

## HYDRAULIC MODELER

<b>RESOURCE CATEGORY</b>	Public Works
<b>RESOURCE KIND</b>	Personnel
<b>OVERALL FUNCTION</b>	The Hydraulic Modeler plans and models water systems, wastewater systems, and projects related to stormwater, groundwater, and recycled water
<b>COMPOSITION AND ORDERING SPECIFICATIONS</b>	<ol style="list-style-type: none"> <li>1. This position can be ordered as a single resource.</li> <li>2. This position can be ordered in conjunction with a National Incident Management System (NIMS) typed team (Operations Team - Water Treatment Facility; Operations Team - Wastewater Treatment Facility; Repair and Start-Up Team Lift and Pump Stations - Wastewater Facility; Repair and Start-Up Team Water Pump Facilities - Water Production; Repair Team - Water Distribution System; Repair and Start-Up Team - Water Treatment Facility; Repair and Start-Up Team - Wastewater Treatment Facility)</li> <li>3. Discuss logistics for deploying this position, such as working conditions, safety, length of deployment, security, lodging, transportation, and meals, prior to deployment</li> <li>4. Requestor and provider discuss safety and work environment prior to deployment</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	SINGLE TYPE	NOTES
<b>DESCRIPTION</b>	<p>The Hydraulic Modeler:</p> <ol style="list-style-type: none"> <li>1. Plans and models water and wastewater systems related to: <ol style="list-style-type: none"> <li>a. Gravity sanitary sewers and force mains</li> <li>b. Water distribution and transmission pipelines</li> <li>c. Water and wastewater pump stations</li> </ol> </li> <li>2. Uses Geographic Information Systems (GIS) to help plan response efforts</li> </ol>	Not Specified
<b>EDUCATION</b>	Bachelor's degree in civil engineering, environmental engineering, or related field	Not Specified
<b>TRAINING</b>	<p>Completion of the following:</p> <ol style="list-style-type: none"> <li>1. IS-100: Introduction to the Incident Command System, ICS-100</li> <li>2. IS-200: Basic Incident Command System for Initial Response, ICS-200</li> <li>3. IS-700: National Incident Management System, An Introduction</li> <li>4. IS-800: National Response Framework, An Introduction</li> </ol>	Not Specified
<b>EXPERIENCE</b>	<ol style="list-style-type: none"> <li>1. Advanced knowledge of system hydraulics and hydraulic modeling software for pressurized and gravity pipeline networks</li> <li>2. Knowledge of and experience working with GIS</li> </ol>	Requestor gives provider modeling software requirements.
<b>PHYSICAL/MEDICAL FITNESS</b>	<ol style="list-style-type: none"> <li>1. Moderate</li> <li>2. Is able to work while wearing appropriate personal protective equipment (PPE)</li> </ol>	<ol style="list-style-type: none"> <li>1. NIMS Guideline for the National Qualification System (NQS) defines Physical/Medical Fitness levels for NIMS positions.</li> <li>2. PPE is mission-specific and may vary by work environment; it includes protective footwear, protective clothing for skin exposure, eye and ear protection, respirators, gloves, and masks.</li> </ol>
<b>CURRENCY</b>	Functions in this position during an operational incident, planned event, exercise, drill, or simulation at least once every three years	Not Specified



COMPONENT	SINGLE TYPE	NOTES
PROFESSIONAL AND TECHNICAL LICENSES AND CERTIFICATIONS	Not Specified	1. Authority Having Jurisdiction (AHJ) specifies necessary licenses or certification. 2. AHJ determines reciprocity or equivalency with the providing jurisdiction before deployment.



## NOTES

Nationally typed resources represent the minimum criteria for the associated component and capability.

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## REFERENCES

1. FEMA, NIMS 508: Operations Team – Water Treatment Facility
2. FEMA, NIMS 508: Operations Team – Wastewater Treatment Facility
3. FEMA, NIMS 508: Repair and Start-Up Team Lift and Pump Stations – Wastewater Facility
4. FEMA, NIMS 508: Repair and Start-Up Team Water Pump Facilities – Water Production
5. FEMA, NIMS 508: Repair Team – Water Distribution System
6. FEMA, NIMS 508: Repair and Start-Up Team – Water Treatment Facility
7. FEMA, NIMS 508: Repair and Start-Up Team – Wastewater Treatment Facility
8. FEMA, National Incident Management System (NIMS), October 2017
9. FEMA, NIMS Guideline for the NQS, November 2017
10. FEMA, National Response Framework, June 2016