ANNUAL REPORT
OF ACTIVITIES PERFORMED BY
THE STATE ENGINEER'S OFFICE
2024

To Satisfy Requirements
of Senate Bill 89-181
Regarding Water Quality

COLORADO
Division of Water Resources
Department of Natural Resources

INTRODUCTION

According to the provisions of Senate Bill 89-181 (SB-181), the Colorado Division of Water Resources/State Engineer's Office (DWR/SEO) is one of the agencies responsible for implementing the water quality standards and classifications adopted by the Colorado Water Quality Control Commission (WQCC). The SEO will implement water quality standards and classifications only where water quality statutes other than the Water Quality Act require the SEO's involvement. This report provides an update on the activities undertaken by the SEO and its Division offices to accomplish its responsibilities pursuant to the provisions of SB-181 in calendar year 2024.

The SEO takes a proactive stance in this matter by cooperating with other agencies and organizations in the development of comprehensive and practical solutions for managing the quantity and quality of the state's waters.

There are three major areas where the SEO exercises its authority in implementing water quality standards and classifications:

- Adoption of points of compliance for discharges to groundwater
- Approval of substitute water supply plans and non-decreed water exchanges
- Adjudication process of plans for augmentation including water exchanges

A. Points of Compliance for Discharges to Groundwater

The SEO ensures that water well construction activities do not result in a pollution discharge to state waters through well permitting activities. All wells must be constructed in accordance with the rules and regulations established by the State Board of Examiners of Water Well Construction and Pump Installation Contractors (BOE). Licensed well drillers construct domestic and commercial water wells. Monitoring and recovery wells can be constructed either by licensed drillers or under the supervision of a professional engineer or professional geologist if the well does not penetrate a confining layer. The BOE takes corrective actions against licensed drillers or pump installers who violate the rules for proper well construction, including penalties and suspension or revocation of their licenses. In the case of unlicensed contractors performing well construction activities that should only be conducted by licensed contractors, legal proceedings are initiated, which usually conclude in significant monetary judgments. Well owners have the ultimate responsibility to correct the deficiencies of improperly constructed wells. Otherwise, the BOE, State Engineer, or both may order the well plugged and abandoned to prevent contamination of groundwater.

The SEO annual well permitting summary is captured in Table 1. The number of well permits issued increased by 15% in 2024 from 2023; reversing a downward trend since 2021. Monitoring hole notice-of-intent to drill (NOI) eForms received by the SEO were similar to 2023, down 3%. These also include NOIs for temporary dewatering wells. Monitoring *holes* (in contrast to monitoring *wells*) are used for temporary monitoring (<18 months) of groundwater quality at environmental remediation sites. The SEO can request water quality data from applicants if necessary.

Table 1 –SEO Annual Well Permitting Summary

SEO Permitting Activity	2020	2021	2022	2023	2024
1. Permits Issued	5784	7265	6414	4914	5639
2. Monitoring Hole Notice-of-Intent	975	1019	1074	1171	1138

Table 2 summarizes annual BOE activities (through the Well Inspection Program) for the last five years. In 2024, approved well construction variances (from the Construction Rules) were approximately 17% higher than 2023. The majority of the variances were for casing & grout issues, shallow infiltration gallery wells, and for minimum offset from contaminant sources. The Board licensed 246 contractors in 2024, 2 more than in 2023. All licensed contractors are required to obtain at least eight hours of continuing education annually for license renewal and the BOE has returned to its normal practice of requiring at least four hours of in-person training.

Table 2 –Board of Examiners Annual Activity Summary

BOE Activity	2020	2021	2022	2023	2024
1. Complaints Investigated	33	14	30	33	38
2. Resolved Complaints	52	15	22	17	42
3. Stipulated Settlements (total dollars)	26 ($13,800)	4 ($1,500)	22 ($15,400)	16 ($13,300)	28 ($31,550)
4. Licenses suspended or revoked	0	0	1	0	1
5. Letter of admonition/ reprimand	8	1	1	0	0
6. Inspections	1202	1182	1467	997	936
7. Well Construction Variances	107	105	124	127	149
8. Licensed Contractors	244	248	237	244	246

The Well Inspection Program was authorized by the legislature in Senate Bill 03-45 and funded by a $40 increase in the well permit application fee, which has not changed since 2003. Presently, the program consists of a Chief Well Inspector headquartered in Denver and two additional well inspectors who perform inspections throughout the state. The Chief Well Inspector coordinates the activities of the program and supports the BOE. The primary objective of the program is to assist the BOE with the enforcement of its rules and regulations for well construction and pump installation. A key focus of the inspection program is to locate and initiate action against unlicensed contractors working illegally in the state. With the support of a temporary employee reviewing well construction and pump installation reports, BOE staff resolved 42 complaints and investigated and settled 28 allegations of rules violations resulting in $31,550 of fines and penalties collected.

BOE Policy 2020-3 authorizes discharges of fluid to groundwater via land application that occur during water well construction, development, testing, disinfection, and rehabilitation. Over 2024 BOE and Staff have continued to work on draft rule changes to the well construction rules. The concept of BOE Policy 2020-3 will be incorporated into the rules which are expected to be brought to administrative hearing in mid 2025.

B. Substitute Water Supply Plans and Non-Decreed Water Exchanges

Substitute water supply plans (SWSPs) provide water users the flexibility of exchanging and replacing out-of-priority depletions on a temporary basis or, if the applicant was to continue such operation permanently, until a court-approved plan for augmentation is obtained. For the approval of SWSPs, the State Engineer requires that the quality of the substituted water meet the use requirements to which the senior appropriators have normally put the water. The SEO reviewed and approved 191 SWSPs in 2024. Of these SWSPs, 86 were related to gravel pits, and one was related to instream flow. The 2024 SWSP total represents a 12% decrease from 2023. The majority of substitute water supply plans use river water as the source of substituted water.

Non-decreed water exchanges generally may or may not involve written approval. They are limited to daily or seasonal timeframes and require the local water commissioner's approval prior to the exchange occurring. The water commissioners keep records of these exchanges in the diversion records for the structures involved. The substitute supply water commonly comes from reservoirs or from bypassing stream diversions. The SEO's consideration of water quality in approving these operations is guided by Rule 6 of the State Engineer's Senate Bill 181 Rules. In 2024, the SEO did not find it necessary to review water quality data or information to ensure the requirements of use of the senior appropriator were met.

C. Decreed Exchanges and Plans for Augmentation

The SEO may oppose applications to Water Court for augmentation plans and exchanges in which the substituted water does not meet the use requirements to which the senior appropriators have normally put the water. The SEO's activities during active water court cases are guided by Rule 7 of the State Engineer's Senate Bill 181 Rules. In 2024 there were no cases where the SEO found it appropriate to opine on the water quality of substituted water. In administering water decrees, the SEO will become involved with issues of water quality where a term in a water court decree requires the State or Division Engineer to consider water quality information. The Water Judge has the ultimate responsibility to determine the adequacy of water quality when approving plans for augmentation or exchange plans.

D. Other Issues and Activities

Every year, staff at the SEO and its Division offices cooperate with public and private agencies and participate in various forums where water quality and quantity issues are considered. Staff at the SEO play an important role by providing input and advice on the impacts of proposed water policies and regulations on the water-using community.

The SEO and WQCD staff have a scheduled quarterly meeting to discuss water quantity and water quality topics of common interest. In 2024, few topics of concern arose on which staff had the need to coordinate.

As required by the Colorado Water Quality Control Act (25-8-104 C.R.S.), SEO staff members respond to referrals from the Water Quality Control Commission (WQCC) to comment on the potential for injury to water rights from actions related to discharge permit applications. These referrals stem from the Act's declaration that no provision of Article 8 of Title 25 will injure rights to put water to beneficial use.

In March of 2024 Governor Jared Polis and Dan Gibbs, DNR Executive Director announced Jason Ullmann as Colorado State Engineer and Director of the Division of Water Resources. Jason brings over 20 years of experience in water resources engineering, 14 years of which have been at DWR, most recently as the Deputy State Engineer. Before his time with DWR, he gained valuable experience in water resources management as a City Engineer for the City of Montrose and as a consulting engineer for various ditch and reservoir companies throughout Colorado.

HB23-1242 created the Colorado Produced Water Consortium, a group with a primary goal of reducing the use of fresh water and increasing the recycling of produced water in oil and gas operations. DWR (Tracy Kosloff, Deputy Director) and CDPHE (Tessa Sorensen,

CDPHE Energy Liaison) each have a seat on the governing body of the Produced Water Consortium, which will consider many aspects of produced water including quality and quantity. The group released numerous reports in 2024 including, 2024 Colorado Produced Water Consortium Annual Update Colorado Produced Water Consortium Recommendations for 2024 ECMC Produced Water Rulemaking (Submitted to ECMC September 17, 2024).

Cherokee Metropolitan District ("Cherokee") and Meridian Service Metropolitan District filed for a replacement plan within the Upper Black Squirrel Creek Designated Basin. In accordance with the Designated Basin Rules a replacement plan must not cause unreasonable impairment of water quality. The replacement source under the replacement plan was water discharged from Cherokee's Water Reclamation Facility to Rapid Infiltration Basins ("RIB"), pursuant to a discharge permit issued by the Colorado Department of Public Health and Environment, Water Quality Control Division. Water discharged to the RIBs infiltrates into the alluvial aquifer within the Upper Black Squirrel Creek Designated Basin. Opposers to the replacement plan application raised concerns regarding water quality as part of the hearing process. The active parties in the case stipulated to Findings and Orders that included specific terms and conditions in regards to water quality. After a one day hearing on the matter the hearing officer accepted the stipulations presented and issued a Findings and Order that was consistent with the stipulations on October 16, 2024. That Order became a final order after the 30 day appeal period.

In collaboration with DWR, the Colorado Energy and Carbon Management Commission (ECMC) has released a report on the regulation of geothermal resources in Colorado. The study includes considerations and recommendations to clarify and streamline the regulatory process in the state. DWR wants to thank CDPHE employees Robert Hillegas, Robert Murphy, and John Duggan for their participation in stakeholding meetings which helped form the contents of the study. The full report and executive summary can be found under the Geothermal heading on the following webpage, https://ecmc.state.co.us/library.html#/gtccsungs.

Specific DWR activities around the state involving water quality issues are described in the sections below:

Colorado River Basin (Division 5)

- In Water Year 2024 (November 1, 2023 – October 31, 2024) Division 5 experienced continued water quality impacts from the three major fires that occurred in 2020: Pine Gulch in western Garfield County, Grizzly Creek in Glenwood Canyon, and East Troublesome in Grand County. Debris flows occurred on each of the burn scars this past summer. The frequency and magnitude of the debris flows is decreasing as the vegetation in the burn scars is reestablishing. DWR efforts were limited in these

instances. The USGS streamgage network that now includes turbidity measurements, indicates that the tributaries within the burn scars are impacted more severely than the Colorado River mainstem. Based on the turbidity data reviewed, it appears that the Pine Gulch burn scar is having the highest impact on water quality affecting Roan Creek and the Colorado River below Roan Creek (which is also impacted by the two other upstream burn scars).

- In 2022, DWR was notified by the dam owners that Grizzly Reservoir (at the confluence of Grizzly Creek and Lincoln Creek, tributary to the Roaring Fork River, in Pitkin County above the City of Aspen) would be drained in the summer of 2023 to complete maintenance on the dam. RJH Consultants, Inc. provided a project plan for the drawdown of Grizzly Reservoir and requested that interested parties provide comments on the plan by December 1, 2022. Pursuant to the MOU between DWR, CPW, and CDPHE, notification was provided by DWR to the other parties of the drawdown plan and the request for comments. Due to supply chain constraints, this project was pushed back to 2024. Pursuant to the MOU between DWR, CPW, and CDPHE, notification was again provided by DWR to the other parties of the drawdown plan on June 3, 2024. Beginning on about July 15, 2024, the last 5 acre-feet of water released from the reservoir contained suspended solids discoloring the flow in Lincoln Creek down to the confluence with the Roaring Fork River and then down to the confluence with the Fryingpan River before being diluted. The discoloration lasted for several days until the reservoir was completely drained. Several news articles were written about the water discoloration that occurred as part of the Grizzly Reservoir construction project. On September 3, 2024, downstream water rights requested administration of upstream junior water rights and DWR placed the call on the stream. The downstream water rights are senior to Twin Lakes Reservoir and Canal Company's water rights, which required the bypass of Lincoln Creek flows at Grizzly Reservoir. The water quality of Lincoln Creek is naturally poor and would have caused further discoloration downstream. To prevent the recurrence of discolored flows below the construction project and to maintain the dewatered conditions at the reservoir to complete the construction project, Twin Lakes Reservoir and Canal Company requested from DWR an administrative exchange allowing them to continue diversions of Lincoln Creek through the Twin Lakes Tunnel to the Arkansas River basin while replacing those diversions from other sources within the Colorado River Basin above the call. DWR verbally authorized the administrative exchange on September 3, 2024, and formally approved the administrative exchange in writing on September 19, 2024. The administrative exchange was operated as needed through October 23, 2024, when the downstream call was released and Twin Lakes Reservoir and Canal Company's water rights were in priority. Construction at the dam completed for the year on October 28, 2024.

The above information completes the Senate Bill 89-181 report from the SEO to the WQCC for the 2024 calendar year.