



RBDMS.NET: A Past and Future Success Story

OIL AND GAS REGULATORY CONFIDENCE

Overview

Twenty-two oil and gas regulatory agencies nationwide use RBDMS.

Business Situation

RBDMS is a client/server application originally designed to help agencies manage oil and gas injection well data and evaluate the risk injection wells pose to USDWs.

Solution

Attributes of today's RBDMS include its continued usefulness in assessing and reducing risk to USDWs, its use of non-proprietary software, and its adaptability to serve variations in state regulatory programs. RBDMS provides data about well locations, permitting, and production to the public and industry owners through its Web interfaces. RBDMS also integrates oil and gas resource data and state source water protection planning.

Benefits

States using RBDMS have collectively saved millions of dollars and have greater confidence in regulatory decisions.

The GWPC developed the Risk Based Data Management System (RBDMS) for regulatory agencies to use in managing and analyzing oil and gas program data. The GWPC's approach to increasing data availability through the RBDMS and its Web interfaces focuses on partnering with federal and state agencies, industry groups, and citizens. Developing and sustaining a family of RBDMS e-commerce applications that have specific purposes for water resources protection and oil and gas regulation depends on such partnerships. In many ways, the success of the RBDMS initiative reflects the dedication and contributions of the agency project managers to build consensus among the stakeholders, and the willingness of industry to be an active partner in these endeavors.

Situation

Since the program's inception in 1992, the development of the award-winning RBDMS software has been underwritten through grants from the Department of Energy. Matching funding has been provided by state agencies in the forms of both donated, in-kind services and direct funding. Originally developed in Access version 1.1, RBDMS has evolved to the latest .NET technologies and has been adopted as a national standard.

RBDMS.NET combines the best aspects of the e-commerce initiative's Web interfaces: full-text searching, integrated GIS, automated notifications, and security that can be configured through defined system roles and user profiles. The same application is used both within agency offices and for field inspection. The result provides immediate access to data for purposes of area trend analyses, well and mine history tracking (ownership, bonding, permitting, location, construction, inspection, production, and plugging/ restoration), compliance monitoring, and complaint adjudication. The GWPC is now overseeing rollouts in Mississippi and Oklahoma. Other agencies also are planning to upgrade to RBDMS.NET.

RBDMS.NET Web interfaces have been installed in many agencies, greatly leveraging efficiency in mission-critical tasks such as reporting UIC data directly to EPA from RBDMS, automating the collection of production and disposition data from operators, and offering electronic permitting of oil and gas wells.

EXPERTISE IN DATA EXCHANGE

“RBDMS focuses on ways that information technology can be used to protect the environment while supporting exploration and responsible development of domestic oil and gas.”

*Michel Paque, GWPC
Executive Director*

Solution

The GWPC and its member-state agencies have identified three priorities for ongoing information exchange through the RBDMS e-commerce initiative:

1. Providing the baseline reference data needed to make informed decisions about environmental protection and ground water resource management.
2. Reducing the cost of information exchange between the petroleum and mining industries and regulatory agencies to support domestic fossil fuel production and to increase state revenues.
3. Providing technology transfer opportunities for industry and agency stakeholders and developing an educational outreach program for the public.

RBDMS development has historically been and continues to be directed by RBDMS states. Ongoing RBDMS development, legacy data conversion and migration, and system setup efforts in multiple states are overseen by both the GWPC and the RBDMS Technical Committee, a users' group whose participation is drawn from multiple states.

In addition to telephone and remote [Terminal Services and/or Virtual Private Network (VPN)] help desk support, GWPC provides user support, code sharing, and development updates through peer-to-peer networking, bi-annual training meetings, open-attendance weekly conference calls, and a Microsoft SharePoint Services site for registered users at <https://www.rbdmsonline.org/Projects>.

Server Requirements

- Microsoft .NET Framework 3.5.1
- SQL Server 2005 or 2008 with advanced services
- IIS 6.0 or higher
- Microsoft Terminal Server and/or VPN
- Internet Explorer 6.0 or Firefox 2.0 or higher

Supported User Interfaces

- Windows Presentation Foundation
- Silverlight 4
- ASP.NET

Client Requirements

- Microsoft .NET Framework 3.5.1
- Internet Explorer 6.0 or Firefox 2.0 or higher
- Approximately 80 MB free disk space for RBDMS
- XGA (1024 x 768) monitor or better
- MS-compatible LAN with SQL Server

Administrator Tools

- Visual Studio 2010
- RBDMSAdmin.NET to manage security, menus, filters, and data validation rules