

WATER OPERATOR CERTIFICATION EXPLAINED

#NoOperatorNoWater



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Certified water operators are a critical part of providing an adequate and safe supply of water.

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SERVE

MY COMMUNITY



PROTECT

PUBLIC
HEALTH

CARE

FOR THE
ENVIRONMENT

“ I BECAME
A WATER
OPERATOR
TO:

FACE NEW
CHALLENGES

PROVIDE
CLEAN WATER
for EVERYONE

LEARN
something new



VALUE OF CERTIFICATION



NO OPERATOR NO WATER™

 American Water Works Association





**OPERATOR
CAREER
SNAPSHOT**

A LOOK AT THE JOB

WHAT THEY DO

WATER TREATMENT OPERATORS

are responsible for operating and maintaining a water treatment plant, including maintenance of equipment, quality control, and day-to-day activities.

WATER DISTRIBUTION OPERATORS

are responsible for operating and maintaining a water distribution system.

WASTEWATER TREATMENT OPERATORS

are responsible for operating and maintaining a wastewater treatment plant.

Water and wastewater operators can perform a wide variety of tasks:

- Inspect equipment
- Monitor operating conditions, meters, and gauges
- Collect and test water and sewage samples
- Record meter and gauge readings and operational data
- Document and report test results to regulatory agencies
- Operate equipment to purify and clarify water or to process or dispose of sewage
- Clean and maintain equipment, tanks, filter beds, and other work areas

*Based on US Department of Labor, Bureau of Labor Statistics Occupational Outlook Handbook, 2018



OUTLOOK

A PROMISING FIELD

The US Bureau of Labor Statistics shares that in the upcoming decade, more than 7,000 certified operators will be needed.

WORK ENVIRONMENT

Water and wastewater treatment plant and system operators held about 119,200 jobs in 2016. The largest employers of water and wastewater treatment plant and system operators were as follows:

LOCAL GOVERNMENT <i>(excluding education and hospitals)</i>	77%
UTILITIES	12%
MANUFACTURING	4%

*Based on US Department of Labor, Bureau of Labor Statistics
Occupational Outlook Handbook, 2018

SALARY

	Water Treatment Operator			Water Distribution/ Collection Operator			Wastewater Treatment Operator		
Population Size	Associate	Intermediate	Senior	Associate	Intermediate	Senior	Associate	Intermediate	Senior
50,000– 100,000	\$37k– \$54k	\$45k– \$64k	\$50k– \$71k	\$38k– \$53k	\$45k– \$62k	\$49k– \$69k	\$39k– \$56k	\$44k– \$63k	\$50k– \$72k
25,000– 50,000	\$37k– \$51k	\$43k– \$59k	\$48k– \$67k	\$37k– \$52k	\$43k– \$59k	\$52k– \$71k	\$38k– \$50k	\$41k– \$54k	\$53k– \$72k
10,000– 25,000	\$37k– \$51k	\$43k– \$57k	\$48k– \$67k	\$35k– \$49k	\$40k– \$56k	\$48k– \$67k	\$35k– \$50k	\$38k– \$54k	\$41k– \$60k
	First-Level	Intermediate	High-Level	First-Level	Intermediate	High-Level	First-Level	Intermediate	High-Level
Typical Years of Experience	0-2	2-4	5+	0-2	2-4	5+	0-2	2-4	5+

*Salary ranges based on AWWA's 2017 Compensation Survey



**GETTING
CERTIFIED**

CERTIFICATION PROCESS

WATER OPERATORS MUST PASS A CERTIFICATION EXAM FOR THEIR SPECIFIC CERTIFICATION LEVEL.



01

Visit Association of Boards of Certification (ABC) website to find your certification contact information.

02



Check your eligibility (exam requirements, applications, training programs, etc.)



03



Check for upcoming testing dates.

04



File for your exam.

Currently, operator certification is offered at a state or province level, but testing criteria are similar across geographic locations.

HOW THE EXAM WORKS

70%

Minimum score required to pass the exam*

\$75-\$100

Average cost of the exam*



Plan for 3-6 months of preparation



Take several practice exams

WHAT THE EXAM COVERS



Each question tests one of three skills: Comprehension, Application, or Analysis

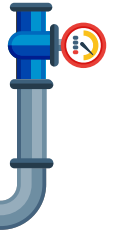
Laboratory Procedures



Regulation/Administrative Duties

Operations and Maintenance

Water Treatment Process



*If you are currently employed with a utility, check with them for testing requirements, cost coverage, and available resources. Requirements may vary by state.

CERTIFICATION REQUIREMENTS



AWWA Water System Operations (WSO) certification study guides all meet Association of Boards of Certification (ABC) Requirements and align with ABC's Need-to-Know Criteria.

	EDUCATION	EXPERIENCE
CLASS I	High school diploma, GED, or equivalent	1 year of acceptable experience
CLASS II	High school diploma, GED, or equivalent	3 years of acceptable experience
CLASS III	High school diploma, GED, or equivalent; 900 contact hours of post high school education	4 years of acceptable experience, including 2 years of direct responsible charge
CLASS IV	High school diploma, GED, or equivalent; 1,800 contact hours of post high school education	4 years of acceptable experience, including 2 years of direct responsible charge
VERY SMALL WATER SYSTEMS		
	High school diploma, GED, or equivalent, six contact hours of education in a very small water system	Six months of acceptable operating experience in a very small water system or high utility

WHAT IF MY STATE DOESN'T FOLLOW ABC?



STATE RESOURCES

Requirements for operator certification and exam details differ slightly by state.
Select your state below for more specific information:

Alabama

Alaska

Arizona

Arkansas

California

Colorado

Connecticut

Delaware

Florida

Georgia

Hawaii

Idaho

Illinois

Indiana

Iowa

Kansas

Kentucky

Louisiana

Maine

Maryland

Massachusetts

Michigan

Minnesota

Mississippi

Missouri

Montana

Nebraska

Nevada

New Hampshire

New Jersey

New Mexico

New York

North Carolina

North Dakota

Ohio

Oklahoma

Oregon

Pennsylvania

Rhode Island

South Carolina

South Dakota

Tennessee

Texas

Utah

Vermont

Virginia

Washington

West Virginia




Wisconsin

Wyoming



HOW AWWA
CAN HELP YOU



CERTIFICATION RESOURCES


 Publications  Online Learning  Video

SHARPEN YOUR SKILLS


PREP AND STUDY


General

-  Operator Math Made Easy
-  Operator Chemistry Made Easy


-  Secrets to Success: How to Prepare for Operator Certification


Water

-  Math for Water Treatment Operators


-  AWWA Water Operator Certification Exam Prep


Treatment


-  WSO Water Treatment, Grade 1


-  WSO Water Treatment, Grade 1 Clips

Operator

-  WSO Water Treatment, Grade 2


-  WSO Water Treatment, Grade 2 Clips

-  WSO Water Treatment, Grades 3 & 4

-  WSO Water Treatment, Grade 3 & 4 Clips


Water

-  WSO Water Distribution, Grades 1 & 2

-  WSO Water Distribution, Grades 1 & 2 Clips


Distribution/

-  WSO Water Distribution, Grades 3 & 4

-  WSO Water Distribution, Grades 3 & 4 Clips


Collection


-  Math for Distribution System Operators

-  AWWA Water Operator Certification Exam Prep


Operator

Wastewater

-  Math for Wastewater Treatment Operators, Grades 1 & 2

-  Wastewater Operator Certification Study Guide

Treatment

-  Math for Wastewater Treatment Operators, Grades 3 & 4

Operator

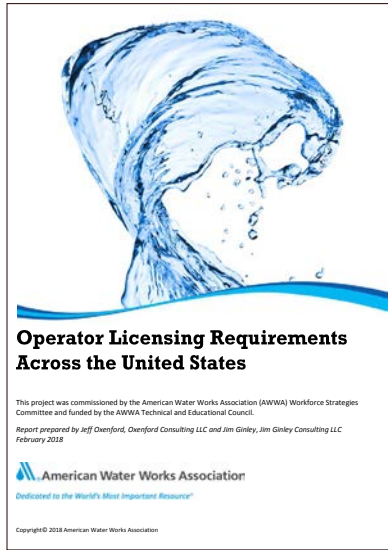


Download AWWA's free Exam Prep App to take studying on the go



OTHER RESOURCES

FROM AWWA:




MORE:




AFTER **CERTIFICATION**




OPERATOR RESOURCES

 Publications

 Online Learning




 Video


 Expert-Led Training

ON-THE-JOB TRAINING













ADVANCE YOUR CAREER












General

-  EL7 Basic Mathematics
-  WSO Source Water Protection
-  WSO Water Loss Control

-  EL6 Applied Mathematics

Water Treatment Operator

-  AWWA Water Operator Field Guide, Second Edition
-  Water Treatment Operator Training Handbook, 3rd Edition
-  Water Treatment Made Simple for Operators
-   Water Treatment Operator Course: Level 1
-   Water Treatment Operator Course: Level 2
-   Water Treatment Operator Course: Level 3
-  EL10 Filtration Basics
-  EL229 Membrane Processes
-  WSO Membrane Technology

-   High-Tech Operator: Course 1
-   High-Tech Operator: Course 2
-   High-Tech Operator: Course 3
-  WSO Chlorine Chemistry
-  WSO Jar Testing
-  WSO Instrumentation and Control
-  WSO Coagulation, Flocculation, and Sedimentation
-  WSO Turbidity Measurement and Particle Counting

OPERATOR RESOURCES



Publications



Online Learning



Video



Expert-Led Training

ON-THE-JOB TRAINING

ADVANCE YOUR CAREER

Water Distribution/ Collection Operator



Water Distribution Operator Training Handbook, 4th Edition



EL13 Distribution Service to Customers



EL227 Backflow Prevention and Cross-Connection Control



EL208 Fire Hydrant Basics for Pressurized Water System



EL206 Why Are Water Service Lines Important



WSO Maintaining a Distribution and Storage System



EL69 Advanced Disinfection of Pipeline and Storage Facilities



EL68 Advanced Metering Infrastructure for the Water Industry



EL24 Disinfection of Pipelines and Storage Facilities



EL14 Distribution System Materials and Equipment



EL15 Water Main Installation



WSO Pumps



WSO Flushing and Cleaning

Wastewater Treatment Operator



Wastewater Microbiology: A Handbook for Operators



AWWA Wastewater Operator Field Guide



EL9 Disinfection Basics



EL210 Pumping and Pressure Sewer Systems



WSO Disinfection



WSO Disinfection By-products



WSO Filtration

OPERATOR RESOURCES

HOW AWWA MEMBERSHIP CAN HELP

Stay up-to-date.

AWWA membership gives you access to the latest news and information on the water sector, including a subscription to *Opflow*, which will:

- Keep you informed on best practices in the water sector
- Offer in-depth articles on important topics
- Provide hands-on guidance to improve utility operations
- Test your knowledge with certification quiz questions

Connect with other Water Professionals.

Talk with your peers at local events and meet water-sector leaders at conferences across North America. Take advantage of the opportunities to share best practices and learn what others have done when they have confronted a crisis.

Section Membership is your local connection to AWWA and provides:

Local events and continuing education opportunities | Region-specific news and information | Ways to directly influence local water issues | Networking opportunities in your community | Opportunity for training and education funding through the One AWWA Operator Scholarship

CONTINUING EDUCATION (CE) CREDITS

CE Credits are required to renew licenses. States and provinces use different labels, but AWWA awards CE Credits in alignment with the International Association for Continuing Education and Training.

AWWA OFFERS A FREE CE CREDITS TRANSCRIPT REPORTING TOOL

Store your CE Credits all in one place with the CE Credit reporting tool. You can print your AWWA certificates, sorting by program or date range (going back SEVEN years). You can even use the transcript as an official document!



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#AWWA

awwa.org/waterneedsoperators



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Association**

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