NEW MEXICO
WASTEWATER SYSTEMS OPERATOR CERTIFICATION STUDY MANUAL

UTILITY OPERATORS CERTIFICATION PROGRAM
Surface Water Quality Bureau
New Mexico Environment Department
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www.nmenv.state.nm.us/swqb/fot
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New Mexico
Wastewater Systems
Operator Certification Study
Manual

Prepared By The
Water Utilities Technical Assistance Program
(NMSU DACC WUTAP)
For The
Utility Operators Certification Program
NMED Surface Water Quality Bureau
PO Box 5469
Santa Fe, NM 87502
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This wastewater study guide manual was produced by the NMSU DACC WUTAP (New Mexico State University, Doña Ana Community College, Water Utilities Technical Assistance Program) and funded by the NMED - SWQB, UOCP (New Mexico Environment Department - Surface Water Quality Bureau, Utility Operators Certification Program). Members of the WUTAP staff - Robert Gott, Program Coordinator; Robert George & Bernie Garcia, Field Training Specialists; and Nancy Gott, Office Manager - are solely responsible for the writing, editing, and compilation of this manual.

The intent of this manual is to provide a document that elaborates on the subject matter listed in the State Certification Need To Know Criteria. This manual will serve a dual purpose in that the operator will have the necessary information needed to study for their State Certification tests as well as an on hand reference manual that can be used to optimize their treatment processes.

This “WASTEWATER SYSTEMS OPERATOR CERTIFICATION STUDY MANUAL” has been created as a tool to assist Wastewater Systems operators in New Mexico in preparation for taking the New Mexico Collection Systems Operator, Small Wastewater Systems Operator, and Wastewater Systems Operator certification exams. There are two classes of Collection Systems Operator certification, two classes of Small Wastewater Systems Operator certification, and four classes of Wastewater System Operator certification. This guide is intended to be a complete reference manual for technical information. Its purpose is to guide the reader to study material for each of the major subject areas for each of the classes. There is no implied claim that this study manual covers every possible point on which an operator may be tested. However, it is intended to be comprehensive in its coverage of the essential information for each exam.

This study manual is divided into sixteen chapters.
Collection Systems exams will include information from Chapters 1 - 4, 8, 16
Small Wastewater Systems exam will include information from Chapters 1 - 9, 11, 15, 16
Advanced Small Wastewater Systems exam will also include information from Chapters 10, 12 - 13
Wastewater Systems Class 1 exam will include information from Chapters 1 - 9, 11, 15 - 16
Wastewater System Class 2 exam will include information from Chapters 1 - 9, 11, 14 - 16
Wastewater Systems Class 3 and 4 exams will include information from all sixteen chapters.

The certification exams use several texts as reference manuals for exam topics. Each chapter of the study guide contains references to specific chapters of these manuals for those who wish to access more information on the topics covered in that particular section.
Office of Water Programs, California State University, Sacramento,
Operation of Wastewater Treatment Plants, Volume 1, 4th ed.
Operation of Wastewater Treatment Plants, Volume 2, 5th ed.
Advanced Waste Treatment, 4th ed.
Operation and Maintenance of Collection Systems, Volume 1, 5th ed.
Standard Methods for the Examination of Water and Wastewater, 18th, 19th, & 20th eds.
US EPA, NPDES Reporting Requirements Handbook
State and Federal Environmental Health & Safety Regulations

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NEW MEXICO ENVIRONMENT DEPARTMENT
SURFACE WATER QUALITY BUREAU, UTILITY OPERATORS CERTIFICATION

The New Mexico Water Quality Control Commission, through the New Mexico Environment Department (NMED), grants certification for competency to the operators of water and wastewater systems. The Utility Operators Certification Program (UOCP) conducts the testing for certification. Certain requirements must be met before an operator is eligible to take a certification examination.

An operator begins the process by completing a test application from the Utility Operators Certification Program. Applications will only be accepted if they are submitted at least 30 days prior to the exam date. A certification officer will review each application to determine if the operator is eligible to take the requested examination. An application must be submitted every time a test is taken. Examinations are given several times a year at various locations around the state. A fee for each examination must be paid to NMED Utility Operators Certification Program. A check or money order for the proper amount as determined in the currently effective Fee Schedule must accompany each exam application.

Certificates must be renewed every three years. The renewal date will be the last day of the certificate holder’s birthmonth following the third anniversary of the certificate. The UOCP also handles renewal of certificates. The fee for renewal is determined by an applicant’s level of proficiency as listed in the currently effectiveFee Schedule for each certificate.

The UOCP maintains training credits for certified operators only. Each operator must keep a record of all training credits earned. A record of current training credits is mailed to each certified operator yearly in July. Anyone who intends to apply for NM certification must include documentation of training credits when the application is submitted. Certified operators that are taking higher level exams may also have to submit training credit documentation to update training record files at the UOCP.

All correspondence, including applications, should be mailed to:
NMED - Surface Water Quality Bureau
Utility Operators Certification Program
PO Box 5469
Santa Fe, NM  87502

Please feel free to call the Utility Operators Certification Program to request information on exam application forms, exam dates and locations, or certification and renewal. The telephone number for the office is 505-827-2804. The web site is www.nmenv.state.nm.us/swqb/fot/index.html

IMPORTANT FACTS ABOUT OPERATOR CERTIFICATION

An operator, as defined by NM Water Quality Control Commission Regulations, is “any person employed by the owner as the person responsible for the operation of all or any portion of a water supply system or wastewater facility. Not included in this definition are such persons as directors of public works, city engineers, city managers, or other officials or persons whose duties do not include actual operation or direct supervision of water supply systems or wastewater facilities.”

Under the Utility Operator Certification Act, “a certified operator is a person who is certified by the commission as being qualified to supervise or operate one of the classifications of water supply systems or wastewater facilities”. Experience is “actual work experience, full or part-time, 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 commission”. Any claim of related experience will be reviewed by the WQCC or its advisory body, the Utility Operators Certification Advisory Board.

The Advisory Board is an appointed “seven-member board from the certified water systems operators and wastewater facility operators to function with the commission to establish qualifications of operators, classify systems, adopt regulations and advise the administration of the Utility Operators Certification Act.”

Experience that includes operation, maintenance or repair of water treatment and water distribution systems is accepted based on whether it is full or part-time. The Advisory Board will review and approve experience in other related fields, such as commercial plumbing or utility construction. Credit for part-time experience will be based on the percentage of time devoted to actual operation or maintenance. Full time water or wastewater laboratory experience may be counted as operator experience at a rate of 25% of actual experience. The credit for this experience will be determined by review of the Advisory Board.
BASIC CERTIFICATION REQUIREMENTS

There are three basic requirements an operator must meet to qualify for New Mexico certification. All certified operators must have at least one year of actual experience in operation or maintenance of a public water system. All levels of certification require high school graduation or GED (see substitutions.) All levels of certification require a certain number of training credits in water systems O&M or related fields.

SUBSTITUTIONS

One year of additional experience may be substituted for the high school graduation or GED requirement for all classes except Class 4. Education may be substituted for experience or training credits in some cases. The education must be in a water or wastewater related field. One year of vocational education can be substituted for up to one year of experience. Associate’s and Bachelor’s degrees in a related field may be substituted for up to three years of experience and 50 training credit hours, depending on the amount of actual experience. The criteria for substitution of education for experience are as follows:

No more than one year (30 semester hours) of successfully completed college education in a non-related field may be substituted for an additional six months of the required experience.

One year of approved vocational school in the water and/or wastewater field may be substituted for only one additional year of the required experience.

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 Class 2. An associate’s degree for a two-year program in an approved school in the water and/or wastewater field and twelve 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 Class 3.

Completion of at least three years of actual experience in the water and/or wastewater field plus high school graduation 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 Class 3.

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 Class 3.

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**BASIC CERTIFICATION REQUIREMENTS**

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<thead>
<tr>
<th>Class</th>
<th>Experience</th>
<th>Training Credits</th>
<th>Education</th>
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<tbody>
<tr>
<td>Class 1/ Small Systems</td>
<td>1 year*</td>
<td>10</td>
<td>HS Grad or GED*</td>
</tr>
<tr>
<td>Class 2</td>
<td>2 years*</td>
<td>30</td>
<td>HS Grad or GED*</td>
</tr>
<tr>
<td>Class 3</td>
<td>4 years*</td>
<td>50</td>
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<td>Class 4</td>
<td>1 year as Class 3</td>
<td>80</td>
<td>HS Grad or GED</td>
</tr>
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* - See Substitutions