other pipe material in every installation, which is a false conclusion when reading the referenced report in its entirety. In fact, a follow-up area of study for the report’s authors would be a comparison of the failure rate between ductile-iron pipe and PVC pipe of the same installation vintage in non-corrosive soils in dense urban areas, and when native backfill is used instead of imported backfill material.

Further, the follow-up report should study if water agency’s practices are skewing the data. If agencies are only installing PVC mains in areas known to have less stresses from vehicle loading, or areas with fewer buried utilities, current and abandoned, then these installations would have caused the data to show a lower break rate with PVC, when in fact, PVC was specifically chosen for these applications. Additionally, if water agency specifications for pipe laying and backfill are different for PVC vs. ductile iron, there is a possibility that a more stringent pipe laying and backfill specification for PVC reduced its overall break-rate in the dataset analyzed in this report.

2. “Water Main Break Rates in the USA and Canada: A Comprehensive Study”, March 2018, Steven Folkman, Ph.D., P.E., Utah State University, Buried Structures Laboratory.

***Finding # 9-4: “Japanese manufacturers have developed earthquake resilient pipes and LADWP has begun evaluation.”***

**Response to finding # 9-4:** The City partially disagrees with this finding. Though this finding does not apply to the City, it is important to clarify that LADWP has already studied earthquake resilient pipe materials and has an active program to install either Japanese-made or American-made earthquake resilient pipes in very specific locations and applications.<sup>1</sup>

## **II. RESPONSE TO GRAND JURY RECOMMENDATIONS**

***Grand Jury Recommendation # 9-1: Utilities and Public Works departments should create interagency practices to avoid encroachments.***

**Response to Recommendation # 9-1:** Interagency practices to avoid damage caused by construction and maintenance activities related to underground utilities is codified in two sections of the California Code of Regulations.

The first is the California Code of Regulations, Title 19 Public Safety, Division 4 California Underground Facilities Safe Excavation Board.

The second is the California Code of Regulations, Title 1 General, Division 5 Public Work and Public Purchases, Chapter 3.1 Protection of Underground Infrastructure, Article 2 Regional Notification Center System, Section 4216.

Per California Government Code 4216:

Every operator of a subsurface installation, except the Department of Transportation, shall become a member of, participate in, and share in the costs of a regional notification center. Operators of subsurface installations who are members of, participate in, and share in, the costs of a regional notification center, including, but not limited to, to Underground Service Alert (DigAlert) - Northern or Southern California are in compliance with this Section and Section 4216.9. A regional notification center shall not charge a fee to a person for notifying the regional notification center to obtain a ticket or to renew a ticket.

GWP's Electric and Water Divisions, as well as Public Works contract with the DigAlert - Southern California because it is the only notification center in the region to fulfill this legal requirement. DigAlert, is an independent non-profit mutual benefit corporation, working to ensure the safety of excavation workers and the general public by preventing damage to subsurface infrastructure through education, advocacy, and operation of an effective communications link between excavators and subsurface infrastructure owners/operators.

Anyone excavating in the public right-of-way in Glendale must notify DigAlert by calling 811 or by using their online notification tool. This service is free of charge. Appropriate GWP staff respond to the "DigAlert ticket" that is generated, mark GWP utilities if any in the excavation zone then upload photos of the makings into the DigAlert system. Similarly, if GWP crews need to perform an excavation, they notify DigAlert and other

utilities must mark the excavation area if they have any underground utilities located there, before GWP crews can begin their excavations.

***Grand Jury Recommendation # 9-2: Due to the corrosion proof of nature of PVC and proven low break rate, the water utilities should review their policy on this noteworthy pipe material.***

**Response to Recommendation # 9-2:**

Due to the ability of PVC pipe to resist corrosion and the formation of bio-films that can increase corrosion inside of the pipe, GWP uses PVC pipe for most recycled water main installations.

GWP uses cement-lined ductile iron pipe for potable water main installations and replacements to help reduce breaks caused by high vehicle loading and settlement of backfill that may occur due to the high number of other underground utilities, new and abandoned, in the public right-of-way. PVC pipe is very susceptible to failures due to point-loading which can be caused by settlement of other utilities “touching the pipe” or causing uneven support of the pipe as the bedding moves. Ductile iron pipe is less susceptible to these uneven forces. Fortunately, most soils in Glendale are not corrosive. As such, exterior pipe corrosion is not a major cause of main breaks within the City.

Additionally, due to the low corrosiveness of Glendale’s soils GWP can rehabilitate existing pipes instead of replacing them. GWP’s current standards are to replace unlined six-inch, or smaller, cast iron mains with eight-inch or larger cement-line ductile iron mains, and to clean and reline cast iron mains that are eight inches and larger. This significantly extends the useful life of the existing mains and allows for more rehabilitation and replacement of the City’s water infrastructure at a lower cost.

***Grand Jury Recommendation # 9-3: Continue evaluation of earthquake resilient pipes and expand usage of this material as indicated.***

**Response to Recommendation # 9-3:**

The City uses earthquake resilient pipes in specific and appropriate locations. GWP’s program focuses on the applications most susceptible to damage from earthquakes and applications that would suffer the highest consequences due to failures. The most important application for earthquake resilient pipes is at the City’s above ground steel water storage tanks. The City’s tanks are designed per ASTM/AWWA standards to withstand earthquakes and minimize damage resulting from earthquakes. If a tank lifts vertically or moves horizontally in an earthquake the pipes connecting to the tank can break and can damage the tank itself by pulling out a section of the tank wall. To prevent this type of damage, GWP has upgraded and installed earthquake resilient pipe at all of its water tank connections.

**STAKEHOLDERS/OUTREACH**

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Not applicable.

## **FISCAL IMPACT**

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There is no fiscal impact associated with this report.

## **ENVIRONMENTAL REVIEW**

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This item is considered a ministerial activity and therefore, not subject to CEQA review.

## **CAMPAIGN DISCLOSURE**

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This item is exempt from campaign disclosure requirements.

## **ALTERNATIVES**

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Alternative 1: Adopt the proposed response to the Grand Jury Report.

Alternative 2: Direct staff to prepare an alternate Response to the Grand Jury Report; not responding to the Report, or an untimely response after September 30, 2022, may expose the City to further consequences, including but not limited to legal action against the City.

## **ADMINISTRATIVE ACTION**

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### **Prepared by:**

Michael E. De Ghetto, Chief Assistant General Manager - Water

### **Approved by:**

Roubik R. Golanian, P.E., City Manager

## **EXHIBITS / ATTACHMENTS**

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Exhibit 1: June 21, 2022 Los Angeles County Civil Grand Jury Report

Exhibit 2: Proposed Response to Grand Jury Report

Exhibit 3: Water Division Ten-Year CIP, Glendale Water & Power Commission, December 5, 2016

Exhibit 4: Example information presented to Civil Grand Jury

Exhibit 5: "LA City Council, Council File No. 20-1076 - Sunset Boulevard / UCLA / Water Main Break /August 23, 2020", Martin L. Adams, General Manager and Chief Engineer, Los Angeles Department of Water & Power.

Exhibit 6: "Water Main Break Rates in the USA and Canada: A Comprehensive Study", March 2018, Steven Folkman, Ph.D., P.E., Utah State University, Buried Structures Laboratory.