

# LEGISLATIVE AUDIT DIVISION

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## MEMORANDUM

**TO:** Legislative Audit Committee Members

**FROM:** Kenneth Noddings, Associate Management and Program Analyst

**CC:** Department of Natural Resources  
Amanda Kaster, Director  
Erin Weisgerber, Deputy Director  
Chris Powell, Chief Information Officer  
Anna Packenham Stevenson, Administrator, Water Resources Division  
Trevor Watson, Deputy Administrator, Water Resources Division  
Kathy Olsen, Operations Manager, Water Resources Division  
Nate Ward, Water Rights Bureau Chief, Water Resources Division

**DATE:** June 2024

**RE:** Performance Audit Follow-Up (24SP-17): *Data Quality in the Montana Water Rights Information System (21P-01)*

### Introduction

The *Data Quality in the Montana Water Rights Information System (21P-01)* report was issued to the Legislative Audit Committee in November 2022. The audit included five recommendations to the Department of Natural Resources and Conservation (DNRC). In March 2024, we conducted follow up work to assess implementation of the report recommendations. This memorandum summarizes the results of our follow-up work.

### **Overview**

Our original audit identified several areas for improving data quality in the Department of Natural Resources and Conservation's Water Rights Information System. We recommended the department implement a data quality strategy, improve outreach and education, transition more fully to electronic processes, improve the quality and searchability of scanned water right documents, and leverage more specific mapping information in applications and queries. Through our follow-up work, we found the department has taken steps towards implementing all of our recommendations. They established a data quality management strategy outlining acceptable levels of data quality, methods to evaluate data quality in the system, and responses if data quality falls below thresholds. The department expanded outreach and education to realty entities statewide and established notification services so water right owners and stakeholders can stay informed on water right changes. Additionally, the department has implemented electronic processes to reduce mailing costs, reduce transfer costs associated with paper water right records, and increase search functionality for digital water right resources. In general, the department has made good progress towards the implementation of our audit recommendations and appears to be on track to achieve full implementation by 2026.

### Background

DNRC manages the current use of water throughout the state by issuing and administering water rights, which allow citizens to use surface or ground water for various beneficial purposes. At the time of our original audit, Montana had about 400,000 water rights. DNRC stores electronic information on these rights in the Water Rights Information System (WRIS). Database information includes descriptors for

each water right's purpose, when the water was originally put to beneficial use, maximum draw, location of use and diversion, and ownership. DNRC also stores some physical copies of water-right documentation with a contracted vendor. Water right information is used by the department to determine the legal availability of water and inform decisions involving the state's water resources. Information in the WRIS is also used by The Water Court, which is a key stakeholder that adjudicates older water rights. Our original audit evaluated data quality in the WRIS by comparing its information to water right owner applications, department updates, and decrees made from the Water Court. Though we found high levels of consistency between the WRIS and these documents, we made five recommendations to improve data quality and processes for the WRIS.

### **Audit Follow-up Results**

The following sections summarize the progress toward implementation of the report recommendations. For this follow-up, we interviewed department staff, regional management, and stakeholder representatives from the Water Court and a Montana-based association of realtors. We also reviewed key policy documents, including the department's new data quality strategy, document retention policy, and a list of quality control checks built into the WRIS. Additionally, we examined recently processed water rights to see if their quality and information aligned with our recommendations.

### **Recommendation #1**

**We recommend the Department of Natural Resources and Conservation establish and implement a data quality strategy for the Water Rights Information System that defines desired levels for data quality that are regularly evaluated.**

### **Implementation Status – Being Implemented**

Our original audit found that DNRC did not regularly evaluate or set targeted data quality levels in the WRIS. Instead, the department relied on owners to independently verify their water right information. Data quality in the WRIS refers to metrics such as accuracy of data compared to actual water use, consistency between system data and water right documents, timeliness of data updates, and completeness of data. Since the audit, the department created a data quality management plan in April of 2024. This plan defines desired levels for data quality, outlines procedures for monitoring data quality, and establishes responses to data-quality levels that are below the targeted threshold. For example, the department defined a total accuracy level of below 95 percent as the threshold where immediate action is required to repair the data system. However, at the time of our follow-up work, the department had not yet evaluated data quality levels in the WRIS. Department management indicated they currently have limited resources to devote to the project and will focus on high-priority data quality elements initially. The department's data quality management plan indicates they will first evaluate data quality levels in June of 2025. Department management also hopes to be granted more resources from the 2025 legislative session in order to aid in implementing the data quality management plan.

### **Recommendation #2**

**We recommend the Department of Natural Resources and Conservation establish an ongoing process for outreach and education including:**

- A. Developing professional relationships with title companies and realtors to facilitate greater understanding of water right processes and information, and**
- B. Developing a system for owners to sign up for regular reminders regarding their water right information.**

### **Implementation Status – Being Implemented**

The original audit included a survey of water-rights holders. The survey determined respondent's understanding of the components of and processes relating to water rights, as well as their willingness to independently verify the information stored in the WRIS. Over 20 percent of respondents to our survey misunderstood key aspects of their water rights and over 40 percent indicated they had never verified their water right information. We concluded DNRC could streamline document processing and increase the

accuracy of the WRIS by providing outreach and education to owners and property entities. We also found that owners would benefit from a system that would regularly remind them of key aspects of their water right information.

Our follow-up work found the department expanded a training and outreach model across the state that was originally successfully applied in the Kalispell region. The model involves outreach and training seminars with local realtors who are then able to disseminate information on water rights to their clients. A representative from a Montana-based association of realtors who attended a seminar expressed approval for the program, and several realtors who had not yet attended a class expressed interest in doing so. We also found the department has created two email notification platforms. They give subscribers updates about changes to water rights in a given area or updates about news, new policies, and new water reviews. The department has not taken any concrete steps towards developing a system that will remind owners about their own personal water-right information. However, they indicated this functionality will be part of a new online application portal that they are planning to release in 2026.

### **Recommendation #3**

**We recommend the Department of Natural Resources and Conservation establish the Water Rights Information System as the official record and transition to electronic processes by:**

- A. Ensuring historical documents are scanned at acceptable quality.**
- B. Creating an online submission option for all applications and updates**
- C. Tracking additional owner contact information electronically such as e-mail address, phone number, etc.**

### **Implementation Status – Being Implemented**

Our original audit found that DNRC's reliance on paper documents was incurring considerable costs, and the department could save money and streamline processes by transitioning to fully electronic procedures. In FY2022, DNRC spent \$91,000 on storage and upkeep of paper water right documents.

Follow-up work found the department updated their records retention policy and destroys paper copies of new water rights after they are processed. However, the department will still retain paper copies of documents received prior to 2020, which they estimate will incur approximately \$20,000 in storage costs annually. While updates to paper storage policies will lead to cost saving, the decision to retain historical paper documents will incur ongoing costs.

The department has established a new standard for new and historical documents. However, they do not plan to systematically re-scan documents already in their system—citing a lack of resources. Instead, they rely on stakeholders and staff members to identify low-quality scans during the course of their normal work, which the department will then re-scan. The department's new standard has increased the quality of new scanned documents, but the ad hoc nature of the re-scanning procedure creates issues for stakeholders. For example, the Water Court typically waits several days after requesting a re-scan before they are able to see the newly scanned file.

The department has not established online application and update submissions. They cited the need to develop an online portal for the submission of these documents to ensure they could be properly tracked. They estimate the portal will be complete in 2026.

The department prioritized in procedure that staff collect owner contact information in addition to mailing address (such as phone numbers, email addresses, etc.) when inputting new water-right information. As part of follow-up work, we examined water rights in the WRIS that had been processed in the last six months and found 78% of these water rights had email contact information listed. However, we also found that a large proportion of water rights without email contact information listed in the WRIS had email addresses on the application forms provided by the owner. Therefore, though the department is moving in the correct direction with their stated priority, they can still improve their consistency when recording this additional contact information in the WRIS.

#### **Recommendation #4**

**We recommend the Department of Natural Resources and Conservation make scanned documents and their processes more functional by:**

- A. Establishing an electronic means to transfer documents for upload, both internally and from the Water Court, and**
- B. Attaching additional labelling and identifying information to uploaded documents.**

#### **Implementation Status – Being Implemented**

Our original audit found that the department was relying on physical mail to transfer electronic documents internally and from the Water Court. The audit also found scanned files in the WRIS lacked identifying or organizing information allowing stakeholders to easily search them. Our follow-up work found the department has established an electronic means for file transfer. The Water Court has expressed the increased quality is beneficial, but the implementation of the electronic transfer has increased their workload by passing responsibility for some administrative steps of file transfer from DNRC's records department to them. The department has also established additional label categories for newly uploaded documents, which improve the searchability of the information system for new water rights. However, the department has not begun retroactive re-labelling of old files and stated that they will be requesting more funding in the 2025 legislative session in order to complete this goal.

#### **Recommendation #5**

**We recommend the Department of Natural Resources and Conservation integrate GIS functionality for stakeholders by:**

- A. Introducing a map interface for electronic applications and queries, and**
- B. Using additional identifiers for the place of use and point of diversion.**

#### **Implementation Status – Being Implemented**

Our original audit found the department did not fully leverage GIS functionality for searching water rights through their online query system, processing water right information, or identifying water right locations. While the department had previously used GIS tools to streamline application processes, these applications were discontinued. We also found the township, range, and quarter section identifiers used to denote point of use and point of diversion were overly broad and often overlapped with multiple parcels when viewed on a map. This overlap made it difficult to determine what property was associated with a water right without further identifying information.

A review of the query system during follow-up work found the department has introduced a map interface for queries making the task of navigating the system more streamlined and allowing users to view water rights in an area based on their geographic attributes. The department also expressed interest in introducing GIS functionality as part of their 2026 online submission portal that would allow water right applicants to denote more specific locations for their place of use and point of diversion. Currently, the department does not solicit additional identifiers for place of use or point of diversion on applications beyond township, range, and subsection.