The Water Rights Information System (WRIS) (aka "the database") is a critical computer system that is used primarily by the Department of Natural Resources and Conservation (DNRC or department), the Montana Water Court within the Judicial Branch, and the public as the authoritative source of digital information concerning water rights records across the State of Montana. The WRIS is currently being supported by technology that was developed in the late 1990s and deployed at DNRC in the early 2000s. This technology is nearing its end of life from the vendor and the costs of using this technology is increasing every fiscal year. Additionally, the current technology locks the department into a single vendor requiring it to pay whatever the vendor charges for its continued services. The new system DNRC is moving towards under the system sustainability project is open and will not be linked to a single vendor allowing DNRC to modify its technology stack as needed to help control the costs of hosting this application.

In order to support the legislatively mandated water rights record keeping system, DNRC needs to upgrade the WRIS to a newer technology that will meet current and future business process/requirements, allow DNRC to move forward with its strategic information technology goals with the WRIS and to ensure that the WRIS lifecycle is good for at least another 8 years.

In 2016 the department engaged with a vendor to assess the current WRIS. This assessment included on-site business process analysis with WRIS stakeholders to define business processes and requirements, analysis of the current WRIS technology stack, research of potential technical solutions that fit the DNRC Office of Information Technology (OIT) strategic plan, and the consideration and cost estimation of potential different solutions.

The technology that was recommended and the cost estimate provided broke the project up into the following phases.

Phase 0 – Technology Proof of Concept

Phase 1 – Business Rules Inventory and Documentation. This involves performing a business rules analysis of existing code. The deliverable is a complete inventory – including detailed documentation – of all existing business rules.

This documentation will serve as a foundation for creating development and quality assurance plans to make sure that any new functionality matches the rules in existing functionality. Also, this documentation, if it is kept up to date, is a significant asset for onboarding any new technical staff in the future.

Phase 2 – Migrate Oracle Reports to Microsoft SQL Server Reporting Services.

Phase 3 – Implement Public-Facing Web Infrastructure and Forms Submission.

Phase 4 – Migrate Oracle Forms.

Phase 5 – Implement Microsoft SQL Server Analysis Services for Ad-Hoc Reporting.

The department engaged with the vendor in June 2017 on the Technology Proof of Concept (Phase 0). The proof of concept was successful; the technology that was recommended by the vendor was proven to work for purposes of the department's business requirements. Based on the outcome of Phase 0, the department engaged with the vendor on Phase 1 of the project in January 2018. This Phase was completed in July 2019. Phase II was initiated at the completion of Phase I after the legislature has approved the funding for continuation of this project through HB10 (2019). Phase II is currently scheduled to be completed February 2020 at which time, the department and the vendor will proceed with the next phase of the project.[1] The project is currently on time and on budget. Please see the following internal monthly detailed status report as an example of the work that is being done.

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[1] Please note that while implementation of public-facing infrastructure and forms submission is listed as Phase 3, it will not be engaged until after the migration of oracle forms (Phase 4).

The Montana Department of
**Natural Resources
& Conservation**

Project Status Report

Project Name: Water Rights Information System Platform Upgrade
Code Name: TRIDENT
Report Date: 20th November 2019

Overall Status: **On Track**

Status Code Legend

● Task will complete successful.   ● Task will NOT complete successfully, need major changes.

● Task may complete successful, needs assistance.   ● Task will NOT complete successfully, may cause project to fail.

Overall Project Status	● The project is on time and on budget.
Issues:	● Hiring a dedicated project manager. ● Report rendering as a PDF in a browser is not working correctly. RESPEC and DNRC are working the issue with help from other vendors as necessary.
Accomplishments since last report:	● Project Manger position is in the interview phase. ● Two additional RESPEC developers onboarded with full access to State of Montana resources. ● Five reports are actively being developed or going through RESPEC QA.
Accomplishments planned to be worked on by next report:	● Finalize a change process that will be used by DNRC and RESPEC for request for new/out of scope work. ● RESPEC will be on site to check in with the business and technical personnel. Will also be holding additional training for UAT testers for DNRC and Water Court.
Project Cost to date:	Project Budget: $ 3,395,197 (HB 10 Total) Project Spent: $ 0 Active Phase Budget: $ 954,010 Phase Spent: $ 0 Active Contract Budget: $ 661,055 Contract Spent: $ 229,981 Operations Funds Spent: $ 21 Pre HB10 funding costs: $482,217
Items needing decisions by Leadership:	

Project Status Report

Contact Information

Contract Manger	**Project Manager**	**Technical Manager**
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Project Abstract

The Water Rights Information System (WRIS) is the authoritative source of digital information concerning water rights across the State of Montana. The WRIS is currently using the Oracle technology stack (database, forms, reports). Portions of the technology are nearing its end of life and the costs of continuing to use it are increasing every fiscal year.

To support the legislatively mandated record keeping system of the water rights of the citizens of the state, DNRC needs to update the technology stack used by the WRIS, with a goal of aligning the technology with DNRC's hosting standards and not locked into using a single vendor.

This will allow DNRC to meet current and future business requirements, allow DNRC to move forward with its strategic information technology goals with the WRIS, and ensure that the WRIS lifecycle is sustainable with the given technology for at least another 8 years.

The first paid work for this project started in summer of 2016.