Is Water Operations the Career for You?

Clean, safe drinking water is the most valuable resource on the planet and that is the job of water operators. This brochure describes:

- The benefits and opportunities for water operations professional,
- What water treatment and distribution are,
- The types of work that water operators perform.

Training to be a Water Operator:

Most states and some tribes require water operators to pass certification exams to show they are capable of overseeing water operations. Many have their own certification programs. Requirements typically include a combination of training and hands-on experience performing the duties of a water operator, and some utilities hire "trainees" who do not yet have the experience and training, but are interested in acquiring them. To learn more about this exciting career opportunity, visit the following websites:

- WaterOperator.org
- American Water Works Association, www.awwa.org
- Association of Boards of Certification, www.abccert.org

Or search for "water operator" on your state's website.

What Would I be Doing?

Water operators run the equipment and control the processes that clean drinking water. They maintain and repair the pipes, valves, pumps, controls, gates, engines, generators, and other equipment used to produce drinking water. They sample and test the water at various points during treatment and distribution to ensure the treatment processes are working correctly to maintain drinking water quality.

Water operators also protect the security of the water supply, treatment, and distribution system before, during, and after natural or human-caused emergencies.

A World of Career Opportunities:

Jobs that offer:

- Stability,
- Ability to work all over the country,
- Advancement opportunities,
- Chance to be part of a "green" industry,
- Chance to make a difference in your comunity,

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WATER OPERATOR CAREERS

Benefits of Being a Water-Operations Professional

Water operators are the first line of defense in public health. They deliver safe drinking water to their customers, ensuring both quantity and quality, and ensure that fire hydrants have enough water to fight fires. Being a water operator is a very meaningful career choice—you make a huge, positive difference in the health and safety of your community.

The average salary for water operators is $52,300 per year, but experienced water operators can earn around $80,000 per year in large communities—more in supervisory positions. Many utilities offer excellent benefits and opportunities for career advancement.

Many water operators are retiring, and the expected operator shortage makes this a great time to enter this industry, whether you're just starting your career or looking for a career change!

How is Water Treated and Distributed?

Drinking water originates in lakes, rivers, or streams (surface water), or comes from formations under the ground (groundwater).

Surface water travels through pipes (usually by gravity) to a water-treatment system. Groundwater is pumped up from the ground to the treatment system. The treatment system is designed to remove contaminants that may be harmful to human health or to the system's components. Contaminants may be:

- Biological, such as algae or microscopic organisms;
- Non-organic metals, radionuclides, and minerals;
- Organic chemicals that come from fertilizers, pesticides, or other sources.

The first step in drinking water treatment is contaminant removal. For surface water, this step consists of:

- Coagulation and flocculation: causing contaminants to clump together
- Sedimentation: where the heavier particles settle out of the water
- Filtration: where the water passes through a filter to remove particles remaining in the water

Groundwater usually has fewer of the contaminants requiring clumping and settling, and so it often does not require these steps. In some cases, however, groundwater may have naturally occurring minerals or industrial contaminants that require specific treatment processes to remove them.

After treatment to remove contaminants, all drinking water (whether from surface or ground sources) is disinfected to kill any biological contaminants still remaining. Disinfection can be done with chlorine, ozone, or ultraviolet light, and regulations require additions of a small amount of chlorine to ensure the water stays free of disease-causing organisms while it's being transmitted from the treatment plant to customers' taps.

Once water leaves the treatment plant, it may be stored in a tank or distributed directly to customers through the distribution system, a network of pipes and pumps that carries water from the treatment system to homes, businesses, schools, hospitals, and other customers.Have you ever wondered how drinking water gets to your home's faucets? Drinking water originates in lakes, rivers, or streams (surface water) or comes from formations under the ground (groundwater).