

**SYSTEM REQUIREMENTS FOR EMPLOYING CERTIFIED WATER AND
WASTEWATER OPERATORS**

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The North Dakota Department of Environmental Quality, Division of Municipal Facilities, is responsible for implementing North Dakota's water and wastewater operator certification requirements as set forth under NDCC Ch. 23.1-26 and its implementing regulations, NDAC Art. 33.1-19. Under these requirements, certain systems must employ appropriately certified water and wastewater operators.

Appropriately certified refers to certification at a grade corresponding to the class of facility being operated, which is based on the level of treatment provided and/or the population served by the system. Examination is based on work experience and education. Experience is calculated based on a forty-hour work week. This means working for the system, hands on, daily. The first day of employment is when the calculation starts. There is also an education component that can be used to lessen the experience requirements. Lastly, for exams at a level II and higher there is a Direct Responsible Charge component. Direct Responsible Charge (DRC) means an operator can work on their own without a supervisor being present. The breakdown on the experience and education, as well as the classification levels can be found towards the end of this document.

This document will also describe which systems are required to employ certified operators.

Water Systems

Except in certain situations, public water systems are required to employ appropriately certified water treatment and water distribution system operators. Certification requirements are based on public water system type, type of water source(s) used, type and degree of treatment provided, and size and complexity of the water distribution/storage system. See additional information included.

A public water system provides water for human consumption through pipes or any other constructed delivery system that has at least 15 service connections or regularly serves at least 25 individuals 60 or more days out of the year. A public water system is either a community water system, a nontransient noncommunity water system, or a

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transient noncommunity water system. Community water systems serve year-round residents and include cities, rural water systems, and mobile home parks. Nontransient noncommunity water systems serve at least 25 of the same persons more than six months per year and include schools, businesses, and industries. Transient noncommunity water systems primarily provide service to transient populations and include bars, restaurants, hotels, campgrounds, and rest areas. Water source types include groundwater, surface water, and groundwater under the direct influence of surface water (GWUDISW). GWUDISW is groundwater with significant occurrence of organisms associated with surface water.

Operator certification requirements for water systems are as follows:

- **Community Water Systems (All Water Sources)**
A certified water treatment operator is required for a system that treats its own source(s) or that treats water obtained from another regulated public water system. All community water systems are required to have a certified water distribution system operator.
- **Nontransient Noncommunity Water Systems (All Water Sources)**
A certified water treatment operator is required for a system that treats its own source(s) or that treats water obtained from another regulated public water system. A certified water distribution system operator may be required based on the size and complexity of the water distribution/storage system.
- **Transient Noncommunity Water Systems (Surface Water or GWUDISW)**
A certified water treatment operator is required for a system that treats its own source(s) or that treats water obtained from another regulated public water system. A certified water distribution system operator may be required based on the size and complexity of the water distribution/storage system.
- **Transient Noncommunity Water Systems (Groundwater Only and Not GWUDISW)**
A certified water treatment operator is required **ONLY IF** the system provides treatment **beyond** processes involving simple chemical addition and minor operation control (beyond processes such as disinfection, fluoridation, sequestration, and corrosion control). This applies both to systems that treat their own source(s) and to systems that treat water obtained from another regulated public water system. Based on the size and complexity of the water distribution/storage system, a certified water distribution operator **may** be required **ONLY IF** a certified water treatment operator is required.

Wastewater Systems

Appropriately certified operators are required for any wastewater treatment plant or wastewater collection system which serves a population equivalent (PE) of 25 or more persons. "Population equivalent" for a wastewater collection system or treatment plant means the calculated population that would normally contribute the same amount of biochemical oxygen demand per day computed based on seventeen hundredths of one pound [77.11 grams] of five-day, sixty-eight-degree Fahrenheit [20-degree Celsius] biochemical oxygen demand per capita per day. There is one exception to this requirement. Certified operators are **not** required for systems that use wastewater stabilization ponds or other non-mechanical wastewater treatment plants and serve PEs of less than 500 persons. Operators of such systems can choose and are encouraged to become certified. A PE of 25 and 500 persons corresponds to a daily biochemical oxygen demand contribution of 4.25 and 85 pounds, respectively.

I. Operator Certification

It is unlawful for anyone to operate a water treatment facility, a water distribution system, a wastewater treatment facility, or a wastewater collection system serving a population of 25 or more if that person is not appropriately certified.

This excludes operators of wastewater collection systems and wastewater treatment facilities which use stabilization ponds or other nonmechanical treatment processes to serve populations of less than 500.

A. Direct Responsible Charge (D.R.C)

An operator who has direct responsible charge shall hold a certificate that is at least equal to the classification of the facility or system where the operator is employed.

Direct responsible charge means full and active performance of onsite operation. In addition to full and active performance of onsite operation, one or several of the following may be included:

- ✓ Responsible for technical support and provides direction to other operators.
- ✓ On site or on call during shift operations.
- ✓ Responsible for operation of a major segment of a facility or system.
- ✓ Operation of a small facility or system as sole employee.

B. Becoming Certified

1. Examination

- ✓ Candidates must apply more than 30 days prior to the test date.
- ✓ Meet education and experience requirements.
- ✓ Pay the \$50.00 examination fee.
- ✓ Pass the examination with a score of 70% or higher.

2. Reciprocity

- ✓ Candidates must be certified in another state by exam.
- ✓ Fulfill education and experience requirements.
- ✓ Pay the \$50.00 reciprocity fee.

C. Education and Experience Requirements

1. High School Diploma or equivalent (GED)

Class of Exam	Experience	D.R.C.
IA	0.5 year	---
I	1 year	---
II	3 years	1 year
III	4 years	2 years
IV	5 years	2 years

2. Post High School (minimum 2 years in related field)

Class of Exam	Experience	D.R.C.
IA	0.5 year	---
I	1 year	---
II	2 years	1 year
III	3 years	2 years
IV	4 years	2 years

3. BS or other related 4 Year Degree

Class of Exam	Experience	D.R.C.
IA	0.5 year	---
I	1 year	---
II	1 year	1 year
III	2 years	2 years
IV	3 years	2 years

D. **Maintaining Certification**

1. Renewal

- ✓ Certificates expire each year on the first day of July.
- ✓ Annual renewal fees are \$25.00 per certificate.

2. Continuing Education Credits (CECs)

- ✓ Each operator must earn 12 CECs every three years.
- ✓ Certified operators no longer operating within the state are exempt.
- ✓ CECs may be earned by attending training programs, seminars, workshops, and schools established or officially recognized by the Department of Environmental Quality. Training other than Department sponsored require credit pre-approval before attendance.

Note: You are responsible for seeing that the Division of Municipal Facilities is notified of training that has taken place so credits may be issued.

II. Facility Classifications (general guidelines)

A. Water Treatment Plant

This refers to a facility which in some way alters the physical, chemical, or bacteriological quality of the water.

1. Systems using simple chemical addition, such as, disinfection, fluoridation, corrosion control, or sequestering:
 - Class IA serves a population of less than 500.
 - Class I serves a population of 500 to 5,000.
 - Class II serves a population of 5,000 to 15,000.
 - Class III serves a population of 15,000 or more.

2. Systems using chemical softening processes and filtration or membrane technology:
 - Class II serves a population of less than 1,000.
 - Class III serves a population of 1,000 to 5,000.
 - Class IV serves a population of 5,000 or more.

3. Systems using coagulation, flocculation, sedimentation, and filtration for clarification:
 - Class II serves a population of less than 1,500.
 - Class III serves a population of 1,500 to 10,000.
 - Class IV serves a population of 10,000 or more.

4. Systems using chemical oxidation of iron or manganese and filtration:
 - Class II serves a population of less than 2,000.
 - Class III serves a population of 2,000 to 15,000.
 - Class IV serves a population of 15,000 or more.

B. Water Distribution System

This refers to a system which obtains, stores, and conveys water from the treatment facility to the consumer.

- Class IA serves a population of less than 500.
- Class I serves a population of 500 to 1,500.
- Class II serves a population of 1,500 to 15,000.
- Class III serves a population of 15,000 to 50,000.
- Class IV serves a population of 50,000 or more.

C. Wastewater Treatment Plant

This refers to a facility used for the treatment and disposal of wastewater and the solids removed from such wastewater.

1. Serving less than 10,000 persons

- Class IA

- ✓ Stabilization ponds serving 500 or less.

- Class I

- ✓ Stabilization ponds serving 500 to 9,999.

- Class II

- ✓ All mechanical facilities
- ✓ Mechanically aerated ponds
- ✓ Oxidation ditches

- Class III

- ✓ Activated sludge.
- ✓ Trickling filter
- ✓ Rotating biological contactors
- ✓ Sludge stabilization facilities

2. Serving 10,000 or more persons

Class II

- ✓ Stabilization ponds

Class III

- ✓ All mechanical facilities
- ✓ Mechanically aerated ponds
- ✓ Oxidation ditches

Class IV

- ✓ Activated sludge.
- ✓ Trickling filter
- ✓ Rotating biological contactors
- ✓ Sludge stabilization facilities

D. Wastewater Collection System

This refers to a system used to convey wastewater from the premises of a contributor to the wastewater treatment facility.

- Class IA serves a population of less than 500.
- Class I serves a population of 500 to 1,500.
- Class II serves a population of 1,500 to 15,000.
- Class III serves a population of 15,000 to 50,000.
- Class IV serves a population of 50,000 or more.

Questions and More Information

Questions and requests for more information on North Dakota's Water and Wastewater Operator Certification requirements may be directed to Craig Bartholomay, Certification Officer, Division of Municipal Facilities, at 701.328.6626 or cbarthol@nd.gov.