



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE BOARD FOR CERTIFICATION OF WATER AND WASTEWATER SYSTEMS OPERATORS

APPLICATION INSTRUCTIONS FOR CERTIFICATION UPGRADE, DOWNGRADE, OR RECIPROCITY TO OPERATE WATER OR WASTEWATER SYSTEMS

Part 1: APPLICANT INFORMATION

IMPORTANT: Complete ALL sections of the application! Incomplete applications will not be considered by the Operator Certification Board. Mailing and email address changes must be submitted to DEP and are critical to ensure you receive important correspondence regarding your license.

Upgrades do not require a Criminal History Record.

Reciprocity applicants – Your PA State Police **NON-NOTARIZED** Criminal History Record (CHR) must accompany this application and be dated within 90 days of the date DEP receives the paper copy of your application. A copy of your valid out-of-state operator certificate must also be included.

All applications must be approved by the State Board for Certification of Water and Wastewater Systems Operators. Board meeting dates are listed on the operator website at www.dep.pa.gov/operatorcenter; please click on “Board Meeting Schedule” to find the dates.

Part 2: CERTIFICATE REQUEST (Mark appropriate box on application)

Upgrade in Class ONLY – No fee	Applicants who previously passed the required examinations and now meet the experience requirements for a higher class.
Reciprocity - \$100 or \$150	Applicants holding a valid out-of-state certificate requesting Pennsylvania certification.
Downgrade in Class – No fee	Applicants must prove they work <u>only</u> in the lower-class facility for which the downgrade is requested. Downgrade requests must be received at least 90 days prior to license expiration date.

Part 3: EDUCATION (Mark appropriate box on application)

Applicants should provide a copy of their high school diploma or GED; or applicants can check the appropriate box on Page 1 to indicate they have successfully obtained a high school diploma or achievement of GED.

An official copy of the applicant's college transcript and/or course completion certificates must accompany the application ONLY if an applicant is requesting consideration of education credit towards operating experience.

College transcripts and education credit supplements do not apply for reciprocity applicants.

Part 4: OPERATING EXPERIENCE

If you have worked at multiple water or wastewater systems and are requesting to apply operating experience from multiple systems, a separate Page 2 and Page 3 of the application must be provided for each system you are claiming operating experience.

Include as much detail as possible regarding your process control experiences and duties. Mark the appropriate boxes and fill in the required information describing your operating duties and responsibilities for the system.

It is important to be specific and accurate, this information will be used to determine your eligibility for class and subclass(es).

Compare the highest level of education you have achieved with the column headings of the tables below to determine the minimum experience requirements you must meet. The definition for each heading is as follows:

- AS** – An Associate Degree in environmental sciences, physical sciences, engineering or engineering technology NOT approved by DEP.
- CP** – A certificate of completion of a DEP-approved Certificate Program in Water Treatment, if applying for certification as a water system operator. The Certificate Program must be in a Wastewater Treatment Program if applying for certification as a wastewater treatment system operator.
- ASP** – An Associate Degree in a Water Treatment Program approved by DEP, if applying for certification as a water system operator. The Certificate Program must be in a Wastewater Treatment Program if applying for certification as a wastewater treatment system operator.
- BS/BA** – A bachelor's or graduate degree in Biology, Chemistry, Environmental Sciences, Physical Sciences, Sanitary or Environmental Engineering or Engineering Technology from a nationally accredited college or university.

Minimum Experience Requirements

Drinking Water System Operators

Classification	High School Diploma or GED	AS	CP	ASP	BS/BA
A	4 years	3.5 years	2 years	1 year	2 years
B	3 years	2.5 years	1 year	6 months	1 year
C	2 years	1.5 year	6 months	6 months	6 months
D	1 year	6 months	6 months	6 months	6 months
E	1 year	6 months	6 months	6 months	6 months
Dc water	6 months	6 months	0	0	0
Dn water	6 months	6 months	0	0	0

Wastewater Treatment System Operators

Classification	High School Diploma or GED	AS	CP	ASP	BS/BA
A	4 years	3.5 years	2 years	1 year	2 years
B	3 years	2.5 years	1 year	6 months	1 year
C	2 years	1.5 years	6 months	6 months	6 months
D	1 year	6 months	6 months	6 months	6 months
E	1 year	6 months	6 months	6 months	6 months

Education/Experience Substitution

Individuals NOT meeting AS, CP, ASP, or BS/BA education levels as listed on Page 1 of these instructions can request **consideration of up to 50%** of total operating experience required for a specific class (see High School Diploma or GED column above) be supplemented with DEP-approved training as defined in the table below. If this supplement request is approved, the other 50% of experience must be process control experience gained under the supervision of an appropriately certified operator.

Education/Experience	Total Experience Allowance
Successful completion of every 10 hours of post high school or post GED water or wastewater related training (as applicable) <u>approved by DEP</u> and determined by the State Board for Certification of Water and Wastewater Systems Operators (Board) to be <u>applicable to the certification sought</u> .	10 contact hours = 1 month = 1 CEU
Successful completion of a college course, from an accredited college or university, <u>approved by DEP as specifically related to the water or wastewater disciplines</u> . The Department will approve these courses in accordance with its training approval process guidelines.	1 college credit in <u>DEP-approved</u> water or wastewater treatment coursework = up to 1.5 months operating experience

Note: Education/Experience Substitution applies to new licenses and upgrades only. It does not apply towards reciprocity,

Part 5: CERTIFICATION HISTORY

Complete all information applicable to you.

SIGNATURE REQUIREMENTS

The applicant must sign, date and have the application notarized. Current and/or previous supervisor/supervising certified operator of the system(s) where the applicant is claiming operating experience must complete this section. If the supervisor was also a properly certified operator for the system, then only one signature is required in this section. **Applications without signatures will not be considered by the Board.**

For further information on the Operator Certification Program and the process for applying for certification, please contact 717.787.5236 or refer to the Drinking Water and Wastewater Information Center at www.dep.pa.gov/operatorcenter

DEFINITIONS OF CLASSES

WASTEWATER

- Class A – Serving an average of more than 5 million gallons per day.
Class B – Serving an average of greater than 1 million gallons per day but less than or equal to 5 million gallons per day.
Class C – Serving an average of greater than 100,000 gallons per day but less than or equal to 1 million gallons per day.
Class D – Serving an average of less than or equal to 100,000 gallons per day.
Class E – Satellite collection system with a pump station (will be combined with wastewater subclassification 4).

Class E

- ▶ **Collection system** – A system of pipelines or conduits, pumping stations and force or gravity mains used for collecting and conveying wastes to a point of treatment and disposal.
- ▶ **Satellite collection system** – A wastewater system consisting only of collection facilities with at least one pump station, which is designed to convey in excess of 2,000 gallons per day of untreated wastewater to a wastewater system owned by a different entity.

WATER

- Class A – Serving an average of more than 5 million gallons per day.
Class B – Serving an average of greater than 1 million gallons per day but less than or equal to 5 million gallons per day.
Class C – Serving an average of greater than 100,000 gallons per day but less than or equal to 1 million gallons per day.
Class D – Serving an average of less than or equal to 100,000 gallons per day.
Class E – Distribution and consecutive water systems
Class Dc – Serving no more than 500 individuals or having no more than 150 connections, where the source of water for the system is exclusively groundwater and requires only disinfection.
Class Dn – Serving no more than 500 individuals or having no more than 150 connections, where the source of water for the system is exclusively groundwater and does not require disinfection.

Class E

- ▶ **Consecutive water system** – A public water system that obtains all of its water from another public water system and resells the water to a person, provides treatment to meet a primary maximum contaminant level or provides drinking water to an interstate carrier. The term does not include bottled water and bulk water systems. If treatment is provided, the examination for the type of treatment utilized must also be taken.
- ▶ **Distribution system** – Pipelines, appurtenances, devices and facilities that convey potable water under pressure to customers. If treatment is provided, the examination for the type of treatment utilized must also be taken.
- ▶ ONLY subclasses 7 through 14 can be added to and utilized with the WE certificate.

DEFINITIONS OF SUBCLASSES

WASTEWATER

Subclassification 1 (Activated Sludge) – A treatment technology that mechanically introduces air into wastewater to achieve microbiological suspended growth treatment such as extended aeration, sequential batch reactors, contact stabilization, conventional, step feed or oxidation ditch.

Subclassification 2 (Fixed Film) – A wastewater treatment technology that uses a fixed contact media to achieve treatment such as trickling filters and rotating biological contactors.

Subclassification 3 (Treatment Ponds & Lagoons) – A wastewater treatment technology that utilizes a pond, lagoon or wetlands with anaerobic or facultative biological processes for the treatment of wastewater and meets the following criteria: (i) A design hydraulic detention time in the treatment process of 15 days or greater; (ii) A biological treatment process that does not have any return activated sludge system and (iii) A biological treatment process that is impacted by diurnal fluctuations as a result of photosynthesis.

Subclassification 4 (Single Entity Collection Systems) – A wastewater collection system consisting only of collection facilities with at least one pump station which is designed to convey in excess of 2,000 gallons per day of untreated wastewater to a wastewater treatment system owned by the owner of the collection system.

Subclassification 5 (Laboratory Supervisor) – An individual having the knowledge, skills and abilities necessary to supervise laboratory procedures and the reporting of analytical data for an environmental laboratory operated by a wastewater system in accordance with industry, State and Federal standards. An operator must already be certified in wastewater treatment to add this subclassification.

WATER

Subclassification 1 (Conventional Filtration) – A series of processes for the purpose of substantial particulate removal consisting of coagulation, flocculation, clarification and granular media filtration. The clarification step must be a solid/liquid separation process where accumulated solids are removed during this separate component of the treatment system.

Subclassification 2 (Direct Filtration) – A series of processes implemented for the purpose of substantial particulate removal consisting of coagulation, and filtration. The term includes flocculation after coagulation but does not include sedimentation.

Subclassification 3 (Diatomaceous Earth Filtration) – A process for the purpose of substantial particulate removal, in which a precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum) and, while the water is filtered by passing through the cake on the septum, additional filter media, known as body feed, is continuously added to the feed water, to maintain the permeability of the filter cake.

Subclassification 4 (Slow Sand Filtration) – A process for the purpose of substantial particulate removal by physical and biological mechanisms during the passage of raw water through a bed of sand at low velocity, generally less than 0.4 meters per hour.

Subclassification 5 (Cartridge or Bag Filtration) – A process for the purpose of substantial particulate removal by straining with bag or cartridge filters manufactured of various materials and pore sizes.

Subclassification 6 (Membrane Filtration) – A pressure or vacuum driven separation process in which particulate matter larger than one micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. The term includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration and reverse osmosis.

Subclassification 7 (Corrosion Control & Sequestering) – A water treatment process designed to mitigate the adverse effects of corrosion in drinking water.

Subclassification 8 (Chemical Addition) – A water treatment process designed to improve the quality of the water being treated through the addition of chemicals such as lime, soda ash, caustic soda and permanganate.

Subclassification 9 (Ion Exchange & Green Sand) – A water treatment process such as greensand filtration, ion exchange, or activated alumina designed to improve the quality of water being treated by removal of inorganic constituents.

Subclassification 10 (Aeration & Activated Carbon Adsorption):

Aeration – A water treatment process designed to improve the quality of water being treated by introducing air or oxygen into water to remove undesirable dissolved gases, to remove volatile organic compounds or to oxidize inorganic compounds so they can be removed as particulates.

Activated Carbon Adsorption – A water treatment process designed to improve the quality of water being treated by using activated granular or powdered carbon to remove specific organic chemical compounds by adsorption.

Subclassification 11 (Gaseous Chlorine Disinfection) – A water treatment process designed to inactivate pathogenic organisms from water being treated utilizing gaseous chlorine.

Subclassification 12 (Nongaseous Chemical Disinfection) – A water treatment process designed to inactivate pathogenic organisms from water being treated utilizing nongaseous chemical elements or compounds.

Subclassification 13 (Ultraviolet Disinfection) – A water treatment process that inactivates pathogenic organisms using light with a wavelength range of 1,000 to 4,000 angstroms.

Subclassification 14 (Ozonation) – A water treatment process designed to inactivate pathogenic organisms from water being treated utilizing ozone.

Subclassification 15 – Laboratory Supervisor – An individual having the knowledge, skills and abilities necessary to supervise laboratory procedures and the reporting of analytical data for an environmental laboratory operated by a drinking water system in accordance with industry, State and Federal standards. An operator must already be certified in drinking water treatment to add this subclassification.