New Mexico Environment Department
Utility Operator Certification Program

PUBLIC WASTEWATER FACILITY – LEVEL 2 (WW2)
Operator Guidebook with Need-to-Know Criteria

March 2026[1]

The New Mexico Environment Department (NMED) administers the Utility Operator Certification Program to implement and enforce the rules of 20.7.4 NMAC (New Mexico Administrative Code) pursuant to the Utility Operators Certification Act [Chapter 61, Article 33 NMSA 1978].

Public Wastewater Facility – Level 2 (WW2)
According to Subsection A of 20.7.4.13 NMAC, the Public Wastewater Facility – Level 2 (WW2) certification is required to operate the various types of treatment processes at public wastewater facilities as listed below.

Type of Treatment Process	Population Served				
	25 to 500	501 to 5,000	5,001 to 10,000	10,001 to 20,000	20,000+
Aerated lagoons	←	**WW2**	**WW2**	**WW2**	**WW2**
Primary treatment	←	**WW2**	**WW2**	**WW2**	**WW2**
Primary treatment and oxidation ponds	←	**WW2**	**WW2**	**WW2**	**WW2**
Secondary treatment, trickling filter	←	**WW2**	---	---	---

("←" *signifies WW2 also covers lower categories*)

According to Subsection H of 20.7.4.14 NMAC, an operator holding a Public Wastewater Facility – Level 2 certification is also certified to perform any activity or function or make any process control or system integrity decision which requires:

- ✓ Small Wastewater (SWW) certification,
- ✓ Public Wastewater Facility – Level 1 (WW1) certification,
- ✓ Wastewater Laboratory Technician – Level 1 (WWLT1) certification,
- ✓ Wastewater Collection System – Level 1 (CS1) certification, and
- ✓ Wastewater Collection System – Level 2 (CS2) certification.

According to Subsection C of 20.7.4.13 NMAC, an operator holding a Public Wastewater Facility – Level 2 certification is also certified to perform wastewater analysis for regulatory compliance at public wastewater facilities as listed below.

Level of Certification Needed	Type of Methodology Performed
SWW, SWWA, WW1, **WW2**, WW3, WW4, WWLT1, WWLT2 or WWLT3	Total Residual Chlorine (TRC) by the N-diethyl-p-phenylene-diamine (DPD) method, pH, Temperature, and Dissolved Oxygen (DO) by probe.

[1] This Guidebook was reviewed by the New Mexico Utility Operators Certification Advisory Board in January and February 2026.

Certification Eligibility

To be eligible to take the Public Wastewater Facility – Level 2 exam, an applicant must meet the following criteria. However, some criteria substitutions may be allowed as listed in the table provided on the next page. [References: 20.7.4.21 NMAC, and 20.7.4.22 NMAC]

- Submit a complete application through the NMED Utility Operator Certification Program online platform and pay the nonrefundable examination application fee.
- Be at least 18 years of age.
- Have a High School diploma or general equivalency diploma.
- Have a minimum of two years of experience*.

  "**Experience**" means actual work experience, full or part-time, as an operator in the fields of public water supply or public wastewater treatment; work experience in a related field may be accepted at the discretion of the NMED.
  [Reference: Subsection K of 20.7.4.7 NMAC]
- Complete a minimum of thirty (30) training credits covering the topics listed in the need-to-know criteria of this document.

WW2 Eligibility Criteria		**Allowable Substitutions** as set forth in Subsection B of 20.7.4.22 NMAC
Application	Completed application	No substitutions
Fee	Payment of examination application fee	No substitutions
Age	Evidence of Age of Majority (18 years of age)	No substitutions
Education	High School or general equivalency diploma	1. In no case shall the actual experience be less than one year for any level except as in Subparagraph (d) of Paragraph (2) listed below. 2. Education may be substituted for the basic requirements or used for training credits as follows. In no case may the same education serve both as a substitute for experience and as training credits except as provided in the following paragraphs. a) One (1) year of additional experience may be substituted for the high school graduation or general equivalency diploma requirement. b) No more than one year (30 semester hours) of successfully completed college education in a non-related field may be substituted for any additional six months of the required experience. c) One year of an approved vocational school in the water and/or wastewater field may be substituted for only one additional year of the required experience. d) An associate's degree for a two-year program in an approved school in the water and/or wastewater field and six months of actual experience in that field (which may be accrued before, during, or after the school program) may be substituted for the requirements of any level up to and including level 2. e) Completion of at least three years of actual experience in the water and/or wastewater field plus high school diploma or equivalent, plus 15 semester hours of successfully completed college education directly related to the water or wastewater field may be substituted for any level up to and including level 3. f) A bachelor's degree for a major directly related to the water or wastewater field plus two years of actual experience in that field may be substituted for any level up to and including level 3. 3. Full time water and wastewater laboratory experience may be substituted for operator experience in a respective field at a rate of 25 percent of the actual experience held.
Experience*	Two (2) years	
Training	Thirty (30) hours of approved training credits	
Exam	Pass the WW2 exam	No substitutions

* "Experience" definition provided on previous page (page 2 of this document)

A supplemental **WW2 Application Scenarios Pamphlet** may be available from NMED to help explain allowable substitution pathways.

Renewal Training Credits

WW2 operator certification must be renewed at three-year intervals. Certification renewal requires the holder obtain thirty (30) training credits for approved training during the three-year period preceding the date on which the renewal application is due. The thirty training credits must be in support of the WW2 operator's job and must include at least ten (10) training credits for approved training specifically in the operations and maintenance of public wastewater facilities. NMED Utility Operator Certification Program approval of training credits will be based on alignment with the topics listed in the need-to-know criteria of this document.

Exam Content

NMED and a panel of subject-matter experts developed the **Public Wastewater Facility – Level 2 (WW2)** operator certification exam. The WW2 certification exam consists of 100 multiple-choice questions that cover the 16 main content areas listed below. This need-to-know criteria document provides a breakdown of the topics and subtopics within each main content area. A list of suggested study references is provided at the end of this document. The minimum passing score on the WW2 exam is 70% (70/100).

	Main Content Areas	Number of Exam Questions
1	Collection Systems	12
2	Cross-Connection Control	4
3	Dechlorination	3
4	Disinfection	6
5	Effluent Polishing	3
6	General	7
7	Laboratory Procedures	5
8	Mechanical Systems	12
9	Plant Pretreatment	7
10	Wastewater Treatment Ponds	6
11	Regulations	4
12	Safety	9
13	Sampling & Reporting	4
14	Sedimentation	5
15	Solids Digestion & Handling	5
16	Trickling Filters	8
	Total:	100 questions on exam

NEED-TO-KNOW CRITERIA FOR
PUBLIC WASTEWATER FACILITY – LEVEL 2 (WW2)

Content Area and Topics	Number of Exam Questions
1. Collection Systems	**12**
Cleaning & maintenance Hydraulic cleaning Preventative maintenance Rodding Stoppages Lift stations Components Maintenance Operation Typical layout Manholes Components Location & types Maps Piping & joints Bedding & backfill Components Installation Materials Operation Problems & repairs Service connections	

Content Area and Topics	Number of Exam Questions
2. Cross-Connection Control	**4**
Application General Maintenance Types of devices	

Content Area and Topics	Number of Exam Questions
3. Dechlorination	**3**
Gas dichlorination Changing cylinders Equipment used Leaks Maintenance Operation Reactions of SO2 w/chlorine Safety Storage & handling Troubleshooting Process description Components Contact time Dosage	

Content Area and Topics	Number of Exam Questions
4. Disinfection	**6**
Gas chlorination Changing cylinders Components Equipment used Leaks Maintenance Operation Safety Storage & handling Troubleshooting Hypochlorination Equipment used Maintenance Operation Safety Storage & handling Process description Components Contact time Dosage Factors affecting disinfection Purpose Reactions of chlorine Typical pathogens Residual Sampling for fecal coliforms Ultraviolet light	

Content Area and Topics	Number of Exam Questions
5. Effluent Polishing	**3**
Operating characteristics Land application of effluent Sand filters Wetlands (constructed)	

Content Area and Topics	Number of Exam Questions
6. General	**7**
Basic chemistry Formulas pH Calculation (generally under specific topics) Dosage Efficiency Flow Hydraulics Volume Measurement Units Pollution removal Effluent limits Removal efficiencies Wastewater characteristics BOD Chemical Microbiological Physical Prohibited substances Solids Terms	

Content Area and Topics	Number of Exam Questions
7. Laboratory Procedures	**5**
Tests (some lab tests on lower levels) pH Residual chlorine Suspended solids	

Content Area and Topics	Number of Exam Questions
8. Mechanical Systems	**12**
Chemical feeders Calibration Operation & maintenance Types General maintenance Metering equipment Motors Components Maintenance Operation Pumps Components Hydraulics Maintenance Operation Troubleshooting Types Valves Characteristics Operations & maintenance	

Content Area and Topics	Number of Exam Questions
9. Plant Pretreatment	**7**
Communitor Operating characteristics Operation & maintenance Grit removal Characteristics Grit channels Operating characteristics Operations & maintenance Screening/grit disposal Screens & racks Operating characteristics Operations & maintenance	

Content Area and Topics	Number of Exam Questions
10. Waste Treatment Ponds	**6**
Loading rates & efficiency Detention time Hydraulic Population Operating characteristics Facultative ponds Operation & maintenance Normal & abnormal conditions Troubleshooting Organic Loading Process control Facultative ponds Process description Components Purpose Types	

Content Area and Topics	Number of Exam Questions
11. Regulations	**4**
NM Utility Operator Certification Regs (20.7.4 NMAC) NM ground water regulations (20.6.2 NMAC) NPDES permit requirements	

Content Area and Topics	Number of Exam Questions
12. Safety	**9**
Chemical handling Confined space entry Electrical Excavation & shoring Fire First aid Hazardous gases Safety Data Sheets (SDS) Personal Protective Equipment Rotating machinery Working in streets	

Content Area and Topics	Number of Exam Questions
13. Sampling & Reporting	**4**
Non-compliance reporting NPDES sampling Records Reporting requirements Sampling procedure Preservation Representative sampling Testing DO pH	

Content Area and Topics	Number of Exam Questions
14. Sedimentation	**5**
Loading rates & efficiency Hydraulic Removal efficiency Solids Weirs Operating Characteristics Primary clarifier Secondary clarifier Operation & maintenance Maintenance Normal & abnormal conditions Problems & corrections Troubleshooting Process control Detention time Process description Components Purpose	

Content Area and Topics	Number of Exam Questions
15. Solids Digestion & Handling	**5**
Operating characteristics Clarigester & Imhof tanks Process description Components Purpose Solids handling Characteristics Drying beds Sampling & testing Sludge draw-off	

Content Area and Topics	Number of Exam Questions
16. Trickling Filters	**8**
Loading rates & efficiency Hydraulic Operating characteristics Operation & maintenance Maintenance Normal & abnormal conditions Operation Troubleshooting Process control Process description Components Purpose Types	

SUGGESTED STUDY RESOURCES

The following is a non-inclusive, non-endorsement listing of reference sources that can be reviewed to help prepare for the New Mexico **Public Wastewater Facility – Level 2 (WW2)** operator certification exam.

Wastewater Collection

- California State University, Sacramento (CSUS) Foundation, Office of Water Programs, *Operation and Maintenance of Wastewater Collection Systems, Volume 1* and *Volume 2*, (latest edition)

Wastewater Treatment

- California State University, Sacramento (CSUS) Foundation, Office of Water Programs, *Operation of Wastewater Treatment Plants, Volume 1 and Volume 2*, (latest edition)
- Water Environment Federation (WEF), *Wastewater Treatment Fundamentals I – Liquid Treatment* (latest edition)
- Water Environment Federation (WEF), *Wastewater Treatment Fundamentals II – Solids Handling and Support Systems* (latest edition)

Mathematics

- American Water Works Association (AWWA), *Math for Wastewater Treatment Operators, Grades 1 and 2* (latest edition)
- *Basic Math Concepts for Water and Wastewater Plant Operators*, by Joanne Kirkpatrick Price, (latest edition)

Regulations

- Clean Water Act, https://www.epa.gov/laws-regulations/summary-clean-water-act, and U.S. Code of Federal Regulations, Title 40
- U.S. Environmental Protection Agency, National Pollutant Discharge Elimination System (NPDES), https://www.epa.gov/npdes
- New Mexico Administrative Code, Title 20, Chapter 6, Part 2, Ground and Surface Water Protection (20.6.2 NMAC)
- New Mexico Administrative Code, Title 20, Chapter 6, Part 8, Ground and Surface Water Protection – Supplemental Requirements for Water Reuse (20.6.8 NMAC)
- New Mexico Administrative Code, Title 20, Chapter 7, Part 4, Utility Operator Certification (20.7.4 NMAC)

Safety and Security

- Water Environment Federation (WEF), *Safety, Health, and security Standards for Water Resource Recovery, Manual of Practice 1* (latest edition)

Wastewater Sampling

- American Water Works Association, American Public Health Association, and Water Environment Federation, *Standard Methods for the Examination of Water and Wastewater* (latest edition)
- U.S. Environmental Protection Agency, *NPDES Compliance Inspection Manual, EPA 300-B-94-014, Chapter 5 – Sampling*, (latest edition)
- U.S. Environmental Protection Agency, *Wastewater Sampling Operating Procedures*, (latest edition)

Laboratory Procedures

- American Water Works Association, American Public Health Association, and Water Environment Federation, *Standard Methods for the Examination of Water and Wastewater* (latest edition)
- CRC Handbook of Laboratory Safety, (latest edition)
- Water Environment Federation (WEF), *Basic Laboratory Procedures for the Operator—Analyst*, (latest edition)
- Water Environment Federation (WEF), *Water and Wastewater Laboratory Techniques*, (latest edition)

Additional Study Aids

- Water Environment Federation (WEF), *Wastewater Treatment Fundamentals I – Liquid Treatment Operator Certification Study Questions* (latest edition)
- Water Environment Federation (WEF), *Wastewater Treatment Fundamentals II – Solids Handling and Support Systems Operator Certification Study Questions* (latest edition)
- Water Environment Federation (WEF), *Wastewater Operator's Guide to Preparing for the Certification Examination* (latest edition)
- Water Environment Federation (WEF), *Wastewater Laboratory Analysts' Guide to Preparing for the Certification Examination*, (latest edition)