

## WASTEWATER TREATMENT FACILITIES OPERATIONS TEAM

<b>DESCRIPTION</b>	The Wastewater Treatment Facilities Operations Team operates wastewater treatment facilities.
<b>RESOURCE CATEGORY</b>	Public Works
<b>RESOURCE KIND</b>	Team
<b>OVERALL FUNCTION</b>	The Wastewater Treatment Facilities Operations Team operates all types of wastewater treatment facilities regardless of size, and with various systems, conveyance facilities, treatment plants, and pump stations, but does not repair pump stations
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. Discuss logistics for deploying this team, such as security, lodging, transportation, and meals, prior to deployment</li> <li>2. This team typically works 12 hours per shift, is self-sustainable for 72 hours, and is deployable for up to 14 days</li> <li>3. This team provides equipment for monitoring and testing the wastewater treatment process, such as gas detectors, pH kits, and portable laboratories unless the requestor supplies them</li> <li>4. Provide schematics and details regarding water treatment facilities, including the following: <ol style="list-style-type: none"> <li>a. Relevant treatment processes and expertise</li> <li>b. Treatment capacity, such as millions of gallons per day</li> <li>c. Types of facilities and processes that requestor needs to have in operational condition</li> <li>d. Materials that responders should provide</li> <li>e. Relevant control systems, such as electronic, pneumatic, and hydraulic</li> </ol> </li> <li>5. 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</li> </ol>

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	TYPE 4	NOTES
<b>CAPABILITY PER TEAM PROCESSES</b>	Same as Type 2, PLUS: 1. Nutrient removal 2. Membranes 3. Ultraviolet (UV)	Same as Type 3, PLUS: 1. Activated sludge 2. Tertiary filtration 3. Gaseous chlorination 4. Biosolids handling	Same as Type 4, PLUS: 1. Biological treatment 2. Liquid chlorination 3. Dewatering	1. Septic systems 2. Trickling filtration 3. Sand filtration 4. Biological lagoons 5. Constructed wetlands	Not Specified
<b>EQUIPMENT PER TEAM VEHICLE</b>	Same as Type 2	Same as Type 3	Same as Type 4	1 - Light-duty vehicle	Not Specified
<b>EQUIPMENT PER TEAM MEMBER COMMUNICATIONS</b>	Same as Type 2	Same as Type 3	Same as Type 4	1. Cell phone 2. Portable radio	1. Team member assignments determine the quantity and kind of communications equipment. 2. Consider alternate forms of communication, such as satellite phones, based on the mission assignment and team needs.
<b>PERSONNEL PER TEAM MANAGEMENT AND OVERSIGHT</b>	Same as Type 2	Same as Type 3	Same as Type 4	1 - National Incident Management System (NIMS) Type 1 Wastewater Treatment Plant Operator	Not Specified

Resource Typing Definition for Infrastructure Systems  
Public Works

COMPONENT	TYPE 1	TYPE 2	TYPE 3	TYPE 4	NOTES
<b>PERSONNEL PER TEAM MINIMUM</b>	3	3	3	2	Not Specified
<b>PERSONNEL PER TEAM OPERATIONS AND SUPPORT</b>	Same as Type 2	Same as Type 3	Same as Type 4, PLUS: 1 - NIMS Type 2 Wastewater Treatment Plant Operator	1 - NIMS Type 2 Wastewater Treatment Plant Operator	Not Specified

**Superseded**

## NOTES

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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

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

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