

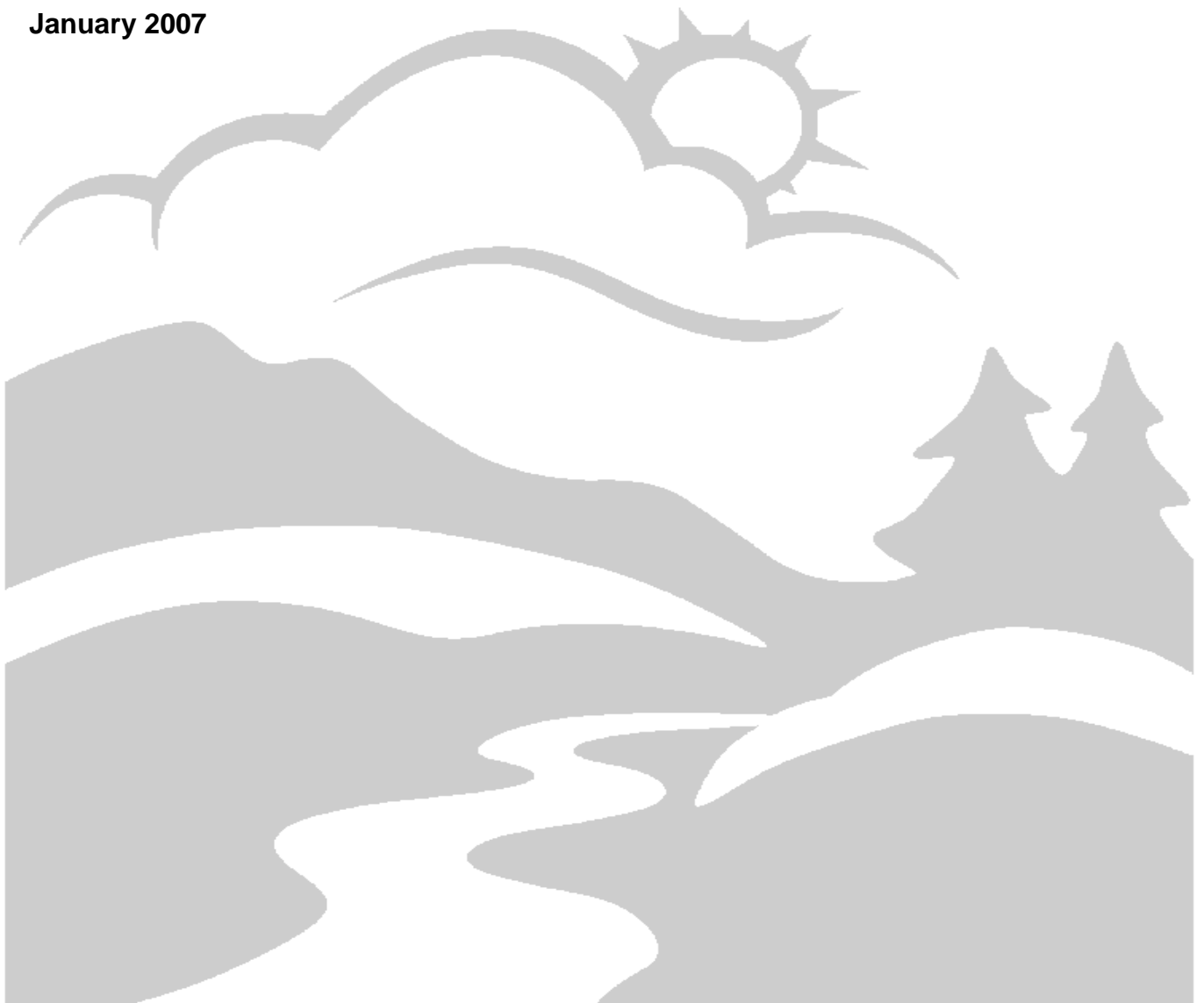
# **Certification Programs for Water and Wastewater System Operators**

**A Joint Report of the Department of Human Services Drinking Water  
Program and the Department of Environmental Quality**

**January 2007**



**State of Oregon  
Department of  
Environmental  
Quality**



The Department of Human Services Drinking Water Program (DHS-DWP) and the Department of Environmental Quality (DEQ) prepared this report in accordance with the requirements of ORS 448.409. The report describes the activities of DHS-DWP and DEQ under their respective water and wastewater operator certification programs from January 1, 2005 to December 31, 2006.

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# Executive Summary

Oregon law requires owners of drinking water and wastewater systems (public and private) to have their systems under responsible control and direction of certified operators. Trained and certified operators are necessary to ensure that the systems are managed in a manner that fully protects public health and the environment. Certified operators also improve facility operation and compliance, protect the public's investment in the facilities, and instill public confidence in the safety and certainty of services. The Department of Human Services Drinking Water Program (DHS-DWP) administers the certification program for drinking water system operators, and the Department of Environmental Quality (DEQ) administers the program for domestic wastewater system operators.

DHS-DWP and DEQ coordinate activities to benefit their respective certification programs. Coordination efforts include, but are not limited to, representation and input at advisory committee meetings on program activities, effectiveness and rulemaking, general program administration in areas such as testing, efficiencies and the sharing of operator work experience records. Another important area of coordination includes input to trainers and educators through the Oregon Environmental Services Advisory Council (OESAC) for workforce training and continuing education. Program staff also works with the Associated Boards of Certification (ABC), a national accreditation organization on issues germane to certification program operation.

This report includes an overview of program activities and accomplishments. Several initiatives have been undertaken to improve program efficiency, including the use of standardized tests and increased use of electronic communication and data base systems. Other program highlights for 2005 and 2006 are noted below.

During this report period, both DHS-DWP and DEQ certification programs committed to conversion to a new certification data management system, L2000, made available through the Department of Administrative Services. Both agencies spent a great deal of time and energy in planning for the data conversion which was successfully implemented in November 2005 for DEQ and November, 2006 for DHS-DWP. This proprietary database management tool replaces our outdated systems and allows for more consistent and reliable support from our respective information services staff. Also, the new database has streamlined the application and renewal process, and will be instrumental in implementing E-commerce business for the public, including online applications and payment of fees in the future.

The DHS-DWP program experienced turnover of both staff positions during this report period. Both positions have been refilled and the program managed to meet the needs of the regulated community in the interim. The DHS-DWP formed a sub-committee of members of its Drinking Water Advisory Committee to work on issues specific to Operator Certification. This committee's work will be on-going. The DHS-DWP investigated and resolved all complaints of fraud or misconduct without assistance from the Department of Justice during this period. One individual was assessed a civil penalty for submitting a false high school graduation diploma (although he had actually graduated). The total number of persons certified in drinking water system operation is 1747. The Small Water System certification has 998 operators who are certified following attendance at a DHS-DWP sponsored water training course specifically designed for operators of small water systems. Figures for this group are separated because small water system operators have unique characteristics (e.g. certifications are not transferable, there is no fee, there is no reciprocity, certificates are good for three years and they take no exams). The DHS-DWP has increased overall compliance rates from the previous biennium to 91%. We have increased the opportunities for operators to take "special" exams by arranging for testing at their local community college on dates other than the two set each year by DHS-DWP. This can be a significant savings in time and money for water systems. The program adopted a new fee schedule in January 2006. We instituted a non-refundable "application fee" and increased fees for special exams, late fees and reciprocity applications.

DEQ investigated and resolved all complaints of fraud, misconduct or improper operator supervisory designations without assistance from the Department of Justice. DEQ refused to certify by reciprocity one certified wastewater system operator for grievous acts committed in another state while certified in that state. The number of persons certified in wastewater system operation is 1663, including 58 persons holding renewable expired certificates. DEQ worked with ABC to evaluate and revise wastewater treatment system operator tests during the biennium. DEQ's operator certification Web page visits have increased to 600 per month on average corresponding with a significant reduction in requests by phone for certified operator information and hard copy application forms.

DHS-DWP and DEQ Operator Certification Program comparative information for 2005 and 2006 is summarized in Table 1.

**Table 1: DHS-DWP and DEQ Operator Certification Programs  
2005 – 2006**

CATEGORY	DHS WATER		DEQ WASTEWATER	
<b>Total Persons Certified</b>	<b>1747</b>		<b>1663</b>	
Persons Holding Two Certificates DHS-DWP or DEQ	762 (44%) (Distribution & Treatment)		705 (42%) (Collection & Treatment)	
Persons Certified <sup>1</sup> by DHS-DWP and DEQ	594 (32%)		594 (37%)	
Certificate Applications Reviewed	805		904	
Applications Denied	141		156	
Certificates Issued by Reciprocity	13		34	
Examinations (scheduled)	718		635	
Operator-In-Training <sup>2</sup>	N/A		58	
Continuing Education Required	2.0 CEUs every two years		2.0 CEUs every two years	
Certification Renewal Period	Annual		Biennial	
<b>Certifications</b>	<b>Distribution</b>	<b>Treatment</b>	<b>Collection</b>	<b>Treatment</b>
Provisional Grade I Certificate	N/A	N/A	4	5
Grade 1 Certificate	662	372	454	421
Grade 2 Certificate	674	265	425	330
Grade 3 Certificate	250	120	176	187
Grade 4 Certificate	123	96	126	240
Filtration Endorsement	N/A	283	N/A	N/A
Total Certificates by Type	1709	1136	1185	1183
Total Certificates	<b>2845</b>		<b>2368</b>	
<b>Systems Where Certified Operators Required</b>	<b>Distribution</b>	<b>Treatment</b>	<b>Collection</b>	<b>Treatment</b>
Class 1	180	59	132	171
Class 2	133	96	142	85
Class 3	24	21	43	39
Class 4	12	5	26	39
Total Systems by Type	349	181	343 <sup>3</sup>	334
<b>Total Entities</b>	<b>349</b>		<b>354</b>	
Certificate Fee (application, exam & license document)	One certificate \$75.00 (1 yr.). Two certificates \$130.00 (1 yr.)		One cert. \$100.00 to \$160.00 (2 yrs.) Grade I combined \$150.00 (2 yrs.)	
Renewal Fee — One Certificate	All Grades \$40.00 for one year		All Grades \$100.00 for two years	
Renewal Fee — Second Certificate	All Grades \$20.00 for one year		No Additional Fee	
<b>Program Staffing</b>	1.0 Compliance Specialist 2		1.0 Natural Resource Specialist	
	1.0 Office Specialist		1.0 Office Specialist	
<b>SMALL WATER SYSTEM OPERATOR PROGRAM</b>				
Number of “S” Operator Certificates	998	N/A	N/A	N/A
Number of Systems with “S” Required	860	N/A	N/A	N/A

<sup>1</sup> Active certificate(s) only.

<sup>2</sup> A “non-certified” applicant who has passed an examination, but has not yet qualified by education and/or experience or a certificate. These numbers are not included in the total certificate count.

<sup>3</sup> Of this number, 56 are regulated upstream or “satellite” wastewater collection systems that are connected to other regulated entities providing wastewater collection and/or treatment.

# Certification Program for Drinking Water System Operators

Under ORS 448, the Drinking Water Program of the Department of Human Services (DHS-DWP) classifies all drinking water treatment and distribution systems and certifies individuals qualified to operate these systems. All community water systems using surface water sources, and those using groundwater sources with more than 150 service connections, must be under the supervision of an operator with a certificate equal to or higher in grade than the water system classification (Levels 1-4). Beginning in 2001, pursuant to House Bill 2239 and subsequent administrative rules (OAR 333-061-0228), all community and nontransient noncommunity water systems using only groundwater and having fewer than 150 connections were required to be under the supervision of a certified operator. In 2004, rule changes added small systems that purchase water from a community or nontransient non-community and which do not add any additional treatment to this category, and changed the name from “Small Groundwater Systems” to “Small Water Systems”. This group must simply attend training every three years in order to remain in compliance.

## Program Activities

### Coordination and Development:

1. Network with other certifying authorities, organizations, and states
2. Manage data, receipts, refunds, and reports
3. Manage services agreement contract for exams and grading by the Association of Boards of Certification
4. Participate in the activities of the Oregon Environmental Services Advisory Council, which evaluates and assigns Continuing Education Units (CEU) to courses offered for professional growth and assists in coordinating statewide training in environmental technology
5. Provide staff support for the Certification Subcommittee of the Drinking Water Advisory Committee
6. Attendance and presentations at industry sponsored training conferences.

### Water System Classification:

1. Classify systems in the areas of distribution, treatment, and filtration method to determine operator certificate grade level requirements

### Operator Certification for Grades 1- 4 and Filtration Endorsement:

1. Review, evaluate, and verify applications for certification including new exams, special exams, upgrades, reciprocity, renewal and reinstatement for applicants in the four levels of treatment, four levels of distribution, and filtration endorsement
2. Schedule exams, secure sites, order exams, schedule proctors, and proctor exams
3. Provide information on examination study materials; notify examinees of exam results
4. Review and amend Water Operator Certification Rules as needed.

### Technical Assistance and Training:

1. Respond to inquiries on certification requirements, and procedures
2. Provide lists of qualified operators to systems recruiting for vacancies
3. Provide technical assistance and data management support to DHS-DWP staff regarding system operator and certification compliance

### Compliance and Enforcement:

1. Track compliance by water systems with requirements to have certified and qualified operator and report performance measures quarterly
2. Respond to complaints and investigate allegations of fraud, misconduct, or false reporting
3. Track professional growth for individual operators
4. Initiate enforcement against non-compliers
5. Revoke/Suspend certificates when necessary

### Small Water System Operator Certification:

1. Work with contractors to develop appropriate training materials for small water system operators.
2. Assure appropriate classification of small water systems according to current rules

### Efficiency and Service Improvements:

1. Update website information for operators and water systems
2. Certification program staff worked with field staff to monitor compliance and assure proper system classification
3. Coordinate special exams with community colleges
4. Improvements in our training website make it easier for operators to identify and access approved training
5. Work with Department Information Services program staff to implement and customize the L2000 data system to support Operator Certification program needs for the future.

## **Coordination and Development**

Program staff participates in the activities of the Oregon Environmental Services Advisory Committee (OESAC) which reviews proposed training for qualifications of instructors, determines relevancy of course material, assigns continuing education units, and coordinates the training opportunities around the state. OESAC is composed of representatives from community colleges, professional organizations in the water and wastewater industry, the office of Professional Technical Education of the Department of Education, DHS-DWP, and DEQ. Coordinated efforts have helped to improve the OESAC website, [www.oesac.org](http://www.oesac.org), which is updated monthly for the benefit of operators and trainers.

Reciprocity certificates are granted on a case-by-case basis when an operator's experience, education, and examination results meet established criteria. The criteria closely follow the Model Certification Program Standards, developed by the Association of Boards of Certification (ABC) and used by over 40 states and Canada. Program standards, uniform testing, and networking among certifying authorities help enable operators certified in Oregon to receive reciprocity in other states or provinces.

The Program contracts with the ABC testing service. These tests are given throughout North America under strict standards set by ABC. To maintain this contract, staff is closely involved with the training procedures of all proctors. We have agreements to have community colleges throughout the State proctor our exams; thus allowing operators to save costs and travel time for specially scheduled exams. During the next reporting period, online testing may be made available at those community colleges.

## **Water System Classification**

All water systems are classified as small water, water distribution, and water treatment based on size and complexity, as determined by the DHS-DWP. A water system is classified as a Small Water System if it has fewer than 150 connections and either uses only groundwater as its source or it purchases water that needs no further treatment once reaching the purchasing system. Distribution systems, with four levels of complexity, are classified based on population served. Water treatment plant classification, also with four levels of complexity, is based on a point system assigned to reflect the complexity of the treatment process used at the plant. A filtration endorsement is required for treatment plants that use conventional or direct filtration. These classifications are used to determine the qualifications required of personnel in direct responsible charge of each water system. There are currently 349 water systems that require Level 1-4 certified operators, and 860 systems classified as Small Water Systems.

## **Operator Certification for Grades 1- 4 and Filtration Endorsement**

Regular certification exams are scheduled and administered by program staff and are held in May and October of each year at multiple locations around the state. A total of 805 applications for exams or reciprocity were reviewed and 718 exams were given during this two-year period, including requests for special exams which numbered 33.

Successful applicants (scoring 70% or above) may become certified. All candidates are provided with individualized exam results noting the areas of deficiency. Staff evaluates exams and works with trainers to develop training intended specifically to improve areas of deficiency.

The Operator Certification Program has continued to show wide acceptance by the water industry. The number of certified operators in grades 1-4 has increased from 1,394 in 1990, to 1,747. The small water system operators were not listed in the total count of earlier reports, and therefore, not included in the comparison above. The increase over the years in certified operators represents the growing professionalism in the industry and the support for certification by water systems.

Certificates for Water Treatment and Water Distribution Grades 1-4 are renewed annually. Certified Operators are required to demonstrate professional growth in the field by completing two (2.0) Continuing Education Units (CEUs) every two years in order to renew their certificates. One CEU is equivalent to 10 contact hours of lecture or formalized training in water treatment or distribution and related fields. Continuing education ensures that operators maintain and enhance their skills and keep pace with changing regulations and technology. Training opportunities are plentiful in the state and well attended.



## **Technical Assistance and Training**

During the past two years, program staff responded to thousands of requests for assistance from system owners, operator personnel, training providers, vocational counselors, and regional staff regarding operator certificate qualifications, application forms, continuing education, system classification, and rule interpretation. Upon request, a list of qualified operators is provided to communities, water systems, and organizations, etc. to assist them in recruiting new operators or sending technical course information mailings. Operators are now given an opportunity to opt out of this list, but very few have done so. Staff routinely provides educational presentations at industry sponsored conferences to facilitate better understanding of program goals and requirements. These presentations are well received by industry groups.

## **Compliance and Enforcement**

DHS-DWP staff responds to allegations of fraud or misconduct from employees from water systems regarding compliance with applicable rules and standards. The program is typically able to resolve these issues by contacting the appropriate parties and clarifying the regulatory requirements. Compliance with Operator Certification requirements is included with any administrative orders generated by the Drinking Water Program. The program assessed one civil penalty for a submittal of a fraudulent diploma to verify compliance with educational requirements.

Certification Staff routinely work with other DHS-DWP staff to provide compliance assistance to system owners, respond to requests for time extensions for operator hiring and examination, proctor regular and special exams, and/or initiate enforcement as needed.

Systems have 30 days to inform DHS-DWP of any change in the operator designated in direct responsible charge of their water system. Compliance is tracked quarterly, and staff makes contact with systems out of compliance. Plans for compliance are initiated, and these informal actions have been successful in gaining compliance. About 91% of systems are currently in compliance with certification requirements.

Program rules allow DHS-DWP to suspend an operator's certificate of competency for violation of any portion of the certification rules if the Department finds that such violation(s) constitute(s) a serious danger to the public health or safety.

## **Small Water System Operator Certification**

This element of the Certification program is supported by a grant from the Environmental Protection Agency (EPA) that is allotted to states to fund the training and certification for the operators of Small Water Systems which are defined as community or non-transient non-community systems serving fewer than 150 connections from a groundwater source.

The grant has been utilized to fund a contract with the Rural Community Assistant Corporation for the development of updated training materials suitable for small water operators. The materials are based on a "Need to Know" criteria document developed by a group of drinking water stakeholders. The training materials will consist of a manual with individual, updatable Fact Sheets on various program elements, an on-line distance learning component which will make the training more accessible to rural community operators and a classroom oriented power point program. The materials are undergoing final staff review and approval at the time of this report.

## **Efficiency and Service Improvements**

The program coordinator position was reclassified from a Compliance Specialist 1 to a Compliance Specialist 2 and the ¾ time Office Specialist 2 position was upgraded to full time.

Certification staff presented training around the state to update operators on rule changes. Systems and operators are advised of the latest program information via the website and the Pipeline, our quarterly newsletter, which is sent to operators and water systems. Technical staff works closely with the certification staff to monitor certification compliance of systems, advise of system upgrades, and assure proper system classification.

The web page for each water system on our website now includes operator's names, certification numbers, and their expiration date. This provides certification compliance information to DHS-DWP staff, water systems, and the public.

Operators have made good use of the OESAC website to check if the course they have attended or want to attend has been approved for renewal CEUs for their drinking water certification. This has proven to be a great asset to water system supervisors and operators.

Certification staff initiated contact with several community college proctoring departments to find sites willing to proctor water operator exams. We currently have 12 sites available for these exams. For the water systems, paying the \$20-\$25 extra proctoring fee is preferred over the added cost and time away from work to have their operator drive to our regular sites (Portland, Bend, Pendleton, Eugene, Roseburg and Medford) for an exam.

Taking special exams at community colleges is expected to increase during the next reporting period. The next step will be to add on-line exams, depending on availability, to those sites. These exams will give instant results so that operators and their systems know immediately if certifications can be upgraded. Operators have stated that this will be of great benefit to them.

The number of exams now available for Level 1-4 operators is 13. The latest types of exams are “multiple entry” exams, which are used when operators take an exam out of sequence. These exams have 120-180 questions and cover material from the lower exams that were skipped.

# Certification Program for Wastewater System Operators

ORS 448 requires the Department of Environmental Quality (DEQ) to certify persons operating or supervising the operation of sewage treatment works (wastewater systems). Wastewater systems include collection systems, treatment systems and combined collection and treatment systems, whether publicly or privately owned. The Wastewater System Operator Certification Program (program), as adopted in rule by the Environmental Quality Commission (EQC), requires DEQ to:

- Classify systems and define requirements of system owners;
- Certify persons qualified to operate and supervise systems;
- Set forth a system of penalties for rule violations;
- Revoke or refuse to issue certificates for established grounds;
- Provide for variances to the rules; and,
- Establish certification fees based on the principle of cost recovery.

## Program Activities

### Program Coordination & Development:

1. Develop forms and guidance material
2. Manage data and reports
3. Review and amend rules, including fees
4. Coordinate and provide staff support for DEQ's Operator Certification Advisory Committee
5. Communicate with trainers to assess training needs and career development ladders, and participate in activities of Oregon's Environmental Services Advisory Council for work force training and continuing education
6. Act as liaison with the Association of Boards of Certification(ABC), North American certifying authorities, and organizations that represent wastewater system operators, owners, vocational-technical educators, and the water quality control industry

### Wastewater System Classification:

1. Compile, evaluate and interpret design summary, operation, maintenance, and operational compliance information for wastewater systems statewide
2. Classify systems to determine operator or supervisor certificate grade requirement
3. Coordinate permit notification to system owners

### Operator Certification & Examination:

1. Evaluate education, training and experience qualifications for certification including provisional and standard certificates, certificate by reciprocity, continuing education, renewal and reinstatement.
2. Evaluate and provide examination accommodations for the disabled
3. Develop, validate, maintain, and secure examinations
4. Prepare and distribute exam study guidance
5. Schedule exams and proctors
6. Score exams and provide notice of results
7. Issue certificates and periodic certificate validation
8. Review and amend Wastewater Operator Certification Rules as needed.

### Technical Assistance & Training:

1. Respond to inquiries and provide guidance and interpretation of certification requirements regarding system owner, supervisor, operator, and contractor operability issues
2. Provide technical assistance, clerical and record support for the Oregon Environmental Services Advisory Council (OESAC) committee on Continuing Education.
3. Provide technical assistance and data management support to DEQ staff regarding system owner and operator certification compliance

### Compliance, Variance & Enforcement:

1. Track compliance of system owners and operators
2. Respond to complaints and inquiries, including evaluation of compliance investigations and actions, and certificate sanction or revocation
3. Evaluate and prepare responses to variance applications

## Coordination and Development

DEQ program staff routinely provides technical assistance to system owners, responds to requests for time extensions for operator hiring and examination, administers examinations, and initiates enforcement activity as warranted to compel compliance.

Program staff is represented on the OESAC. DEQ supports and participates with OESAC to identify, develop and evaluate workforce training and assign Continuing Education Units (CEUs) to qualifying courses including those approved for certificate renewal.

DEQ maintains a standing 14-member Operator Certification Advisory Committee to provide advice and recommendations to the program. Advisory committee members are appointed by DEQ's Director and represent wastewater system owners and operators, professional technical education and training, and interested parties including the Oregon Association of Clean Water Agencies, League of Oregon Cities, Oregon Association of Water Utilities, and the Pacific Northwest Clean Water Association. DHS-DWP staff also plays an important program advisory role.

## Wastewater System Classification

Wastewater systems are classified by DEQ in two areas, collection or treatment, and at one of four levels based upon a system's size, complexity and degree of difficulty to operate. These classifications establish the certificate type and grade level requirement for the operator. Some entities have both a collection and treatment system classification, while others have only one type of system. As of December 31, 2006, there were a total of 354 entities operating 390 classified systems where certification of operators is required (Table 2). Additionally, there are about 58 systems where voluntary certification is encouraged by DEQ.

**Table 2: Oregon Classified Wastewater Systems - December 2006**

Classified Wastewater Systems	CERTIFICATION	
	MANDATORY	VOLUNTARY*
Collection & Treatment	287	20
Collection Only	56	8
Treatment Only	47	30
<b>TOTAL</b>	<b>390</b>	<b>58</b>

\* These systems are not required to have certified operators but choose to have them anyway.

DEQ will conduct a classification review for a system whenever a permit action occurs (new permit, permit renewal or modification) or a technical evaluation is required (plan review). Over the past two years, DEQ staff reviewed system classifications for about 100 facilities, including three new ones. Thirteen systems were re-classified higher or lower, or dropped from operator certification requirements.

## Operator Certification and Examination

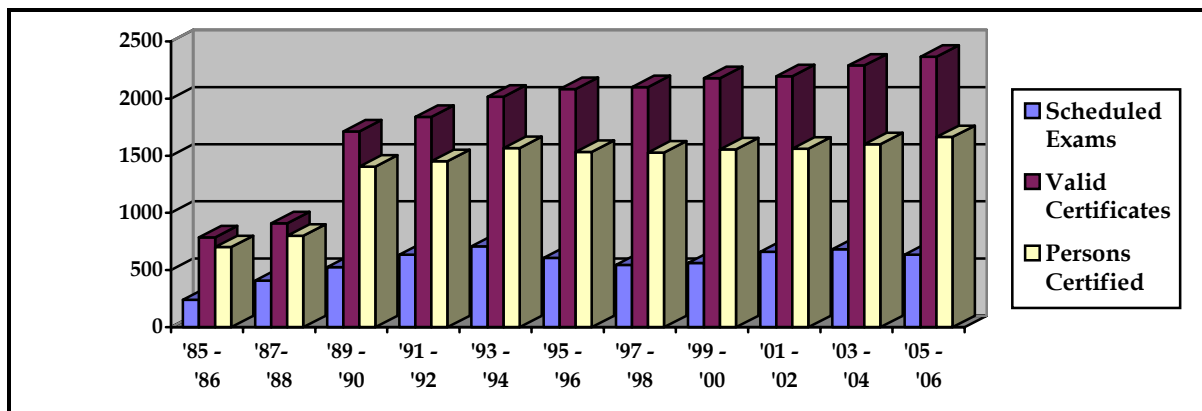
Oregon has a long history of operator certification dating back to the beginning of the former all-voluntary program in 1956. Today, as then, an operator must meet minimum standards for education and operator work experience and pass an examination to obtain a renewable certificate. DEQ examinations are closed-book tests scheduled by notice at least twice each year (Spring and Fall) at several sites around the state. DEQ administers validated standardized tests that are developed jointly by DEQ and ABC. After scoring and analysis by ABC, all test results are evaluated by DEQ.

In 2005 and 2006, program staff continued to participate on the ABC Validation and Examination Committee to evaluate and revise wastewater treatment questions and tests in follow-up to a survey of essential "need-to-know" job tasks, duties and responsibilities. All wastewater collection tests were revised by a similar process in 2003. During this reporting period, DEQ scheduled 635 examinations, including 41 that were scheduled on dates to accommodate operator or employer needs.

DEQ now has 14 tests for Grades 1 to 4 available from ABC that include one standardized "sequential" test for each of four grades in collection and treatment, and a standardized "multiple entry" test for collection and treatment Grades 2, 3, and 4. The multiple entry tests are appropriate when operators apply for an advanced grade level and have not progressed through lower grade examinations. The number of questions increase in these tests to 120, 150 and 180 respectively, and each include the 100-question sequential test for Grade 1, plus additional essential "Need-to-Know" questions from each lower level test.

As of December 31, 2006, 1,663 persons held certificates in wastewater system operation, including 7 holding provisional certificates that enable on-the-job training. The total number of certificates, active and renewable, on this date was 2,368. Of the total number of persons certified, about 42 percent hold certificates in both collection and treatment system operation. The following graph (Figure 1) shows how the number of scheduled examinations, valid certificates and persons certified has grown since 1985.

**Figure 1: Oregon's Wastewater Operator Certification Program  
1985 - 2006**



### Continuing Education

To be eligible to renew a certificate, an operator needs to accumulate a minimum of two (2.0) Continuing Education Units (CEUs) or equivalent, or two hours of community college, college or university credit. One CEU equals ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction and qualified instruction. CEUs or credit must have direct application to wastewater system (collection or treatment) operator job tasks and required knowledge. Continuing education promotes professional growth, helps ensure that operators maintain their skills in keeping with changing technology and regulations, and ultimately enhances safe and effective practices in the field. During this reporting period, all the operators who were required to report were able to document the continuing education claimed.

### Technical Assistance and Training

During the past two years, program staff responded to hundreds of requests for assistance from system owners, operator personnel, training providers and DEQ regional staff regarding operator certificate qualifications, application forms, continuing education, system classification and rule interpretation. DEQ also provides certified operator and classified system information to system owners (employers), operators, vocational counselors, organizations, etc., to help with operator training, recruiting, and job placement

Training of operators is accomplished by a host of non-profit organizations, community colleges, public and private sector consultants and professional trainers. DEQ staff routinely assists by coordinating and developing operator training, and often delivers training modules on certification requirements, system operation issues and compliance at regional “short schools” around the state. In Oregon in 2005 and 2006, there were over 65 continuing education events providing a combined total of over 1500 contact hours of water environment related topics approved for certificate renewal. DEQ staff assisted with and/or made presentations at 17 of these events.

### Compliance, Variance and Enforcement

DEQ determines permit compliance by reviewing self-monitoring reports, written operator designations, file records, and through field inspections, surveys, and other investigative techniques. DEQ has significant enforcement authority to compel compliance should it be needed and program rules call for the Director of DEQ to revoke or to refuse to issue an operator’s certificate for grievous acts.

DEQ will investigate complaints alleging operator violations of permit conditions for various acts such as failure to perform proper sampling and testing, improper facility operation, false or fraudulent records or reports, or failure to obtain proper certification. DEQ works with system owners and operators who are out of compliance, as well as those in marginal compliance, to help them find efficient and cost effective ways to come into compliance. DEQ

encourages and often recommends a course of action to assure both operator and operator training deficiencies are corrected in the shortest possible time. When there is a sudden loss or departure of a system supervising operator, upon written request, DEQ may grant a conditional time extension to allow for recruiting or contracting with a certified operator or for examination of operator personnel. During this reporting period, several requests were granted.

During the biennium, DEQ issued two Notices of Noncompliance for failure to comply with certification requirements and assessed civil penalties in two other cases for operating or supervising a wastewater treatment system without proper certification. DEQ refused to certify by reciprocity one certified wastewater system operator for grievous acts committed in another state while certified in that state. DEQ was able to resolve non-compliance issues without assistance from the Department of Justice.

The number of systems supervised by properly certified operators is near 94%, with the balance working to achieve full compliance. About one in four wastewater system owners meet operator certification compliance through some type of contractual agreement that includes the services of a certified operator to supervise system operation.

### **Efficiency and Service Improvements**

A program coordinator and a clerical support person currently staff DEQ's Operator Certification Program. Continued efficiency efforts have helped offset any need for increased staffing despite some increase in the number of persons certified and applying for certification. For example, the program has increased use of the Internet for communication, guidance, application and other document distribution. The Certification Web page now includes a Certified Operator Query that provides name, certificate type, grade and expiration date, and county of residence, and an Examination Query that gives the names of person passing showing exam type and date. Web page visits average more than 600 per month with a corresponding reduction in telephone requests for information and mailing of material.

DEQ committed to convert to a new certification data management system, L2000, made available through the Department of Administrative Services. This proprietary database management tool replaced our outdated system beginning in November 2005, and allows for more reliable support from our information services group. The new database has enhanced the application and renewal process, and will be instrumental to implementing E-commerce through the L2000 MyLicense feature, including online completion of applications and payment of fees.

DEQ's staggered certificate expiration dates and corresponding two-year continuing education reporting periods for renewal at six-month increments has been most successful in distributing workload and revenue flow over the biennium. DEQ continues to benefit in reduced examination development, maintenance and validation costs as a member and testing service client of ABC. An increasing number of operators find it necessary to schedule examinations at times other than set by DEQ, so exams are allowed by rule and operators may test at DEQ regional offices or at a local community college testing center.

### **Conclusion**

The objectives of the Wastewater System Operator Certification Program are to help protect public health, Oregon's environment and water resources, and capital investment in infrastructure through safe and effective operation and maintenance of Oregon's domestic wastewater collection and treatment systems. The Operator Certification Program helps ensure that there are an adequate number of qualified persons available to provide these services throughout the state.

Oregon's wastewater utilities continue to raise minimum employment qualifications for both supervisory and non-supervisory personnel. Certification has established a much-needed minimum standard for education, training and experience that helps ensure an effective and efficient workforce that properly operates and maintains facilities to minimize adverse effects on water quality.

The continued acceptance and support of the program is evidenced by increased employer preference for certification, recruiting preferences, promotional and pay incentives, and increased employer support for continuing professional skill training. Another indicator of support is the high number of employer-paid certification fees for their operators estimated to be around 67%, with certificate renewals alone at 80%.

The Wastewater System Operator Certification Program is working well in Oregon. For the near future, the main program development issues DEQ will be addressing include continued validation of examinations and continued process efficiency improvement.