

FACILITY OPERATORS CERTIFICATION PROGRAM

CY 2023 Annual Report to the Water and Wastewater
Facility Operators Certification Board

Prepared jointly by the Colorado Certified Water Professionals Office and
the Colorado Water Quality Control Division

INTRODUCTION

The goal of the operator certification program is to protect public health and the environment. It does so by ensuring that skilled professionals are certified to oversee the treatment and distribution of safe drinking water as well as the collection and treatment of wastewater prior to discharge. Certification requirements in Colorado comply with the Safe Drinking Water Act, the Clean Water Act, and federal and state implementing regulations. Certified operators provide a critical barrier in safeguarding public and environmental health.

The State of Colorado's Operator Certification Program was approved by the U.S. Environmental Protection Agency consistent with the requirements of the Final Guidelines for the Certification and Recertification of the Operators of Community and Non-Transient, Non-Community Public Water Systems, 64 FR 5916 on June 22, 2001.

PURPOSE OF THIS REPORT

This report provides the Water and Wastewater Facility Operators Certification Board (board) with a comprehensive overview of program activities. It covers the calendar year 2023 and includes data for the previous four years, when available, for comparison and trend purposes. The sources of data used to compile this report are official annual reports to the EPA and records maintained by the board's contractor and the Colorado Department of Public Health and Environment, Water Quality Control Division (division).

BOARD INFORMATION

The board is a ten-member, governor-appointed board representing a variety of water and wastewater professionals. The board is established by Article 9 of Title 25, C.R.S. The board published Regulation 100 Water and Wastewater Facility Operators Certification Requirements in accordance with sections 25-9-101 - 110 C.R.S.

During this reporting period, the facility operators certification program, known as Colorado Certified Water Professionals (CCWP), consisted of three distinct groups: the board, including the board administrator; the division; and the board's contractor. They have interrelated responsibilities for activities within the program.

The board is authorized to adopt and amend rules related to operator certification. It also adopts and revises policy and guidance documents as needed. The board hears appeals of any contractor or division decisions that fall within its jurisdiction and determines the appropriate disciplinary action for operator misconduct.

Subject to the board's oversight, the board's contractor administers the operator certification aspect of the program. Colorado Rural Water Association runs the Colorado Certified Water Professionals (CCWP) office to directly serve operators seeking initial or renewed Colorado certification. The CCWP office also reviews and approves training unit credits for courses submitted to meet required operator continuing education. The CCWP Portal automates many of the tasks associated with operator and course provider applications and reviews. This tool is utilized and managed by the CCWP office.

The division is responsible for compliance and enforcement to ensure every water and wastewater facility is under the supervision of a certified operator holding a certificate equal to or greater than the classification of the facility. The division is also responsible for the classification of all water and wastewater facilities in accordance with Regulation 100, Sections 100.4 to 100.9, and for the investigation of complaints of misconduct by certified operators in the performance of their duties. The division serves as staff to the board and as the liaison between the division and the board, board contractor, certified operators, and facility owners. In that role, the division provides compliance assistance, regulation implementation, outreach, training, and education.

Colorado Certified Water Professionals Program

2023 Annual Report



2023 was a successful year for the certified operators of Colorado and the CCWP Program. The program continues to provide timely review of operator applications, customer service, and certification trainings to those it serves. The program's goal remains the same: It seeks to serve operators who serve the communities of Colorado. Water Professionals International named CCWP the 2023 Certification Program of the Year for the innovations and customer service it provides Colorado operators. This was a proud accomplishment for everyone who contributes to the success of the CCWP program.

PSI testing centers continue to provide testing locations and remotely proctored exams for people wanting to take certification exams. CCWP recorded a 7% increase in exam applications submitted from 2022 to 2023. PSI reports that there were 372 more exams administered in 2023 than in 2022. Almost 10% of the 2023 exams were remotely proctored. 41% of the operators who passed their exams did so on their first attempt. There were 20% more certification renewal applications in 2023 than in 2022. On December 31, 2023, there were 12,470 Colorado certified water professionals, which is the highest number of operators in CCWP history.

Course providers issued course completion certificates 24,096 times in 2023. The course providers that deliver professional development courses continue to meet the virtual and in-person training needs of Colorado operators. They are providing in-person operator trainings, schools, and conferences and are maintaining virtual platforms to provide the opportunities for professional development and training unit accrual. The CCWP program continues to uphold its guidance for training unit approval including the requirements for online training. To submit an application for an exam, renewal, or reciprocity, all operators must complete a mandatory regulatory training (MRT) course. Thirteen course providers taught at least one MRT course in 2023. 60% of the issued TUs for the MRT courses were for online, asynchronous deliveries of the content; 40% were live – instruction, most of which happened within a conference or operator school. MRT TU certificates were issued 4,233 times in 2023. Overall, it was a stable year with relatively consistent trends compared to data from previous years.

The information in this report was collected using CCWP Portal and PSI testing data. The information in this report is a collection of the best information the CCWP Program has at this time, and the program continues to work to validate this data and improve data collection with the partners at LaunchIT, USAePay, and PSI to ensure data reports are consistent and accurate.

Table of Contents

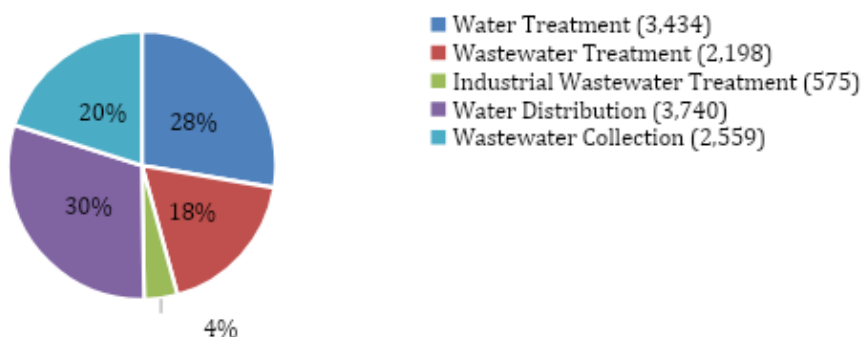
Section	Page
Section 1: Active Certificates and Active Operators (as of 12/31/2023)	
A. Number of active certificates by category and level (includes restricted certificates)	
B. Number of active restricted certificates by category and level	
C. Total number of active operators (includes operators holding restricted certificates)	
D. Number of active operators holding restricted certificates	Pg. 3
Section 2: 2023 Exams	
A. Exam Applications	
B. Exams Administered	
C. Pass Rates	
D. Exam Delivery Method	
E. Trends, issues, and problems for board attention or action	Pg. 5
Section 3: 2023 Renewed and Restored Certificates	
A. Renewed Certificates	
B. Restored Certificates	
C. Trends, issues, and problems for board attention or action	Pg. 10
Section 4: 2023 Certification by Reciprocity	
A. Total Requests	
B. Requests Approved	
C. Requests Denied	
D. Trends, issues, and problems for board attention or action	Pg. 12
Section 5: 2023 Courses Approved for TUs	
A. Number of 2021 courses approved for TUs	
B. Trends, issues, and problems for board attention or action training	Pg. 13
Section 6: 2023 Financial Summary	
A. Fees collected by certificate category and level	
B. Other fees collected	
C. Expenditures compared to board-approved budget	
D. Trends, issues, and problems for board attention or action	Pg. 14
Section 7: Staff	Pg. 21

Section 1: Active Certificates and Active Operators as of 12/31/2023

On December 31, 2023, there were 12,470 Colorado Certified Water Professionals certifications on the CCWP Portal. This number excludes expired certificates within 2-year restoration period and renewed certificates not effective as of December 31st. It includes 38 active restricted certificates. There was a 3% increase in the number of active and restorable certificates compared to 2022.

Active Certificates December 31, 2018	Active Certificates December 31, 2019	Active Certificates December 31, 2020	Active Certificates December 31, 2021	Active Certificates December 31, 2022	Active Certificates December 31, 2023
11,685	11,879	11,851	11,884	12,095	12,470

Active Certificates by Type



Active and Restorable Certificates on December 31, 2023 Number of certificates* by category and level (includes restricted certificates) <i>Information collected using the CCWP Portal</i>	
Certification Type and Level	Active Certificates
Water Treatment Operator	
T	24
S	411
D	985
C	672
B	471
A	871
Water Treatment Operator total	3,434
Wastewater Treatment Operator	
S	152
D	729
C	465
B	262
A	590
Wastewater Treatment Operator total	2,198

Active and Restorable Certificates on December 31, 2023 (cont.) Number of certificates* by category and level (includes restricted certificates) Information collected using the CCWP Portal		
Industrial Wastewater Treatment Operator		
D	261	
C	122	
B	67	
A	125	
Industrial Wastewater Treatment Operator total	575	
Certification Type and Level	Active Certificates	Active Restricted Certificates
Water Distribution System Operator		
1	1,422	4
2	884	4
3	513	0
4	859	18
Water Distribution System Operator total	3,678	26
Wastewater Collection System Operator		
1	1,022	2
2	606	3
3	358	0
4	561	7
Wastewater Collection System Operator total	2,547	12
Grand Total all Categories / Level	12,432	38

**Active certificates are certificates that are currently effective (excludes expired certificates within 2-year restoration period and renewed certificates that have not become effective yet)*

Number of Active Restricted Certificates by Category and Level

Active Restricted Certificates by Type and Level on December 31, 2023	
Certification Type and Level	Active Restricted Certificates
Water Distribution System Operator	
1	4
2	4
3	0
4	18
Water Distribution System Operator total	26
Wastewater Collection System Operator	
1	2
2	3
3	0
4	7

Wastewater Collection System Operator total	12
Restricted Certification Total all Categories/Levels	38

Active Operator Report on December 31, 2023 <i>Includes operators holding restricted certificates</i>	
Active Operators	
5,668 (2.5% increase from 2022)	

***Active operators hold at least one active certificates*

Number of active operators holding restricted certificates

Active Operator Report on December 31, 2023	
Operators with Active Restricted Certificates	% of Total Operators
38	< 1%

***Active operators hold at least one active certificate.*

Section 2: 2023 Examination Information

Certification by Examination

There were approximately 240 exams applications submitted per month in 2023, which reflects a 7% increase from applications submitted in 2022. Rejected applications make up one percent of application received and reviewed. They are typically rejected because operators submit applications in error. For example, someone who currently holds a Small Water System certification applies to take a class D Water Treatment certification exam because of changing system requirements without realizing he or she is a candidate for a class C Water Treatment certification exam.

Examination Applications

Examination Applications Received and Reviewed January 1, 2023 through December 31, 2023	
Application Status	Number of Applications
Approved	2,853
Awaiting Reply from Applicant	4
Ineligible	29
Total Received Applications	2,886

Number of Applications Approved in 2023

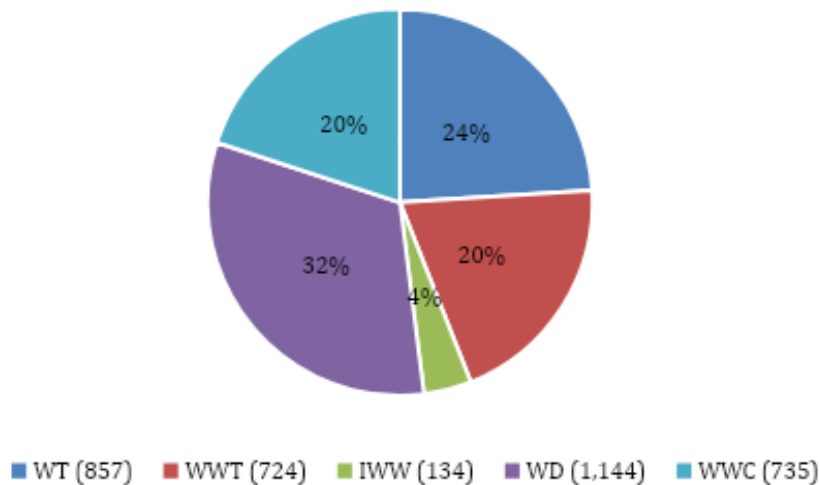
Examination Applications Reviewed January 1, 2023 through December 31, 2023		
Application Status	Number of Applications	% of Applications Received
Approved	2,853	99%

Exams Administered by Category and Level

Data source: PSI Online Database

PSI continues to administer exams for Colorado operators. Once exam applications are approved, operators contact PSI directly to schedule examinations. When operators pass exams successfully, PSI shares the data with the CCWP Portal, and the CCWP staff issues certifications to operators on the CCWP Portal. There were 3,594 exams administered in 2023, which is a 12% increase from 2022. Though it seems strange there were far more exams administered per month than applications submitted, operators can take exams multiple times if unsuccessful on their previous attempts without having to reapply.

Exams Administered January 1, 2023 - December 31, 2023 Total Exams: 3,594



Water Treatment Exams Administered July 2019 through December 31, 2023	
Exam Class and Type Administered	Exams Administered
Water Treatment – T	5
Water Treatment – S	48
Water Treatment – D	298
Water Treatment – C	194
Water Treatment – B	125
Water Treatment – A	187
Total Water Treatment Exams Administered	857
Wastewater Treatment Exams Administered July 2019 through December 31, 2023	
Wastewater Treatment – S	20
Wastewater Treatment – D	267

Wastewater Treatment – C	135
Wastewater Treatment – B	164
Wastewater Treatment – A	138
Total Wastewater Treatment Exams Administered	724
Industrial Wastewater Treatment Exams Administered July 2019 through December 31, 2023	
Industrial Wastewater Treatment – D	67
Industrial Wastewater Treatment – C	37
Industrial Wastewater Treatment – B	13
Industrial Wastewater Treatment – A	17
Total Industrial Wastewater Treatment Exams Administered	134

Water Distribution Exams Administered July 2019 through December 31, 2023	
Water Distribution – 1	523
Water Distribution – 2	296
Water Distribution – 3	181
Water Distribution – 4	144
Total Water Distribution Exams Administered	1,144

Wastewater Collection Exams Administered July 2019 through December 31, 2023	
Wastewater Collection – 1	296
Wastewater Collection – 2	182
Wastewater Collection – 3	156
Wastewater Collection – 4	101
Total Wastewater Collection Exams Administered	735

Examination Pass and Fail Rates

Of the 3,594 exams administered, operators passed 54% of the exams taken in 2023. For the third year in a row, the overall pass percentage is lower than the previous year. Approximately 41% of the operators who passed their exams in 2023 did so on their first attempt. In 2022, 42% passed on their first attempt.

Pass Rate for Certification Exams Administered January 1, 2023 through December 31, 2023 Total Exams Administered: 3,594		
Certification Exam Type	Exams Passed/Total Exams by Type	Pass Rate
Water Treatment	552/857	64%
Wastewater Treatment	306/724	42%
Industrial Wastewater Treatment	90/134	67%
Water Distribution	582/1,144	51%
Wastewater Collection	408/735	56%
Overall Pass Rate	1,938/3,594	54%

Certification Exams Passed on the First Attempt with Pass Rate January 1, 2023 through December 31, 2023		
Certification Exam Type	Exams Passed on First Attempt/Total First Attempts	Pass Rate on First Attempt
Water Treatment	442/594	74%
Wastewater Treatment	184/357	52%
Industrial Wastewater Treatment	82/103	80%
Water Distribution	431/699	62%
Wastewater Collection	317/463	68%
Overall First Attempt Pass Rate	1,456/2,216	66%

Certification Exams Failed on the First Attempt with Fail Rate January 1, 2023 through December 31, 2022		
Certification Exam Type	Exams Failed on First Attempt/Total First Attempts	Fail Rate on First Attempt
Water Treatment	152/594	26%
Wastewater Treatment	173/357	48%
Industrial Wastewater Treatment	21/103	20%
Water Distribution	268/699	38%
Wastewater Collection	146/463	32%
Overall First Attempt Fail Rate	760/2,216	34%

Certification Exams Passed on Subsequent Attempt January 1, 2023 through December 31, 2023		
Certification Exam Type	Exams Passed on Subsequent Attempt/Total Subsequent Attempt(s)	Pass Rate on Subsequent Attempt(s)
Water Treatment	102/251	41%
Wastewater Treatment	120/363	33%
Industrial Wastewater Treatment	7/30	23%
Water Distribution	149/443	34%
Wastewater Collection	90/270	33%
Overall Subsequent Attempt Pass Rate	468/1,357	34%

Pass Rates for Certification Exams Administered January 1, 2023 through December 31, 2023		
Certification Exam Type	Exams Passed/Total Exams by Type and Class	Pass Rate
Water Treatment		64%
T	4/5	80%
S	37/48	77%
D	217/298	73%
C	136/194	70%
B	88/125	70%
A	70/187	37%
Wastewater Treatment		42%
S	17/20	85%
D	131/267	49%
C	75/135	56%
B	36/164	22%
A	47/138	34%
Industrial Wastewater Treatment		67%
D	59/67	88%
C	19/37	51%
B	9/13	69%
A	3/17	18%
Water Distribution		51%
1	296/523	57%
2	144/296	49%
3	89/181	49%
4	53/144	37%
Wastewater Collection		56%
1	214/296	72%
2	102/182	56%
3	65/156	42%
4	27/101	27%
Overall Pass Rate and Exam Score	1,938/3,594	54%

Identification of trends, issues, and problems for board attention or action - 2023 Examinations

- Water treatment class A pass rate is significantly lower than the pass rates of the other water treatment exams
- Wastewater treatment class A exam pass rate has significantly improved over the past year. In 2022, the pass rate was 26%. In 2023, it was 34%.

- Unfortunately, pass rates have significantly decreased over the past year for four major certification areas: Industrial wastewater class A (47% to 18%), Water distribution class 3 (60% to 49%), Water distribution class 4 (42% to 37%) and Wastewater collection class 4 (40% to 27%).
- Of the 3,594 exams administered in 2023, 348 of them used remote proctoring as an online method of taking an operator exam, which is 14 fewer exams than in 2022. This means that more than 90% of exams were administered in PSI testing centers.

Section 3: 2023 Renewed and Restored Certificates

All Certification Renewals and Restorations January 1, 2023 through December 31, 2023		
Certification Type	Renewals Type and Class	% per Type Renewed
Water Treatment	670 Total	
T	8	1%
S	117	18%
D	138	20%
C	98	15%
B	72	11%
A	237	35%
Wastewater Treatment	461 Total	
S	46	10%
D	129	29%
C	77	17%
B	37	9%
A	159	35%
Industrial Wastewater Treatment	116 Total	
D	44	38%
C	24	21%
B	12	10%
A	36	31%
Water Distribution	715 Total	
1	230	32%
(1 restricted certificate included)	2	23%
3	89	12%
(4 restricted certificates included)	4	32%
Wastewater Collection	540 Total	
1	161	30%
(2 restricted certificates included)	2	25%
3	64	12%
(2 restricted certificates included)	4	34%
Total Renewals and Restorations	2,502	

Certification Restorations January 1, 2023 through December 31, 2023		
Certification Type	Renewals Type and Class	
Water Treatment		125
	T	1
	S	21
	D	24
	C	24
	B	25
	A	30
Wastewater Treatment		69
	S	8
	D	23
	C	16
	B	4
	A	18
Industrial Wastewater Treatment		25
	D	9
	C	6
	B	2
	A	8
Water Distribution		119
	1	49
	2	23
	3	12
	4	35
Wastewater Collection		96
	1	32
	2	22
	3	14
	4	28
Total Restorations		434

*Note: One restricted application was restored in 2023

Identification of trends, issues, and problems for board attention or action - Renewals

- There were 18 fewer restoration applications reviewed in 2023 than in 2022. Ideally, the goal is to see fewer and fewer restoration applications each year.

- All certification types had more renewed certificates in 2023 than in 2022. Overall, there were approximately 20% more renewal applications in 2023.
- Though the highest-level class of each certification type represents the highest number of certificates renewed in 2023, the number of high-level renewals is dropping. For example, in 2022, 41% of water treatment certificates renewed were class A certifications. In 2023 only 35% of the water treatment certificates renewed were class A certifications. Wastewater treatment class A, industrial wastewater treatment class A, and distribution class 4 share nearly identical declines in high-level renewals.

Section 4: 2023 Certification by Reciprocity

Reciprocity Applications Received and Reviewed January 1, 2023 through December 31, 2023	
Certification Type	Application Type and Class
Wastewater Treatment	22
D	5
C	5
B	6
A	6
Water Treatment	25
S	1
D	4
C	8
B	7
A	5
Industrial Wastewater Treatment	1
A	1
Water Distribution	16
1	6
2	5
3	2
4	3
Wastewater Collection	7
2	4
3	1
4	2
Total Reciprocity Applications	72

Reciprocity Applications and Decisions January 1, 2023 through December 31, 2023		
Certification Type	Decision	Number of Applications
Reciprocity by Examination	Passed non-sequential exam	8
	Did not pass non-sequential exam	2
	Eligible for non-sequential exam	5
Reciprocity not Requiring Exam	Approved	53
	Ineligible	3
	Closed while awaiting information from applicant	1
Total		72

Identification of trends, issues, and problems for board attention or action - Reciprocity

- The number of reciprocity applications more than doubled between 2022 and 2023.
- The revised reciprocity policy allows applicants to take Colorado exams equivalent to the type and class they hold in another state to avoid having to take Colorado sequential exams. In 2022, fifteen applicants were approved to take these exams. Eight of the fifteen applicants took and passed the Colorado exams.

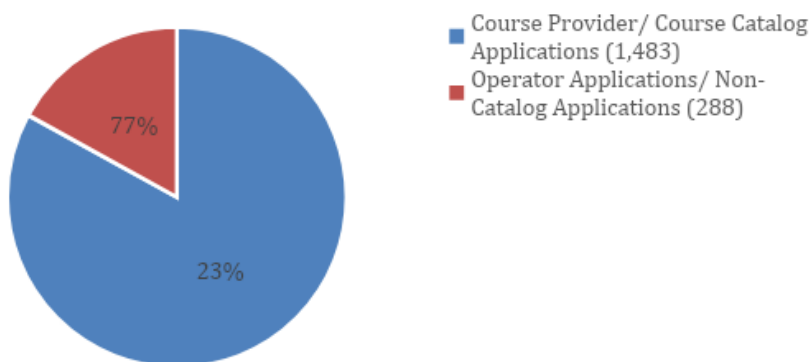
Section 5: 2023 Course Provider Applications for Training Units

There were 21 fewer course provider applications submitted in 2023 compared to 2022. There were virtually the same number of non-catalog training unit applications in 2022 and 2023. More course providers are uploading TUs into the CCWP portal for people who complete their courses. Please note, there is a higher number of rejected applications than in the past because operators are accidentally submitting non-catalog TU applications without payment.

2023 Course Applications Received/ Reviewed for January 1, 2023 through December 31, 2023	
Approved	1,445
Not Approved	0
Expired/ Required More Information from Course Provider	38
Total Applications	1483

Non-Catalog Course Applications Received/ Reviewed January 1, 2023 through December 31, 2023	
Approved	184
Not Approved	61
Resent for more information/ Closed for failure to resubmit	43
Total Applications	288

Training Unit Applications 1,777 Total Applications



Identification of trends, issues, and problems for board attention or action - Training

- 50% of the courses provided in 2023 were focused on regulatory and safety-related topics

- 4,233 of the certificates issued were for Mandatory Regulatory Training TUs. This accounts for more than 16% of the total TU certificates issued.
- Top ten issuing entities:
 - o Four are large systems that provide training for their own employees with a vast majority being safety-related courses
 - o Two are non-profit organization
 - o Three are a for-profit organization
 - o One is CDPHE
- Many certified operators renew annually without a single process-related course

Section 6: 2023 Financial Summary

CCWP Portal Fees Collected by Category and Level – Examination Applications January 1, 2023 - December 31, 2023			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D	70	\$50.00	\$3,450.00
C	33	\$50.00	\$1,600.00
B	15	\$50.00	\$750.00
A	11	\$50.00	\$550.00
Industrial Wastewater Treatment Operator total	129	\$50.00	\$6,350.00
Wastewater Collection System Operator			
1	295	\$50.00	\$14,700.00
2	158	\$50.00	\$7,850.00
3	113	\$50.00	\$5,650.00
4	76	\$50.00	\$3,800.00
Wastewater Collection System Operator total	642	\$50.00	\$32,000.00
Wastewater Treatment Operator			
S	20	\$50.00	\$1,000.00
D	206	\$50.00	\$10,250.00
C	117	\$50.00	\$5,800.00
B	112	\$50.00	\$5,600.00
A	76	\$50.00	\$3,800.00
Wastewater Treatment Operator total	531	\$50.00	\$26,450.00
Water Distribution System Operator			
1	437	\$50.00	\$21,650.00
2	256	\$50.00	\$12,550.00
3	127	\$50.00	\$6,300.00
4	103	\$50.00	\$5,150.00
Water Distribution System Operator total	923	\$50.00	\$45,650.00
Water Treatment Operator			
T	6	\$50.00	\$250.00
S	54	\$50.00	\$2,600.00
D	282	\$50.00	\$14,100.00
C	185	\$50.00	\$9,100.00

B	114	\$50.00	\$5,600.00
A	117	\$50.00	\$5,850.00
Water Treatment Operator total	758	\$50.00	\$37,500.00
EXAM APPLICATIONS total 13% increase from 2022	2,983	\$50.00	\$147,950.00

CCWP Portal Fees Collected by Category and Level – Reciprocity Applications January 1, 2023- December 31, 2023			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D			
C			
B			
A			
Industrial Wastewater Treatment Operator total	0	0	0
Wastewater Collection System Operator			
1	0	\$85.00	\$00.00
2	4	\$85.00	\$340.00
3	0	\$85.00	\$00.00
4	2	\$85.00	\$170.00
Wastewater Collection System Operator total	6	\$85.00	\$510.00
Wastewater Treatment Operator			
S	0	\$85.00	\$00.00
D	6	\$85.00	\$340.00
C	5	\$85.00	\$340.00
B	4	\$85.00	\$340.00
A	3	\$85.00	\$255.00
Wastewater Treatment Operator total	18	\$85.00	\$1,275.00
Water Distribution System Operator			
1	5	\$85.00	\$340.00
2	5	\$85.00	\$425.00
3	1	\$85.00	\$85.00
4	3	\$85.00	\$255.00
Water Distribution System Operator total	14	\$85.00	\$1,105.00
Water Treatment Operator			
T	0	\$85.00	\$00.00
S	0	\$85.00	\$00.00
D	4	\$85.00	\$340.00
C	8	\$85.00	\$595.00
B	5	\$85.00	\$425.00

A	4	\$85.00	\$255.00
Water Treatment Operator total	21	\$85.00	\$1,615.00
RECIPROCITY total 61% increase from 2022	59	\$85.00	\$4,505.00

CCWP Portal Fees Collected by Category and Level – Renewal Applications January 1, 2023 - December 31, 2023			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D	34	\$85.00	\$2,720.00
C	19	\$85.00	\$1,615.00
B	10	\$85.00	\$850.00
A	28	\$85.00	\$2,380.00
Industrial Wastewater Treatment Operator total	91	\$85.00	\$7,565.00
Wastewater Collection System Operator			
1	128	\$85.00	\$10,880.00
2	109	\$85.00	\$9,180.00
3	52	\$85.00	\$4,335.00
4	150	\$85.00	\$12,750.00
Wastewater Collection System Operator total	439	\$85.00	\$37,145.00
Wastewater Treatment Operator			
S	37	\$85.00	\$3,145.00
D	108	\$85.00	\$9,095.00
C	75	\$85.00	\$6,375.00
B	33	\$85.00	\$2,805.00
A	140	\$85.00	\$11,900.00
Wastewater Treatment Operator total	393	\$85.00	\$33,320.00
Water Distribution System Operator			
1	184	\$85.00	\$15,385.00
2	143	\$85.00	\$11,985.00
3	77	\$85.00	\$6,545.00
4	190	\$85.00	\$16,150.00
Water Distribution System Operator total	594	\$85.00	\$50,065.00
Water Treatment Operator			
T	7	\$85.00	\$595.00
S	97	\$85.00	\$8,245.00
D	118	\$85.00	\$9,775.00
C	74	\$85.00	\$6,290.00
B	47	\$85.00	\$3,995.00

A	206	\$85.00	\$17,510.00
Water Treatment Operator total	549	\$85.00	\$46,410.00
RENEWAL FEES total 25% increase from 2022	2,066	\$85.00	\$174,505.00

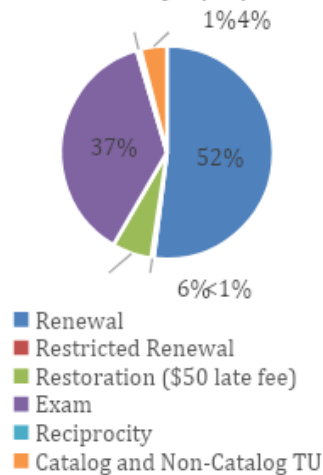
CCWP Portal Fees Collected by Category and Level – Restricted Renewal Applications January 1, 2023 - December 31, 2023			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Wastewater Collection System Operator			
1	0	\$85.00	\$00.00
2	2	\$85.00	\$170.00
3	0	\$85.00	\$00.00
4	2	\$85.00	\$170.00
Wastewater Collection System Operator total	4	\$85.00	\$340.00
Water Distribution System Operator			
1	0	\$85.00	\$00.00
2	1	\$85.00	\$85.00
3	0	\$85.00	\$00.00
4	3	\$85.00	\$255.00
Water Distribution System Operator total	4	\$85.00	\$340.00
Total			\$690

CCWP Portal Fees Collected by Category and Level – Restoration Applications January 1, 2023 - December 31, 2023			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
A	8	\$135.00	\$1,080.00
B	2	\$135.00	\$270.00
C	6	\$135.00	\$810.00
D	9	\$135.00	\$1,215.00
Industrial Wastewater Treatment Operator total	25	\$135.00	\$3,375.00
Wastewater Collection System Operator			
1	34	\$135.00	\$4,320.00
2	22	\$135.00	\$2,970.00
3	14	\$135.00	\$1,890.00
4	28	\$135.00	\$3,780.00
Wastewater Collection System Operator total	98	\$135.00	\$12,960.00
Wastewater Treatment Operator			
A	18	\$135.00	\$2,430.00
B	4	\$135.00	\$540.00
C	17	\$135.00	\$2,245.00
D	24	\$135.00	\$3,105.00
S	8	\$135.00	\$1,080.00
Wastewater Treatment Operator total	71	\$135.00	\$9,400.00
Water Distribution System Operator			
1	51	\$135.00	\$6,480.00
2	24	\$135.00	\$3,105.00
3	13	\$135.00	\$1,620.00
4	34	\$135.00	\$4,590.00
Water Distribution System Operator total	122	\$135.00	\$15,795.00
Water Treatment Operator			
A	30	\$135.00	\$4,050.00
B	24	\$135.00	\$3,240.00
C	23	\$135.00	\$3,105.00
D	25	\$135.00	\$3,240.00
S	21	\$135.00	\$2,835.00
T	1	\$135.00	\$135.00
Water Treatment Operator total	124	\$135.00	\$16,605.00

RESTORATIONS total 4% decrease from 2022	440	\$135.00	\$58,135.00
--	------------	-----------------	--------------------

CCWP Portal Fees- Training Unit Applications January 1, 2023 - December 31, 2023		
Fee Type	Number of Fees	Fees Collected
Non-Catalog TU application fees collected	42	\$1,000
Catalog Course Application fees collected	240	\$14,200.00
TU APPLICATION FEES total	262	\$15,200.00

Application Fee Summary 1/1/2023- 12/31/2023



2023 Expenditures Compared to Board-Approved Budget			
Description	Budget	Expenditures	Percent to Budget
Income			
App & Admin fees for exams	\$132,500.00	\$147,550.00	111%
App & Admin fees for renewals	\$182,750.00	\$213,690.00	117%
App & Admin fees for reciprocity	\$4,250.00	\$5,865.00	138%
TU Course approval fee	\$13,000.00	\$14,800.00	114%
Late fees	\$21,500.00	\$21,800.00	101%
INCOME TOTALS	\$354,000.00	\$403,705.00	114%
Expenses			
Salaries and Fringe			
Program Director	\$97,500.00	\$97,500.00	100%
Program Coordinator	\$70,800.00	\$70,800.00	100%
Program Assistant	\$70,800.00	\$70,800.00	100%
Accounting (bookkeeper)	\$12,000.00	\$12,000.00	100%
Executive Director	\$12,000.00	\$12,000.00	100%
Operating Expenses			
Support Services to Launch IT	\$13,020.00	\$22,935.00	176%
Hosting, Maintenance and offsite backup	\$10,200.00	\$10,200.00	100%
IT Services	\$3,000.00	\$3,000.00	100%
CO Treasurer Certificate Fee	\$19,750.00	\$19,450.00	98%
Bulk mailing, printing and postage	\$1,800.00	\$300.00	17%
Credit Card payment Processing	\$15,900.00	\$13,502.56	85%
Financial Audit	\$6,000.00	\$6,000.00	100%
WPI Membership Dues	\$1,800.00	\$3,600.00	200%
ABC Conference Attendance	\$6,000.00	\$4,000.00	67%
Training, staff	\$6,000.00	\$4,000.00	67%
Training, operators	\$6,000.00	\$4,000.00	67%
Travel Expense for Program Staff	\$6,000.00	\$5,000.00	83%
Office Supplies, Printing	\$2,400.00	\$2,200.00	92%

Office Rent and Utilities	\$6,000.00	\$6,000.00	100%
Miscellaneous Expenses	\$6,000.00	\$6,000.00	100%
EXPENSE TOTALS	\$372,970.00	\$373,287.56	100%

Identification of trends, issues, and problems for board attention or action - CCWP Financials

The efficiency of the CCWP Portal saves operators and course providers both time and money; unfortunately, it negatively impacts the CCWP's earning potential.

- There are very few rejected applications.
- Operators only pay CCWP exam applications fees once and have 180 days to take and pass exams; however, they pay WPI/PSI \$100.00 every time they take an exam.
- Course providers can submit up to ten course applications at once.
- There are quite a few improvements that should be made to the CCWP Portal, but the support hours are expensive.

Section 7: 2023 CCWP Staff



Vanessa Roy
CCWP Program Assistant



Paula Martinez
CCWP Program Coordinator



Larisa Oringdolph
CCWP Director



COLORADO
Department of Public
Health & Environment

FACILITY OPERATORS CERTIFICATION PROGRAM

CY 2023 Annual Report to the Water and Wastewater
Facility Operators Certification Board

April 16, 2024

Contact:
Jessica Morgan
Water Quality Control Division
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
720-213-6539
jessica.morgan@state.co.us

INTRODUCTION

The Water Quality Control Division's (division) responsibilities for Colorado's water and wastewater facility operators certification program include

- monitoring, encouraging, and, as needed, enforcing facility compliance with the requirement to operate under the supervision of a certified operator in responsible charge,
- investigating allegations of operator misconduct,
- interacting with stakeholders,
- drafting regulatory, policy, and guidance revisions for board consideration,
- outreach, training and education efforts, and
- ensuring that periodic internal and external reviews of the program are done.

Division activities in these areas during the calendar year 2023 are documented in the following sections of this report.

FACILITY COMPLIANCE

Article 9 of Title 25, C.R.S., Water and Wastewater Treatment Facility Operators, requires “every water treatment facility, domestic or industrial wastewater treatment facility, wastewater collection system, and water distribution system be under the supervision of a certified operator, holding a certificate in a class equal to or higher than the class of the facility or system.”

Regulation 100, the Water and Wastewater Facility Operator Certification Requirements, uses this statutory language to identify the purpose of the regulation. Compliance with the certified operator in responsible charge (ORC) requirement is determined by the following:

- Has the facility owner reported the ORC's name and operator identification number to the division? (100.10.4)
- Does the ORC have a valid certificate? (100.16.3)
- Is the reported ORC's certificate at or above the level of classification of the facility they are operating? (100.10.2, 100.10.5)

If a response to any of these questions is no, the facility owner is out of compliance with Regulation 100.

Public Water Systems

Accurate and timely compliance determination is a division priority. Operator data from the CCWP Portal allows the division to monitor the ORC compliance status for all drinking water systems required to comply with Regulation 100. Compliance can be determined at any time, although the division usually runs compliance reports monthly as part of its routine workflow.

Water treatment facilities and water distribution systems are classified separately, impacting the number of unique public water systems in the state. During 2023, 44 public water systems received violations for failing to meet the ORC requirements. Colorado enforces the requirement to provide public notice within 30 days of the violation notice, which is a powerful motive for compliance. Systems that do not return to compliance in a timely manner may be issued a formal enforcement order with penalties.

Although treatment facilities and water distribution systems are classified separately, according to EPA, the operator violation is a system-level violation. That means failure to have both a treatment and a

distribution operator, for a system that has both processes, is a single violation. Table 1 lists the number of public water systems by type and their compliance rates. Prior to 2020, the number of systems in Table 1 indicated the total number of facilities classified as water treatment plus the total number of systems classified as water distribution. For 2020, 2021, and 2022, the count of systems reflects the number of a) treatment only systems, b) distribution only systems, and c) systems that have both water treatment and water distribution components. This simplifies the accounting of the compliance rate.

Table 1 - Public Water System Facilities and Compliance Status.

Reporting Year	Treatment and Distribution Systems	Compliance Rate (%)
Community		
2019	1635	98%
2020	911	97%
2021	917	98%
2022	945	98%
2023	954	98%
Non-transient Non-community		
2019	291	99%
2020	174	99%
2021	174	98%
2022	173	99%
2023	178	97%
Transient Non-community		
2019	1543	98%
2020	970	98%
2021	971	97%
2022	959	97%
2023	959	97%

Wastewater Facilities

In 2023, the division issued 124 compliance advisories to industrial wastewater facilities and 82 compliance advisories to domestic wastewater facilities for failure to meet the ORC requirements. By December 31, 2023, 23 industrial wastewater facilities and 21 domestic wastewater facilities were out of compliance.

Table 2 shows the compliance rates for both domestic and industrial wastewater treatment facilities.

Table 2 - Wastewater Facilities Required to have an ORC.

Reporting Year	Permitted Facilities	Compliance Rate (%)
Permitted Domestic Wastewater Facilities		
2019 Individual	255	92%
2019 General	275	92%
2020 Individual	262	91%
2020 General	266	96%
2021 Individual	249	86%
2021 General	273	86%
2022 Individual	257	99%
2022 General	267	94%
2023 Individual	248	97%
2023 General	270	94%
Permitted Industrial Wastewater Facilities		
2019 Individual	135	70%
2019 General	104	44%
2020 Individual	134	78%
2020 General	102	26%
2021 Individual	129	98%
2021 General	167	15%
2022 Individual	128	99%
2022 General	181	73%
2023 Individual	123	97%
2023 General	181	89%

Overall increases in compliance rates from 2022 to 2023 are likely due to the following:

- consistent outreach and compliance advisories issued to all facilities on a quarterly basis;
- the division had issued more formal enforcement actions (Notice of Violation/Cease and Desist Order) for operator violations over the past couple of years, specifically within the domestic general permit sector;
- lowest compliance rates continue to be within the industrial general permits. The reasons are primarily the high number of short-term discharges with ORC requirements (lack of understanding/education, short-term discharges and a misconception that these do not need ORC coverage, and a shortage of industrial ORCs willing/able to contract for short-term discharges). Rates continued to improve between 2022 and 2023, from 73% to 89%.

A number of industrial facilities are automatically exempted from the ORC requirement. Per Regulation 100.1.6, automatic exempted facilities include facilities that discharge pursuant to a Colorado Discharge Permit System general permit for

- Industrial stormwater.
- Construction stormwater.
- Municipal stormwater.

- Water treatment plant wastewater discharge.
- Construction dewatering activities.
- Aquatic animal production.
- Sand and gravel mining and processing stormwater.
- Sand and gravel mining wastewater and stormwater combined.
- Minimal industrial discharge.
- Subterranean dewatering or well development.
- Hydrostatic testing of pipelines, tanks, and similar vessels.
- Non-contact cooling water.
- Pesticides application.
- Commercial washing of outdoor structures.

Per 100.1.6, the WWFOCB can grant discretionary exemptions from the ORC requirement under certain conditions. In 2023, no discretionary exemptions were granted for meeting the passive or no treatment requirement of Regulation 100.1.6(c)(i).

FACILITY ENFORCEMENT

While the division issues a large number of violations, Table 3 only reflects situations that rise to the level of formal action required, such as formal enforcement orders. In 2023, one formal drinking water enforcement action and one formal wastewater notice of violation (NOV) were issued to facilities that failed to comply with the ORC requirement. By the end of the year, the drinking water facility returned to compliance and the facility that received the formal wastewater NOV was still in the process of working with its compliance and enforcement specialists on returning to compliance.

Table 3 - Notices of Violation with Status.

Reporting Year	Drinking Water	Wastewater	Total DW and WW NOVs Issued	Returned to Compliance
2019	2	3	5	5
2020	5	2	7	5
2021	3	1	4	3
2022	3	1	4	0
2023	1	1	2	1

DISCIPLINARY ACTION INVESTIGATIONS

The board is authorized to take disciplinary action against a certified operator under sections 25-9-104(6) and -104(6.5) C.R.S. This authority provides the board with the discretion to reprimand a certified operator or suspend or revoke an operator's certification. As delegated in statute, the division investigates allegations of operator misconduct and makes recommendations to the board for action.

Complaints are received in writing by email or mail. Complaints come from facility customers, co-workers, supervisors, subordinates, etc., and division staff from a variety of interactions including on-site inspections and visits. Confidentiality is maintained throughout the complaint investigation.

Below is a summary of complaints received against a certified operator for misconduct in the exercise of their duties.

Table 4 - Summary of Operator Misconduct Complaint Investigations

Type of Action	2019	2020	2021	2022	2023
Formal Letter of Reprimand	0	1	0	0	0
Consent Agreement	0	0	0	0	0
Suspension or Revocation	0	2	5	0	3
Informal Letter of Reprimand	1	3	1	7	6
Closed - Lack of Evidence	0	4	0	0	0
Closed - Lack of Jurisdiction	0	0	0	1	0
Voluntary Relinquishment	0	0	1	0	0
Investigations Still Open at End of the Year*	0	2	1	5	12
Total Complaints	1	11	7	8	20

*This number reflects how many of the received complaints from that calendar year had not yet concluded (meaning, a determination had not been made by the division investigator by December 31st of that year); and therefore, were considered to be “open.” This is why it may not align with the number of ‘Total Complaints.’

STAKEHOLDER GROUPS AND PARTICIPATION

The EPA identified stakeholder involvement as important to the public health objectives of the program. Stakeholders help ensure the relevancy and validity of the program and the confidence of all interested parties. States are required to include ongoing stakeholder involvement in the revision and operations of state operator certification programs. Stakeholder involvement goes beyond public comment on rule revisions and participation in board meetings.

Examples of Stakeholders:

- Certified operators.
- Contract operators.
- Drinking water system owners.
- Domestic and industrial wastewater permittees.
- Local government officials
- Environmental/public health groups.
- The general public.
- Consumer groups.
- Technical assistance providers.
- Utility managers.
- Trainers.
- Water and wastewater professional organizations.

The board provides an opportunity for public comment at the beginning of every meeting.

Specific Staff Participation:

A number of division staff participate in a variety of activities with stakeholders. These include

- Rocky Mountain Section American Water Works Association and Rocky Mountain Water Environment Association Joint Small Systems Committee.
- Colorado Water and Wastewater Utility Councils.

- Water Quality Management Program advisory boards at Red Rocks Community College and Arvada West High School.
- Colorado Rural Water Association annual and regional conferences.
- Water Professionals International annual conference.

REGULATION REVISIONS

Table 5 identifies revisions to Regulation 100, 5 CCR 1003-2, adopted by the board in the past 5 years, along with the associated effective dates. For a detailed description of changes, refer to the corresponding statements of basis and purpose comprising sections 100.58-100.63 of Regulation 100.

Table 5 - Regulation 100, 5 CCR 1003-2 Revisions.

Reporting year	Regulation 100 Revisions	Statement of Basis and Purpose
2019	Amended 11/26/19, effective 1/30/20	Section 100.58
2020	Amended 9/29/20, effective 11/30/20	Section 100.59
2021	Amended 1/26/21, effective 3/31/21	Section 100.60
2021	Amended 3/30/21, effective 5/15/21	Section 100.61
2021	Amended 9/28/21, effective 11/30/21	Section 100.62
2022	None	N/A
2023	Amended 12/12/23, effective 3/1/24	Section 100.63

DIVISION OUTREACH AND EDUCATION EFFORTS

The division's outreach and education efforts through the Local Assistance Unit focused on three main areas in 2023:

- Course providers continued to reach rural and small systems through monthly in-person and webinar training events.
- Coaches continued to focus on building a culture of health with operators and system staff.
- Division training specialists continued to develop specialized training curriculum including
 - Mandatory Regulatory training for water and wastewater;
 - Monitoring and Operating for Regulatory Compliance;
 - Sanitary Survey Preparation;
 - Building Resilience in the Water Sector: Emergency Planning and Asset Management;
 - Tabletop exercises conducted with groups and individual systems;
 - Seasonal System 101; and
 - Monitoring Plan workshop.

Additional training events were provided by technical assistance providers through contracts with the Local Assistance Unit. Contracted training event curriculum included how to navigate a boil water order and subsequent public notification.

The Local Assistance Unit provided 53 group training events in 2023, reaching 658 operators or personnel from 431 systems. In addition, division coaches provided one-on-one assistance at 102 facilities.

DIVISION PROGRAM EXPENSES

The division liaison to the board position is the only staff person wholly dedicated to the facility operator certification program. Many duties assigned to the division through facility operator certification statute and regulation are performed as part of the routine duties for nearly 100 division staff including compliance, enforcement, sanitary survey, and inspection, design review and approval, facility classification, administrative support, and management oversight.

Division management recognizes a correlation between compliance with Regulation 100 and overall compliance with permits or drinking water regulations. To facilitate an efficient and effective approach to interactions between division staff and the regulated community and to efficiently use limited resources, each water and wastewater facility is assigned to a single compliance specialist. The compliance specialist oversees the facilities' compliance with all applicable regulations including Regulation 100. The drinking water specialist oversees compliance with the primary drinking water regulations and with Regulation 100 for drinking water facilities. The clean water specialist oversees compliance with the permit and with Regulation 100 for wastewater facilities.

Table 6 shows the salary expenses for the board administrator and the division liaison for the calendar year 2023. The costs associated with the routine tasks assigned to other division staff members are not included in Table 8. The salaries of the liaison to the board and the board administrator were paid through state general funds, federal grants, and drinking water and permitted facility fees.

Table 6 - Board Administrator and Division Salary Expenses.

Salary expenses for board administrator and division program staff ¹		Full time equivalent (FTE)
2019	\$153,356	1.6 FTE 0.6 Management, 1.0-EPS III ¹
2020	\$155,584	1.6 FTE 0.6 Management, 1.0-EPS III ¹
2021	\$160,636	1.6 FTE 0.6 Management, 1.0-EPS III ¹
2022	\$177,796	1.6 FTE 0.6 Management, 1.0-EPS III ¹
2023	\$182,429	1.6 FTE 0.6 Management, 1.0-EPS III ¹

¹ Directly assigned to the operator certification program (does not include the nearly 100 other staff who have some responsibility for operator certification program implementation)

REVIEWS

Internal and External Reviews

As part of the Final Guidelines for the Certification and Recertification of the Operators of Community and Non-transient Non-community Public Water Systems, February 5, 1999, the U.S. Environmental Protection Agency recommends that states perform periodic internal reviews and occasional external or peer reviews. Examples of items to review include regulations, exam items for relevancy and validity, compliance, enforcement, budget and staffing, training relevancy, training needs through examination performance, and data management systems.

The division conducts routine internal reviews of regulations and policies. Through its contract with Water Professionals International (WPI), the board ensures regular reviews of exam items. The division continually assesses compliance and enforcement, while the board oversees budget and staffing with regard to its contract with CRWA. The CCWP office reviews training courses at least annually and routinely evaluates training needs by assessing examination performance data.

The program continues to seek input from external sources through periodic peer reviews.

Sunset Review

The sunset review is the analysis and evaluation of regulatory agencies to determine the least restrictive regulation consistent with the public interest. The purpose of the sunset review is to evaluate the need for the continued existence of existing regulatory bodies in accordance with the criteria established in statute.

Sunset reviews provide valuable information for the program, but in accordance with the Operator Certification Guidelines Implementation Guidance, January 2000, the U.S. Environmental Protection Agency determined a sunset review does not meet the periodic external or peer review requirement.

In accordance with Section 25-9-103(4), C.R.S., the last sunset review report was released in October 2019. In 2020, the state legislature implemented the recommendations contained in the 2019 sunset report by continuing the Water and Wastewater Facility Operators Certification Board until September 1, 2031.

SUMMARY

The division focused on ensuring that skilled, certified water professionals throughout Colorado were overseeing the treatment and distribution of safe drinking water as well as the collection and treatment of wastewater prior to discharge to waters of the state. The division remains committed to providing training and assistance to help operators succeed and to increasing compliance by facility owners by appropriately applying all the tools at our disposal.