

DAMAGE ASSESSMENT AND REPAIR TEAM – WATER DISTRIBUTION SYSTEM

DESCRIPTION	The Damage Assessment and Repair Team - Water Distribution System conducts damage assessment and light repairs to a water distribution system.
RESOURCE CATEGORY	Public Works
RESOURCE KIND	Team
OVERALL FUNCTION	The Damage Assessment and Repair Team - Water Distribution System conducts assessments and repairs of mains, valves, hydrants, storage facilities, and excavation through backfill, in all types of water distribution facilities. This team does not repair pump stations
COMPOSITION AND ORDERING SPECIFICATIONS	<ol style="list-style-type: none"> 1. Discuss logistics for deploying this team, such as security, lodging, transportation, and meals, prior to deployment 2. This team typically works 12 hours per shift, is self-sustainable for 72 hours, and is deployable for up to 14 days 3. Specify facilities that need damage assessment and repair expertise, including specific water main materials and size ranges, typical depth of facilities and soil conditions, and any materials that responders should provide 4. Specify details regarding water distribution facilities, including specific types of system components in need of assessment and repair, typical depth and soil condition, hydrant makes and models, and other specific materials 5. Requestor provides plans showing water main locations, and coordinate notification of “call-before-you dig”-type services used in the region 6. Based on the mission, the requestor and provider coordinate welder and welding equipment, traffic control considerations, and materials the requestor or others provide 7. Specify whether the team will need a vacuum truck 8. Specify basic safety equipment for team members, including personal protective equipment (PPE) such as hard hats, reflective vests, eye protection, ear protection, and other equipment based on incident conditions

Each type of resource builds on the qualifications of the type below it. For example, Type 1 qualifications include the qualifications in Type 2, plus an increase in capability. Type 1 is the highest qualification level.

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
CAPABILITY PER TEAM DIAMETER MAIN	24” or more	10” - 22”	2 inches (“) - 8”	The team’s ability to conduct assessments and repairs is dependent on the diameter of the main.
EQUIPMENT PER TEAM MEMBER COMMUNICATIONS	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1. Cell phone 2. Portable radio 	Consider alternate forms of communication, such as satellite phones, based on the mission assignment and team needs.
EQUIPMENT PER TEAM VEHICLE	Same as Type 2, PLUS: 1 - Tandem dump truck	Same as Type 3, PLUS: 1 - Medium track excavator 1 - Truck with equipment boom	<ol style="list-style-type: none"> 1 - Backhoe loader 1 - Tandem dump truck 1 - Truck 	Not Specified
EQUIPMENT PER TEAM WATER REPAIR	Same as Type 2	Same as Type 3	<ol style="list-style-type: none"> 1 - Air compressor 1 - Mud pump 	Equipment includes pneumatic tools, small power tools, and hand tools necessary for the repairs indicated.
PERSONNEL PER TEAM MANAGEMENT AND OVERSIGHT	Same as Type 2	Same as Type 3	1 - National Incident Management System (NIMS) Water Distribution Plant Operator	Not Specified

Resource Typing Definition for Infrastructure Systems
Public Works

COMPONENT	TYPE 1	TYPE 2	TYPE 3	NOTES
PERSONNEL PER TEAM MINIMUM	7	5	4	Not Specified
PERSONNEL PER TEAM OPERATIONS AND SUPPORT	Same as Type 2, PLUS: 1 - Tandem Dump Truck Driver 1 - Utility Worker	Same as Type 3, PLUS: 1 - Lead Repair Technician	1 - Backhoe-Loader Operator 1 - Tandem Dump Truck Driver 1 - Utility Worker	1. The Backhoe-Loader Operator, Tandem Dump Truck Driver, Utility Worker, and Lead Repair Technician are not NIMS typed positions. 2. The Backhoe-Loader Operator needs the Authority Having Jurisdiction's (AHJ) authorization to operate a medium-track excavator.

Superseded

NOTES

1. Nationally typed resources represent the minimum criteria for the associated component and capability.
2. This document is US Government work and is not copyright protected in the United States. This publication was created with individual input and expertise provided by several state and local government entities. While the Federal Emergency Management Agency does not endorse any non-US government organizations or publications, several documents were referenced in the creation of this document, including, for example, the “American Water Works Association (AWWA), c 2008. Water & Wastewater Mutual Aid and Assistance Resource Typing Manual. Denver, Colorado.”

REFERENCES

1. FEMA, NIMS 509: Water Distribution Plant Operator
2. American Water Works Association’s (AWWA), © 2008. Water & Wastewater Mutual Aid and Assistance Resource Typing Manual. Denver, Colorado. Used with permission

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