ITERATIVE PROJECT REPORT FOR PROGRAMS & MULTI-YEAR PHASED PROJECTS

Submitted to Large Project Oversight on 01/04/2019

GENERAL INFORMATION

Program/Project Name: RBDMS Upgrade
Agency Name: Department of Mineral Resources
Project Sponsor: Michael Ziesch
Project Manager: Melissa Hvidsten

PROGRAM DESCRIPTION

This program will use an iterative approach to implement (over four releases) a customized solution that updates the North Dakota (ND) Oil and Gas Risk-Based Data Management System (RBDMS) legacy platform to a web-enabled environment. Each release will be planned and executed as a separate project. The efforts for each project will involve staff from the ND Department of Mineral Resources (DMR), ND Information Technology Department (ITD), and the Ground Water Protection Council (GWPC). Impacted systems and applications include all components of the RBDMS platform and work flows associated with them. Further analysis is being completed to determine all impacted systems, files, interfaces, letters, reports, and batch processing. The solution is currently expected to include:

- Updates to the RBDMS 3.0 platform, as identified in existing contract with GWPC dated 10/5/2018, implemented over four releases
- Migration to ITD's Azure-based Cloud environments to host the upgraded RBDMS 3.0 platform

BUSINESS NEEDS AND PROBLEMS

The business need for this project is rooted in the following issues with the legacy RBDMS platform:

- The legacy RBDMS platform is at end of life, operating on Access 2003 which is no longer supported by Microsoft.
- The legacy RBDMS platform requires a significant amount of manual entry of data by DMR staff, which increases risk of entry error and takes time away from more technical aspects of their jobs.

PROGRAM FORMAT

Program/Project Start Date: The contract with GWPC was approved by the ESC on 10/5/2018. The **kickoff** was held on 10/8/2018. The program charter was approved by the ESC on 11/8/2018. The project plan for Release 1 was approved by the ESC on 11/30/2018.

Program Budget Allocation at Time of Initial Start Date:

Funding Source	Funded Amount	Explanation
Other Funds	$650,000	From DMR reservoir data fund
Other Funds	$1,996,030	From GWPC
Budget Sub-Total	**$2,646,030**	
Funding Source	Planned Request Amount	Explanation
Special Funds	$5,000,000	An appropriation request that will be made to the legislature
Budget Sub-Total	**$5,000,000**	
Funding Source	Budgeted Amount	Explanation
Budget Total	**$7,646,030**	

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How Many Releases (Projects) Expected at Time of Initial Start Date: Four

Phased Approach Description: This program will use an iterative approach to implement the solution over four releases. Each release will be planned and executed as a separate project.

Estimated End Date for Program Known at Time of Initial Start Date: 1/31/2021

PROJECT ROAD MAP

The project road map shows the high-level plan or vision for all projects in the program. It is intended to offer a picture of the lifespan of all the effort that is expected to be required to achieve the business objectives.

Project /Release	Scope Statement	Estimated Duration (months)	Estimated Budget
Release 1	Release 1 will implement the Bond Management, Entity Management, and General Modules, along with their supplemental components.	7 months	$1,285,115
Release 2	Release 2 will include Well Management, Well Stim & Idle Well, Transfer, Production, and UIC.	9 months	$3,038,253
Release 3	Release 3 will include Inspections, Facility (Part 1), and Hearing and Docket.	9 months	$2,389,286
Release 4	Release 4 will include Facility (Part 2), Compliance, and Incidents.	3 months	$426,805

Notes:

PROJECT BASELINES

The baselines below are entered for only those projects (releases) that have been planned. At the completion of a project/release a new planning effort will occur to baseline the next project/release and any known actual finish dates and costs for completed projects/releases will be recorded. The startup report will be submitted again with the new information.

Project /Release	Program Start Date (Kickoff)	Baseline Execution Start Date	Baseline End Date	Baseline Budget	Actual Finish Date	Schedule Variance	Actual Cost	Cost Variance
Release 1	10/08/2018	11/30/2018	5/10/2019	$1,285,115				
Release 2								
Release 3								
Release 4								

Notes:

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OBJECTIVES

Business Need	Objective	Measurement Description	Anticipated Benefit	Met/Not Met
1. The legacy RBDMS platform is at end of life, operating on Access 2003 which is no longer supported by Microsoft.	1.1 Implement modifications to the RBDMS platform in four releases, where each release contains operational components that are immediately useable.	1.1.1 Upon completion of each release, each included module is fully deployed and functioning according to documented requirements.	1.1.1.1 Business operations continue at current, and in some cases enhanced, levels of efficiency and flexibility with current staffing levels	
	1.2 Maintain access to all legacy data.	1.2.1 Upon completion of the program, access to all legacy data is available without having to access multiple systems.	1.2.1.1 Access to all legacy data is available and easily accessible for reporting and data analytics.	
	1.3 Ensure the upgraded platform has increased compatibility for current and future application development and use.	1.3.1 Upon completion of the program, the RBDMS platform will have been upgraded to meet accessibility standards according to documented requirements.	1.3.1.1 Stakeholders will have the ability to gain access to other existing and future compatible relevant applications (i.e. the Well Finder application).	
	1.4 Provide stakeholders with enhanced accessibility to the RBDMS platform through web-enabled technology.	1.4.1 Upon completion of the program, access to the entire RBDMS platform is available to stakeholders anywhere there is an internet connection.	1.4.1.1 Stakeholders will have access to the platform from anywhere there is an internet connection.	

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Business Need	Objective	Measurement Description	Anticipated Benefit	Met/Not Met
2. The current system requires a significant amount of manual entry of data by DMR staff, which increases risk of entry error and takes time away from more technical aspects of their jobs.	2.1 Eliminate the need for manual entry of data, freeing staff up for more technical aspects of their jobs.	2.1.1 Upon completion of the production module, there should be a reduction of hours of required data entry by approximately 80% for related forms.	2.1.1.1 A streamlined workflow will be realized upon completion of the program.	
			2.1.1.2 Improved automation of basic functions, leading improved accuracy of information (correspondence and form letters, statistical data gathering, event tracking, improved reconciling of data)	
	2.2 Maintain or improve existing business functionality/capabilities.	2.2.1 Upon completion of each module, there will be no measurable loss of process efficiencies and all process changes, enhancements, and efficiencies identified for inclusion in the release are fully deployed and functioning according to documented requirements.	2.2.1.1 DMR business operations continues at current or improved levels of efficiency without adding additional staff.	

COST BENEFIT ANALYSIS

See the anticipated benefits listed in the previous section.

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KEY CONSTRAINTS AND/OR RISKS

Risks of Performing the Projects in the Program

Risk	Impact	Response
The project could go over time.	Legacy system forced to run longer. Staff engagement distracts from core functions	Change management team would evaluate options
The project could go over budget.	Potentially delay completion, or force a change in scope	Change management team would evaluate options
Other functional requirements could be discovered.	Potentially delay completion, or force a change in scope	Change management team would evaluate potential options
The upgraded system might not perform as expected.	Potentially delay completion, or force a change in scope	Change management team would evaluate potential options.
DMR staff resources may be unavailable due to other priorities.	Potentially delay completion, or force a change in scope	Change management team would reassign resources as necessary.
The program may end before all releases are completed.	Potentially forced to operate in two environments.	Change management team would evaluate to transition remaining legacy systems.

Risks of Not Performing the Projects in the Program

Risk	Impact	Response
The legacy system software may crash.	DMR would not be able to conduct normal operations. External stakeholders would be impacted as well.	Attempt to restart system from backups
A delay to program/project start may cause GWPC and vendor staff (who are already familiar with system and DMR business and technical needs) to not be available due to reassignment.	Would require end of life legacy system to continue being run	DMR staff would continue to use legacy system and its labor-intensive processes
GWPC commitment of staff and financial resources may not be available in the future.	Would require greater future commitment of North Dakota time and money due to need to find an alternate path forward	DMR staff would continue to use legacy systems and begin researching other avenue to upgrade the system

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Constraints

The projects in this program have the following constraints:

- The RBDMS 3.0 system must contain all of the legacy elements present in the legacy system
- DMR staff will be required to work on activities related to the upgrade, while continuing to do their regular duties
- Cost, schedule, scope, and quality are often in conflict during projects. The sponsor elected to prioritize as follows:
    1. Quality
    2. Scope
    3. Cost
    4. Schedule