THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Information Technology Group

- **Information Technology Group Monthly Activities for April 2025**

Summary

This report provides a summary of activities related to the Information Technology Group for April 2025.

Purpose

Informational

Detailed Report

Over time, earthquakes have impacted critical infrastructure, both structural and non-structural, throughout the Southern California region. The consequences of non-structural component failures within some Metropolitan facilities could potentially impact the ability to reliably deliver water to member agencies. Non-structural components of a facility include all elements that are not a part of a building's structural system, including architectural details, mechanical, electrical, and instrumentation equipment, plumbing/process piping systems, and miscellaneous furniture and fixtures.

As part of the Metropolitan's seismic resiliency program, a "rapid evaluation" methodology was developed for these non-structural components with an established goal of assessing potential deficiencies and recommending improvements to address their overall structural integrity and safety performance during and after seismic events. Initially, an observation and hazard checklist form was created to document findings from field investigations, but the paper-based format proved to be inefficient and delayed improvement projects. A request was made to develop a software application that could be utilized by staff in the field on mobile devices and improve the technical workflow.

By creating a GIS application, IT streamlined and optimized the workflow by creating smart forms on a tablet and having a central data repository. The standardized smart forms eliminate the laborious paper-based processes and easily capture data anywhere, on any device, from any location. The application consists of drop-down or pick-list type questions for a more intuitive user experience and uses formula-based fields where survey questions will be based on the previous answers. Survey questions are grouped into four categories:

- Architectural components
- Mechanical, electrical, and process/plumbing components
- Furniture, fixtures, equipment, and content
- Emergency systems

There are over 305 non-structural components with checklist questions in the application. Each component may also be repeated multiple times, as well as have photos or PDF attachments. Submissions are synced in real time and are displayed on a GIS web application to visualize and analyze the data in one place. Since the application's release, the team has received positive feedback from our customers, and this has proven to improve efficiency.

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Photo of the application interface