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GOOD STORY

Fremont, California's Disaster Preparedness Container Program

SUMMARY

The City of Fremont, California, in partnership with the local water utility and solid waste disposal contractor, developed a new method of re-establishing water supply after a water main break. The City purchased large cargo containers stocked with large-diameter hose and stored at fire stations. These Disaster Preparedness Containers (DPCs) enable firefighters and water utility officials to temporarily bridge ruptured water mains in as little as 20 minutes.

BACKGROUND

Water main ruptures were a serious problem in California during both the 1989 Loma Prieta earthquake and the 1993 Northridge earthquake. Until water mains were reconnected, firefighters lacked the water needed to fight fires, while citizens were left without drinking water. Before water service was restored, the local water utility, Alameda County Water District (ACWD), used heavy digging equipment and cranes to replace damaged water mains with new large-diameter pipe—a time consuming and difficult process. As a result, multiple neighborhoods went for hours or even days without water in the aftermath of the 1989 and 1993 earthquakes.

In 1995, Fremont Fire Chief Dan Lydon decided that the City needed to develop a method of rapidly restoring temporary water service. He proposed the formation of a public-private partnership between the City and its waste disposal contractor, Browning-Ferris Industries (BFI) to address the problem. BFI agreed to work with the Fremont Fire Department and the ACWD to develop the DPC Program.

GOALS

The DPC Program's goal is to enable firefighters and water utility officials to circumvent a ruptured water main quickly with large-diameter hose.

DESCRIPTION

Purchasing the Containers

The City of Fremont purchased several large metal containers at a cost of approximately \$3000 each. The containers are stocked with hose, portable fire hydrants, and the necessary fittings for temporarily re-connecting an affected neighborhood to the water supply. The containers can also be loaded with blankets, water jugs, food, medicine, and other emergency supplies.

The Fremont Fire Department selected large cargo containers that could be pulled up onto the loading rails on BFI trucks. The containers are stored at fire stations, where BFI waste disposal trucks can pick them up during an emergency. In the event that roads are

impassable, the containers are outfitted with special hooks so that they can be airlifted by helicopter.

The DPC Program managers thought as carefully about the appearance of the containers as they did about their function. The containers are bright, "fire engine red" so that citizens can immediately identify them as official emergency equipment. The sides are painted with the logos of the three participating organizations, along with the slogan "Working Together for Disaster Preparedness." This positive publicity rewards BFI and ACWD for their cooperation.

Restoring Water Service

In the event of a water main rupture, BFI trucks deliver the DPCs to the affected neighborhood. Firefighters and ACWD work together at the scene to decide how to bridge the ruptured water main with large-diameter hose. A Fremont Fire Department engine is sent to lay the large diameter hose to connect the damaged area with an undamaged part of the water supply system. The DPC has thousands of feet of large diameter hose on board to ensure that the repair crew has enough hose to connect to a functioning portion of the water supply system.

Improving Service and Safety

The DPCs have been deployed to water main ruptures in Fremont and nearby Union City. During those incidents, water was restored to affected neighborhoods in less than twenty minutes. The DPC Program has been so successful during the last decade that Fremont has purchased additional containers in order to further strengthen the City's ability to respond to disruptions to the water supply. Fremont is also considering stocking the containers with collapsible water bottles and a dispensing manifold, so that water can be distributed to citizens directly from the emergency water supply.

REQUIREMENTS

Keys to Success

The DPC Program has succeeded because the City of Fremont made a careful, considered decision about exactly what type of container it needed. The appearance of the container, possible future uses, and compatibility with other equipment were all reviewed prior to any expenditures.

The aid of the ACWD and BFI were essential to the DPC program. The relationship between local government and private industry in Fremont helped make the program a success.

Resources

The containers cost approximately \$3000 each and require storage space at local fire stations. The containers must be stored in fire stations so that firemen can perform routine checks of the equipment. BFI pays the cost of gas for the disposal trucks and drivers' salaries.

Training

The city did not need to train any of the participants in the program, because the waste disposal trucks and other equipment are operated by BFI, ACWD, and Fremont Fire Department employees who are already trained to use them.

Links

US Council of Mayors Outstanding Achievement Award:

http://www.usmayors.org/uscm/best_practices/partnership/fremont_award.html

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