



# FACILITY OPERATORS CERTIFICATION PROGRAM

CY 2020 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

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The goal of the operator certification program is to protect public health and the environment 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 in compliance 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

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This report provides the Water and Wastewater Facility Operators Certification Board (board) with a comprehensive overview of program activities. It covers calendar year 2020 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

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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 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 credit 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 and education.

# Colorado Certified Water Professionals Program

## 2020 Annual Report



After the exciting building year of 2019, the CCWP program was pleased to enter 2020 fully functional and serving operators. Unexpectedly, the outbreak of the novel coronavirus, COVID-19, affected the CCWP program for most of 2020. Limited testing opportunities, in-person trainings and travel restrictions constrained some operators' ability to renew certifications and advance in their profession. Despite these challenges, the CCWP program was able to function without disruption or interruption due to the CCWP portal, the online operator certification platform, and the CCWP staff's ability to work remotely.

PSI closed testing centers from March 15<sup>th</sup> through May 1<sup>st</sup> in accordance with statewide mandates. After May 1<sup>st</sup> some testing centers re-opened in a limited capacity and remained at 50% or less capacity for the duration of 2020. These closures limited the opportunities for operator examinations. Understandably, people submitted fewer operator exam applications because of travel restrictions, employer COVID-19 policies and because they knew the testing centers were closed with a backlog of operators awaiting exam. Once testing centers were able to open, PSI provided three opportunities in Colorado Springs, Denver and Ft. Collins for operators to test in a PSI mobile lab in late July and early August. The Water and Wastewater Facility Operator Certification Board recognized the need to support the operators who were impacted by the testing center closures, so they authorized two testing extensions to approximately 510 applicants who were within their 180-day testing window prior to the March 15<sup>th</sup> PSI testing center closures. By the end of 2020, the backlog of testers cleared and applications for examinations were comparable to 2019. To avoid these issues in the future, the WWFOCB authorized remote testing for operators as an exam option beginning in 2021.

The course providers that deliver professional development for the Colorado operators experienced challenges due to the same statewide mandates and travel restrictions of COVID-19. Operator trainings, schools and conferences were cancelled throughout the year limiting the opportunities for professional development and training unit accrual. Impressively, course providers adjusted their delivery methods and offered online trainings to meet the needs of operators during the unusual circumstances. The CCWP program established guidance for training unit approval including the requirements for online training.

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. Neither 2019 nor 2020 should be considered normal years of operation due to the CCWP Program start-up in 2019 and the COVID-19 pandemic of 2020. After three to five years of operations, a baseline will be established and trends and observations will be more apparent based on historical data and observations.

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## Section 1: Active Certificates and Active Operators as of 12/31/2020

On December 31, 2020 there were 11,851 effective 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 31<sup>st</sup>. There was virtually no change in the number of Effective and Restorable Certificates or Active Certificates compared to 2019. There were 8% fewer Active Restricted Certificates in 2020 than in 2019.

Active Certificates December 31, 2018	Active Certificates December 31, 2019	Active Certificates December 31, 2020
11,685	11,879	11,851

**Active Certificates by Type**



Effective and Restorable Certificates on December 31, 2020 Number of active certificates* by category and level (includes restricted certificates) <i>Information collected using the CCWP Portal</i>	
Certification Type and Level	Active Certificates
<b>Water Treatment Operator</b>	
T	26
S	487
D	934
C	615
B	413
A	830
Water Treatment Operator total	3,305
<b>Wastewater Treatment Operator</b>	
S	172
D	714
C	455
B	219
A	592
Wastewater Treatment Operator total	2,152
<b>Industrial Wastewater Treatment Operator</b>	
D	240
C	131
B	64
A	124
Industrial Wastewater Treatment Operator total	559

<b>Effective and Restorable Certificates on December 31, 2020 (continued)</b>		
Number of active certificates* by category and level (includes restricted certificates)		
<i>Information collected using the CCWP Portal</i>		
Certification Type and Level	Active Certificates	Active Restricted Certificates
<b>Water Distribution System Operator</b>		
1	1,322	4
2	842	4
3	406	0
4	827	31
Water Distribution System Operator total	3,397	39
<b>Wastewater Collection System Operator</b>		
1	964	4
2	573	5
3	294	0
4	607	12
Wastewater Collection System Operator total	2,438	21
<b>Grand Total all Categories / Level</b>	<b>11,851</b>	<b>60</b>

\*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**

<b>Active Restricted Certificates by Type and Level on December 31, 2019</b>	
Certification Type and Level	Active Restricted Certificates
<b>Water Distribution System Operator</b>	
1	4
2	4
3	0
4	31
Water Distribution System Operator total	39
<b>Wastewater Collection System Operator</b>	
1	4
2	5
3	0
4	12
Wastewater Collection System Operator total	21
<b>Restricted Certification Total all Categories/Levels</b>	<b>60</b>

**Total number of active operators\*\***

<b>Active Operator Report on December 31, 2020</b> <i>Includes operators holding restricted certificates</i>	
Active Operators	
5,524	

**\*\*Active operators hold at least one active certificate as defined above.**

**Number of active operators holding restricted certificates**

<b>Active Operator Report on December 31, 2019</b>	
Operators with Active Restricted Certificates	% of Total Operators
48	< 1%

**\*\*Active operators hold at least one active certificate as defined above.**

**Section 2: 2019 Examination Information**

**Certification by Examination**

There were approximately 181 exams applications submitted per month in 2020 which was a 3.4% increase in the average number of applications submitted in 2020 compared to 2019.

**Examination Applications**

<b>Examination Applications Received and Reviewed January 1, 2020 through December 31, 2020</b>	
Application Status	Number of Applications
Approved	2,114
Awaiting Reply	0
Closed – operator did not provide response upon request	47
Ineligible	21
Total Received Applications	2,182

**Number of applications approved in 2020**

<b>Examination Applications Reviewed January 1, 2020 through December 31, 2020</b>		
Application Status	Number of Applications	% of Applications Received
Approved	2,114	2,182

**Exams Administered by Category and Level**

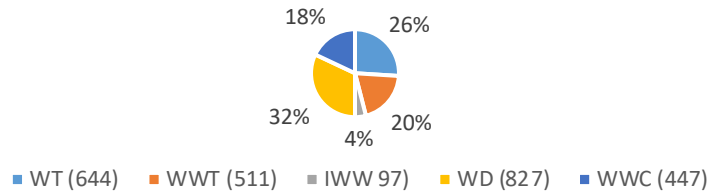
***Data source: PSI Online Database***

Despite the public health crisis of 2020, 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 approximately 211 average exams administered per month in 2020 which is a 57% increase from 2019. Though it seems strange that 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, 2020 through December 31, 2020**

**Total Exams: 935/2526**



Water Treatment Exams Administered January 1, 2020 through December 31, 2020	
Water Treatment – T	0/1
Water Treatment – S	16/40
Water Treatment – D	92/199
Water Treatment – C	61/130
Water Treatment – B	43/98
Water Treatment – A	62/176
Total Water Treatment Exams Administered	274/ 644
Wastewater Treatment Exams Administered January 1, 2020 through December 31, 2020	
Wastewater Treatment – S	5/13
Wastewater Treatment – D	85/170
Wastewater Treatment – C	43/123
Wastewater Treatment – B	46/132
Wastewater Treatment – A	38/73
Total Wastewater Treatment Exams Administered	217/511
Industrial Wastewater Treatment Exams Administered January 1, 2020 through December 31, 2020	
Industrial Wastewater Treatment – D	18/45
Industrial Wastewater Treatment – C	13/25
Industrial Wastewater Treatment – B	5/14
Industrial Wastewater Treatment – A	5/13
Total Industrial Wastewater Treatment Exams Administered	41/97
Water Distribution Exams Administered January 1, 2020 through December 31, 2020	
Water Distribution – 1	98/304
Water Distribution – 2	68/262
Water Distribution – 3	60/150
Water Distribution – 4	30/111
Total Water Distribution Exams Administered	256/827
Wastewater Collection Exams Administered January 1, 2020 through December 31, 2020	
Wastewater Collection – 1	53/171
Wastewater Collection – 2	40/152
Wastewater Collection – 3	27/79
Wastewater Collection – 4	27/45
Total Wastewater Collection Exams Administered	147/447

### Examination Pass and Fail Rates

Of the 2,526 administered, operators passed 58.3% of the exams taken in 2020 which represents a 2% decrease in the overall pass rate of 2019. Like 2019, approximately 67% of the operators who passed their exams did so on their first attempt. Though small, there was a 7.7% increase in first attempt pass rates compared to 2019. However, there was a 15.33% decrease between subsequent pass rates between 2019 and 2020. This means that even though more people are passing exam on the first attempt, those who must take the exam more than once a showing less success than in 2019.

Pass Rate for Certification Exams Administered January 1, 2020 through December 31, 2020 Total Exams Administered: 2,526		
Certification Exam Type	Exams Passed/Total Exams by Type	Pass Rate
Water Treatment	434/644	67.4%
Wastewater Treatment	225/511	44%
Industrial Wastewater Treatment	66/97	68%
Water Distribution	462/827	55.9%
Wastewater Collection	285/447	63.8%
<b>Overall Pass Rate</b>	<b>1,472/2,526</b>	<b>58.3%</b>

Certification Exams Passed on the First Attempt with Pass Rate January 1, 2020 through December 31, 2020		
Certification Exam Type	Exams Passed on First Attempt/Total First Attempts	Pass Rate on First Attempt
Water Treatment	368/489	75.3%
Wastewater Treatment	154/313	49.2%
Industrial Wastewater Treatment	57/78	73.1%
Water Distribution	380/581	65.4%
Wastewater Collection	250/333	75.1%
<b>Overall First Attempt Pass Rate</b>	<b>1209/1794</b>	<b>67.4%</b>

Certification Exams Failed on the First Attempt with Fail Rate January 1, 2020 through December 31, 2020		
Certification Exam Type	Exams Failed on First Attempt/Total First Attempts	Fail Rate on First Attempt
Water Treatment	121/489	24.7%
Wastewater Treatment	159/313	50.8%
Industrial Wastewater Treatment	21/78	26.9%
Water Distribution	201/581	34.6%
Wastewater Collection	83/333	24.9%
<b>Overall First Attempt Fail Rate</b>	<b>585/1794</b>	<b>32.6%</b>

Certification Exams Passed on Subsequent Attempt January 1, 2020 through December 31, 2020		
Certification Exam Type	Exams Passed on Subsequent Attempt/Total Subsequent Attempt(s)	Pass Rate on Subsequent Attempt(s)
Water Treatment	66/155	42.6%
Wastewater Treatment	71/198	35.9%
Industrial Wastewater Treatment	9/19	47.4%
Water Distribution	82/246	33.3%
Wastewater Collection	35/114	30.1%
<b>Overall Subsequent Attempt Pass Rate</b>	<b>263/732</b>	<b>35.9%</b>

### Examination Pass and Fail Rates

Pass Rate for Certification Exams Administered January 1, 2020 through December 31, 2020		
Certification Exam Type	Exams Passed/Total Exams by Type and Class	Pass Rate
Water Treatment	434/644	67.4%
T	1/1	100%
S	36/40	90%
D	152/199	76.4%
C	106/130	81.5%
B	80/98	81.6%
A	59/176	33.5%
Wastewater Treatment	225/511	44%
S	13/13	100%
D	90/170	52.9%
C	62/123	50.4%
B	34/132	25.8%
A	26/73	35.6%
Industrial Wastewater Treatment	66/97	68%
D	39/45	86.7%
C	12/25	48.0%
B	10/14	71.4%
A	5/13	38.5%
Water Distribution	462 /827	55.9%
1	188/304	61.8%
2	145/262	55.3%
3	88/150	58.7%
4	41/111	36.9%
Wastewater Collection	285/447	63.8%
1	127/171	74.3%
2	96/152	63.2%
3	44/79	55.7%
4	18/45	40%
Overall Pass Rate	1472/2526	58.3%

### Identification of trends, issues and problems for board attention or action- 2019 Examinations

- The one certification exam type that has a significantly lower pass rate than the others is wastewater treatment with only a 44% pass rate. Additionally, far fewer people pass wastewater treatment exams on the first or subsequent attempts than any other operator type. The data suggests that the wastewater class D and wastewater class B exams pass rates are far lower than the pass rates compared to parallel types and classes.
- The closing of the testing centers, backlog in applicants needing to take certification exams, travel restrictions and social distancing requirements in the testing environments all add a layer of stress to the testing experience. That stress likely affects pass and failure rates. Fewer in-person training opportunities may have limited exam prep training during 2020.

### **Section 3: 2020 Renewed and Restored Certificates**

<b>All Certification Renewals and Restorations January 1, 2020 through December 31, 2020</b>		
<b>Certification Type</b>	<b>Renewals Type and Class</b>	<b>% per Type Renewed</b>
<b>Water Treatment</b>	<b>695 Total</b>	
T	14	2%
S	126	18%
D	162	23%
C	102	15%
B	65	9%
A	226	33%
<b>Wastewater Treatment</b>	<b>486 Total</b>	
S	53	11%
D	144	30%
C	92	19%
B	36	7%
A	161	33%
<b>Industrial Wastewater Treatment</b>	<b>136 Total</b>	
D	55	40%
C	28	21%
B	15	11%
A	38	28%
<b>Water Distribution</b>	<b>734 Total</b>	
1	268	37%
2	154	21%
3	78	11%
(4 restricted certificate included)	234	32%
<b>Wastewater Collection</b>	<b>529 Total</b>	
(1 restricted certificate included)	186	35%
2	97	18%
3	56	11%
(1 restricted certificate included)	190	36%
<b>Total Renewals and Restorations</b>	<b>2,580</b>	

<b>Restricted Renewals January 1, 2020 through December 31, 2020</b>		
<b>Certification Type and Class</b>	<b>Restricted Renewal</b>	
<b>Water Distribution</b>	<b>4 Total</b>	
1	-	
2	-	
3	-	
4	4	
<b>Wastewater Collection</b>	<b>2 Total</b>	
1	1	
2	-	
3	-	
4	1	
<b>Total Restricted Renewals</b>	<b>6</b>	

Certification Restorations January 1, 2020 through December 31, 2020		
Certification Type	Renewals Type and Class	
Water Treatment		86
	T	3
	S	23
	D	23
	C	11
	B	9
	A	17
Wastewater Treatment		65
	S	7
	D	22
	C	16
	B	9
	A	11
Industrial Wastewater Treatment		29
	D	11
	C	7
	B	2
	A	9
Water Distribution		110
	1	50
	2	18
	3	7
	4	36*
Wastewater Collection		76
	1	26
	2	11
	3	12
	4	27
<b>Total Restorations</b>		<b>366</b>

\*Note: Only one restricted certification was restored in 2020

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

- There are far fewer operators restoring certifications than in previous years because the CCWP Portal reminds operators via email about upcoming renewal deadlines. There were the exact same number of restorations per month, 30 per month, in 2019 and 2020.
- The number of renewal applications is comparable to 2019 despite the limited in-person training opportunities.
- The CCWP portal shows a 30% increase in number of renewals from 2019 to 2020, but the CCWP portal does not include the data of the off-the-portal renewal forms used from March through May of 2019 while the CCWP portal was still under construction.

#### **Section 4: 2020 Certification by Reciprocity**

Reciprocity applicants submitted about the same number of applications in 2019 and 2020, but far fewer per month in 2020. This likely has to do with the numerous travel restrictions and closures due to COVID-19. There was a 15% decrease in approved reciprocity apps and a 43% increase in annual ineligible apps from 2019 to 2020.

<b>Reciprocity Applications Received and Reviewed January 1, 2020 through December 31, 2020</b>		
Certification Type	Application Type and Class	
Water Treatment		14
	D	3
	C	6
	B	2
	A	3
Wastewater Treatment		13
	C	4
	B	3
	A	6
Industrial Wastewater Treatment		2
	A	1
	B	1
Water Distribution		12
	1	5
	2	3
	3	4
Wastewater Collection		3
	2	1
	3	1
	4	1
<b>Total Reciprocity Applications</b>		<b>44</b>

<b>Approved Reciprocity Applications January 1, 2020 through December 31, 2020</b>		
Certification Type	Application Type and Class	
Water Treatment		10
	D	2
	C	4
	B	2
	A	2
Wastewater Treatment		9
	C	3
	B	2
	A	4
Industrial Wastewater Treatment		1
	B	1
Water Distribution		11
	1	5
	2	3
	3	3
Wastewater Collection		3
	2	1
	3	1
	4	1
<b>Total Approved Reciprocity Applications</b>		<b>34</b>

Ineligible and Expired Reciprocity Applications January 1, 2020 through December 31, 2020		
Certification Type	Application Type and Class	
Water Treatment		4
	A	1
	C	2
	D	1
Industrial Wastewater Treatment		1
	A	1
Wastewater Treatment		4
	A	2
	B	1
	C	1
Water Distribution		1
	3	1
<b>Total Ineligible and Pending Applications</b>	<b>10</b>	

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

The WWFOCB spent six months discussing ways to improve the reciprocity policy and with help from CDPHE staff drafted and approved a revised reciprocity policy that will go into effect in 2021.

Top 3 reasons for application denials:

- 1) Operators did not apply for the appropriate level of certification in Colorado
- 2) Operators did not take exams sequentially in their certification state
- 3) Applicant did not provide sufficient documentation to approve application or applied from states that do not administer Colorado comparable exams.

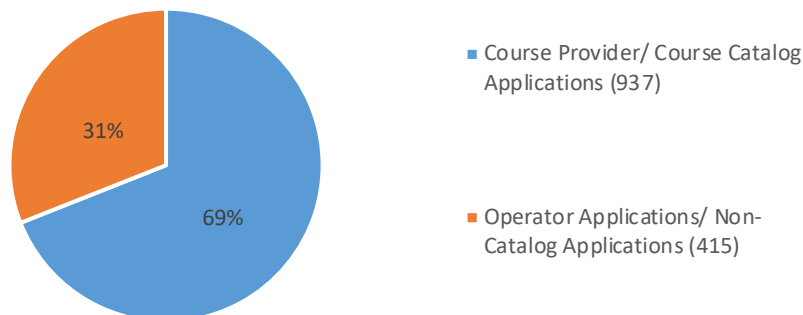
## **Section 5: 2020 Course Provider Applications for TUs**

There was more than a 200% increase in course provider applications from 2019 to 2020. However, course providers were only able to submit courses for 7 months of 2019. Additionally, OCPO approved some 2019 course provider applications prior to the CCWP turnover. Conversely, there were 27% fewer non-catalog training unit applications in 2020 than in 2019. More course providers are uploading TUs into the CCWP portal for people who complete their courses. Please note, there is a higher number rejected applications than in the past because operators are accidentally submitting catalog TU applications as non-catalog tu applications. Also, unverifiable webinars being submitted as non- catalog TU applications.

<b>2020 Course Applications Received and Reviewed January 1, 2020 through December 31, 2020</b>	
Approved	909
Rejected	3
Expired/ Required More Information from Course Provider	25
Total Applications	937

<b>Non-Catalog Course Applications Received and Reviewed January 1, 2020 through December 31, 2020</b>	
Approved	292
Not Approved	63
Resent for more information/ Closed for failure to resubmit	60
Total Applications	415

### Training Unit Applications 1,352 Total Application





## Section 6: 2020 Financial Summary

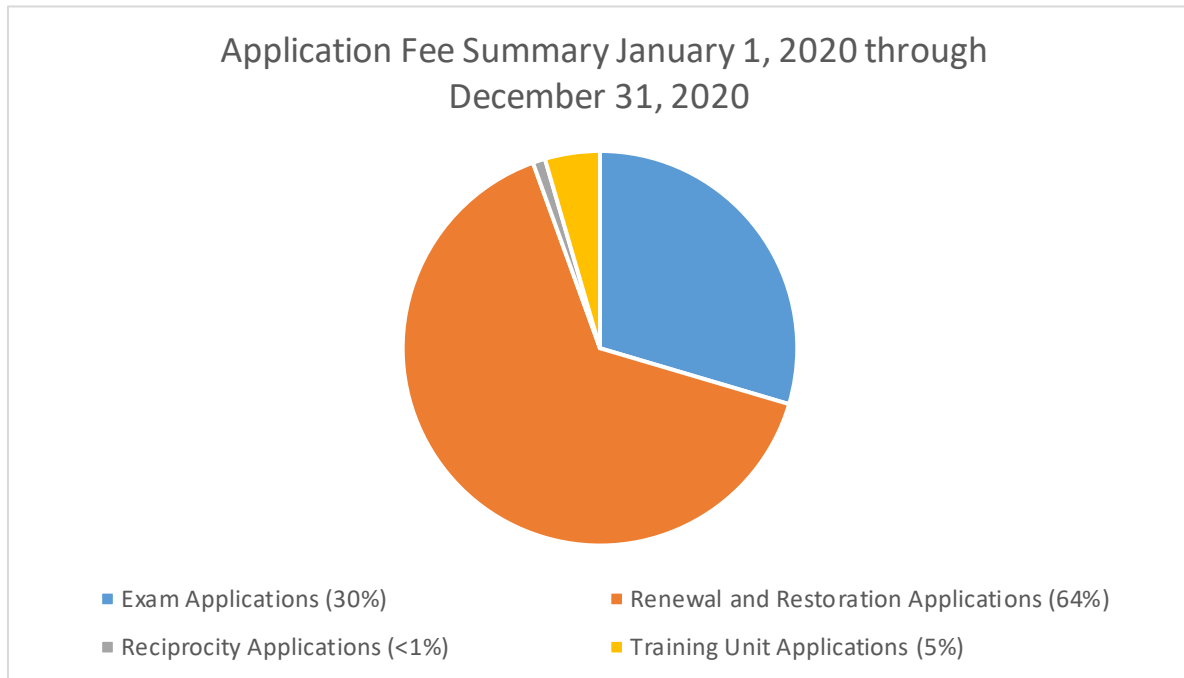
CCWP Portal Fees Collected by Category and Level – Examination Applications January 1, 2020 - December 31, 2020			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D	42	\$50.00	\$2,100.00
C	23	\$50.00	\$1,150.00
B	11	\$50.00	\$550.00
A	11	\$50.00	\$550.00
Industrial Wastewater Treatment Operator total	87	\$50.00	\$4,350.00
Wastewater Collection System Operator			
1	161	\$50.00	\$7,950.00
2	124	\$50.00	\$6,200.00
3	70	\$50.00	\$3,500.00
4	33	\$50.00	\$1,650.00
Wastewater Collection System Operator total	388	\$50.00	\$19,300.00
Wastewater Treatment Operator			
S	19	\$50.00	\$900.00
D	136	\$50.00	\$6,800.00
C	90	\$50.00	\$4,500.00
B	89	\$50.00	\$4,450.00
A	40	\$50.00	\$2,000.00
Wastewater Treatment Operator total	374	\$50.00	\$18,650.00
Water Distribution System Operator			
1	291	\$50.00	\$14,550.00
2	205	\$50.00	\$10,200.00
3	129	\$50.00	\$6,350.00
4	80	\$50.00	\$4,000.00
Water Distribution System Operator total	705	\$50.00	\$35,100.00
Water Treatment Operator			
T	3	\$50.00	\$150.00
S	46	\$50.00	\$2,150.00
D	212	\$50.00	\$10,400.00
C	122	\$50.00	\$6,050.00
B	97	\$50.00	\$4,800.00
A	104	\$50.00	\$5,100.00
Water Treatment Operator total	584	\$50.00	\$28,650.00
EXAM APPLICATIONS total	2,138	\$ 50.00	\$106,050.00

CCWP Portal Fees Collected by Category and Level – Reciprocity Applications January 1, 2020 - December 31, 2020			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D			
C			
B	1	\$85.00	\$85.00
A	1	\$85.00	\$85.00
Industrial Wastewater Treatment Operator total	2	\$85.00	\$170.00
Wastewater Collection System Operator			
1		\$85.00	
2	1	\$85.00	\$85.00
3	1	\$85.00	\$85.00
4	1	\$85.00	\$85.00
Wastewater Collection System Operator total	3	\$85.00	\$255.00
Wastewater Treatment Operator			
S			
D			
C	4	\$85.00	\$170.00
B	4	\$85.00	\$340.00
A	6	\$85.00	\$510.00
Wastewater Treatment Operator total	14	\$85.00	\$1,020.00
Water Distribution System Operator			
1	5	\$85.00	\$425.00
2	3	\$85.00	\$255.00
3	4	\$85.00	\$340.00
4			
Water Distribution System Operator total	12	\$ 85.00	\$1,020.00
Water Treatment Operator			
T			
S			
D	3	\$85.00	\$170.00
C	7	\$85.00	\$595.00
B	2	\$85.00	\$170.00
A	3	\$85.00	\$255.00
Water Treatment Operator total	15	\$85.00	\$1,190.00
<b>RECIPROCITY total</b>	<b>39/47</b>	<b>\$85.00</b>	<b>\$3,655.00</b>

CCWP Portal Fees Collected by Category and Level – Renewal Applications January 1, 2020 - December 31, 2020			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
D	44	\$85.00	\$3,740.00
C	20	\$85.00	\$1,700.00
B	13	\$85.00	\$1,105.00
A	29	\$85.00	\$2,465.00
Industrial Wastewater Treatment Operator total	106	\$85.00	\$9,010.00
Wastewater Collection System Operator			
1	159	\$85.00	\$13,345.00
2	87	\$85.00	\$7,310.00
3	45	\$85.00	\$3,825.00
4	149	\$85.00	\$12,665.00
Wastewater Collection System Operator total	440	\$85.00	\$37,145.00
Wastewater Treatment Operator			
S	45	\$85.00	\$3,825.00
D	122	\$85.00	\$10,285.00
C	76	\$85.00	\$6,460.00
B	27	\$85.00	\$2,295.00
A	149	\$85.00	\$12,665.00
Wastewater Treatment Operator total	419	\$85.00	\$35,530.00
Water Distribution System Operator			
1	213	\$85.00	\$18,020.00
2	134	\$85.00	\$11,305.00
3	71	\$85.00	\$6,035.00
4	180	\$85.00	\$15,300.00
Water Distribution System Operator total	598	\$85.00	\$50,660.00
Water Treatment Operator			
T	11	\$85.00	\$935.00
S	103	\$85.00	\$8,755.00
D	138	\$85.00	\$11,560.00
C	92	\$85.00	\$7,820.00
B	54	\$85.00	\$4,590.00
A	201	\$85.00	\$17,085.00
Water Treatment Operator total	599	\$85.00	\$50,745.00
<b>RENEWAL FEES total</b>	<b>2,162</b>	<b>\$85.00</b>	<b>\$183,090.00</b>

CCWP Portal Fees Collected by Category and Level – Restoration Applications January 1, 2020 - December 31, 2020			
Fee Type	Number of Fees	Fee Amount	Amount Collected
Industrial Wastewater Treatment Operator			
A	9	\$135.00	\$1,215.00
B	2	\$135.00	\$270.00
C	7	\$135.00	\$945.00
D	11	\$135.00	\$1,485.00
Industrial Wastewater Treatment Operator total	29	\$135.00	\$3,915.00
Wastewater Collection System Operator			
1	27	\$135.00	\$3,510.00
2	11	\$135.00	\$1,485.00
3	12	\$135.00	\$1,620.00
4	27	\$135.00	\$3,645.00
Wastewater Collection System Operator total	77	\$135.00	\$10,260.00
Wastewater Treatment Operator			
A	11	\$135.00	\$1,485.00
B	9	\$135.00	\$1,215.00
C	18	\$135.00	\$2,445.00
D	24	\$135.00	\$3,140.00
S	7	\$135.00	\$945.00
Wastewater Treatment Operator total	69	\$135.00	\$9,030.00
Water Distribution System Operator			
1	50	\$135.00	\$6,750.00
2	19	\$135.00	\$2,430.00
3	7	\$135.00	\$945.00
4	34	\$135.00	\$4,590.00
Water Distribution System Operator total	110	\$135.00	\$14,715.00
Water Treatment Operator			
A	17	\$135.00	\$2,295.00
B	9	\$135.00	\$1,215.00
C	13	\$135.00	\$1,485.00
D	25	\$135.00	\$3,190.00
S	23	\$135.00	\$3,105.00
T	3	\$135.00	\$405.00
Water Treatment Operator total	90	\$135.00	\$11,695.00
<b>RESTORATIONS total</b>	<b>304/375</b>	<b>\$135.00</b>	<b>\$49,615.00</b>
<b>Grand Total of ALL Certification Applications</b>	<b>4,721</b>		<b>\$342,410.00</b>

CCWP Portal Fees- Training Unit Applications January 1, 2020 - December 31, 2020		
Fee Type	Number of Fees	Fees Collected
TU APPLICATION FEES		
Non-Catalog TU applications	26	\$ 600.00
Catalog Course Applications	257	\$15,550.00
TU APPLICATION FEES total	283	\$16,150.00



2020 Expenditures Compared to Board-Approved Budget			
Description	Budget	Expenditures	Percent to Budget
Income			
App & Admin fees for exams	\$170,000.00	\$104,700.00	62%
App & Admin fees for renewals	\$255,000.00	\$211,665.00	83%
App & Admin fees for reciprocity	\$3,400.00	\$3,570.00	105%
TU Course approval fee	\$25,000.00	\$16,200.00	65%
Late fees		\$18,450.00	
<b>INCOME TOTALS</b>	<b>\$453,400.00</b>	<b>\$354,585.00</b>	<b>78%</b>
Expenses			
<b>Salaries and Fringe</b>			
Program Director	\$88,800.00	\$88,800.00	100%
Program Coordinator	\$73,200.00	\$27,450.00	38%
Program Assistant	\$66,600.00	\$66,600.00	100%
Accounting (bookkeeper)	\$24,000.00	\$24,000.00	100%
Executive Director	\$60,000.00	\$60,000.00	100%
<b>Operating Expenses</b>			
Support Services to Launch IT	\$18,000.00	\$8,500.00	47%
Hosting, Maintenance and offsite backup	\$8,400.00	\$11,263.00	134%
IT Services	\$3,000.00	\$2,303.00	77%
CO Treasurer Certificate Fee	\$27,940.00	\$24,815.00	89%
Bulk mailing, printing and postage	\$2,400.00	\$0.00	0%
Credit Card payment Processing	\$15,900.00	\$11,000.54	69%
Financial Audit	\$5,000.00	\$7,545.00	151%
ABC Membership Dues	\$1,800.00	\$0.00	0%
ABC Conference Attendance	\$9,000.00	\$0.00	0%
Training, staff	\$6,000.00	\$600.00	10%
Training, operators	\$12,000.00	\$1,400.00	12%
Travel Expense for Program Staff	\$6,000.00	\$1,495.50	25%
Office Supplies, Printing	\$2,400.00	\$400.00	17%
Office Rent and Utilities	\$9,000.00	\$2,125.00	24%
Miscellaneous Expenses	\$9,000.00	\$8,250.00	92%
<b>EXPENSE TOTALS</b>	<b>\$448,440.00</b>	<b>\$346,547.04</b>	<b>77%</b>

### **Section 7: 2019 CCWP Staff**

During 2020, the CCWP Program operated with two staff members from January through September. In March, the program began operating remotely due to the COVID-19 pandemic. In October, the CCWP Program welcomed back the program coordinator and remained fully staffed for the remainder of 2020.



Vanessa Roy  
CCWP Program Assistant



Paula Martinez  
CCWP Program Coordinator



Larisa Oringdulph  
CCWP Director



**COLORADO**  
Department of Public  
Health & Environment

# FACILITY OPERATORS CERTIFICATION PROGRAM

CY 2020 Annual Report to the Water and  
Wastewater Facility Operators Certification  
Board

April 19, 2021

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## INTRODUCTION

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The Water Quality Control Division's (division) responsibilities for Colorado's water and wastewater facility operator 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 revisions for board consideration,
- outreach and education efforts, and
- ensuring that periodic internal and external reviews of the program are done.

Division activities in these areas during calendar year 2020 are documented in the following sections of this report.

## FACILITY COMPLIANCE

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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 for 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 work flow.

Water treatment facilities and water distribution systems are classified separately, impacting the number of unique public water systems in the state. During 2020, 55 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 2 lists the number of public water systems by type and their compliance rates. Prior to 2020, the number of systems in Table 2 indicated the total number of facilities classified as water treatment and the total number of systems classified as water distribution. For 2020, 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 2 -Public water system facilities and compliance status.**

Reporting year	Treatment and distribution systems	Compliance rate (%)
Community		
2016	1597	98%
2017	1619	99%
2018	1575	98%
2019	1635	98%
2020	911	97%
Non-transient Non-community		
2016	273	98%
2017	274	98%
2018	281	98%
2019	291	99%
2020	172	99%
Transient Non-community		
2016	1438	95%
2017	1475	96%
2018	1506	98%
2019	1543	98%
2020	970	98%

## Wastewater facilities

The division identified a number of facilities, especially industrial facilities that were operating without a certified operator in 2020. Some of those systems requested, and were granted, an exemption from the ORC requirement.

In 2020, the division issued 139 compliance advisories to industrial and domestic wastewater facilities for failure to meet the ORC requirements. By December 31, 2020, only 28 facilities were still under compliance advisories.

Table 3 shows the compliance rates for both domestic and industrial wastewater treatment facilities.

**Table 3 - Wastewater facilities required to have an ORC.**

Reporting year	Permitted facilities	Compliance rate
Permitted Domestic Wastewater Facilities		
2016 Individual	250	99%
2016 General	169	89%
2017 Individual	245	97%
2017 General	295	99%
2018 Individual	248	100%
2018 General	260	100%
2019 Individual	255	92%
2019 General	275	92%
2020 Individual	262	91%
2020 General	266	96%
Permitted Industrial Wastewater Facilities		
2016 Individual	124	91%
2016 General	87	74%
2017 Individual	137	88%
2017 General	75	71%
2018 Individual	119	100%
2018 General	240	100%
2019 Individual	135	70%
2019 General	104	44%
2020 Individual	134	44%
2020 General	102	72%

A number of industrial facilities are automatically exempted from the ORC requirement. Per Regulation 100.1.6, automatic exempted facilities include facilities which 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 2020, two discretionary exemptions were granted, both for meeting the passive or no treatment requirement of Regulation 100.1.6(c)(i).

## FACILITY ENFORCEMENT

In 2020, five formal drinking water enforcement actions and two formal wastewater notices of violation (NOV) were issued to facilities that failed to comply with the ORC requirement. By the end of the year, five had returned to compliance.

Table 4 - Notices of violation with status.

Reporting year	Drinking water	Wastewater	Total DW and WW NOV's issued	Returned to compliance
2016	0	0	0	0
2017	4	0	4	1
2018	5	0	5	4
2019	2	3	5	5
2020	5	2	7	5

## 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 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 and disposition.

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

Table 5 - Disciplinary action investigations conducted (with disposition).

Type of action	2016	2017	2018	2019	2020
Letter of reprimand	1				1
Consent agreement					
Suspension or revocation	1				2
Conference		2			
Warning letter	1		4	1	3
Closed - lack of evidence	1	1	1		4
Investigation still open at end of the year					1
<b>Total investigations</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>11</b>

## 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 received feedback from stakeholders at a special meeting for that purpose held in conjunction with the February 2020 Colorado Rural Water Association Conference. In-person stakeholder meetings were not scheduled for most of 2020 due to COVID-19. The division received written stakeholder input for proposed revisions to Regulation 100 and Board Policy 13-1, regarding Colorado certification for operators holding out-of-state certificates.

### Specific staff participation:

A number of division staff participates 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.

## REGULATION REVISIONS

Table 6 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 100.54-100.59 of Regulation 100.

Table 6 - Regulation 100, 5 CCR 1003-2 revisions.

Reporting year	Regulation 100 revisions	Statement of basis and purpose
2017	Amended 06/20/17, effective 08/31/17	Section 100.54
2018	Amended 09/25/18, effective 03/01/19	Section 100.55
2018	Amended 11/27/18, effective 03/01/19	Sections 100.56 and 100. 57
2019	Amended 11/26/19, effective 1/30/20	Section 100.58
2020	Amended 9/29/20, effective 11/30/20	Section 100.59

## DIVISION OUTREACH AND EDUCATION EFFORTS

The division's liaison to the board presented at two trainings in 2020 before COVID-19 shut down in-person training events. Throughout the rest of 2020, the division's liaison responded to stakeholders individually by phone and email. The division also developed two on-demand training videos. These presentations provide additional opportunities for contact with the program's stakeholders.

Table 7 - Facility operator certification staff outreach and education.

	2016	2017	2018	2019	2020
Number of events	21	12	13	45	2

## 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 routine duties of approximately 76 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 8 shows the salary expenses for the board administrator and the division liaison for calendar year 2020. The costs associated with the routine tasks assigned to over 76 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, drinking water and permitted facility fees.

**Table 8 - Board administrator and division salary expenses.**

Salary expenses for board administrator and division program staff <sup>1</sup>		Full time equivalent (FTE)
2016	\$138,912	1.2 FTE 0.1 Management, 0.1 PAII, 1.0-EPS III <sup>1</sup>
2017	\$144,367	1.2 FTE 0.1 Management, 0.1 PAII, 1.0-EPS III <sup>1</sup>
2018	\$121,983	1.2 FTE 0.1 Management, 0.1 PAII (for 7 months), 1.0-EPS III <sup>1</sup>
2019	\$153,356	1.6 FTE 0.6 Management, 1.0-EPS III <sup>1</sup>
2020	\$155,584	1.6 FTE 0.6 Management, 1.0-EPS III <sup>1</sup>

<sup>1</sup> Directly assigned to the operator certification program (does not include 76+ 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 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

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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 without compromise.