About RBDMS

- Originally designed to help agencies manage oil and gas injection well data and evaluate the risk injection wells pose to underground sources of drinking water (USDWs).

- Now also used to monitor the environmental effects of oil and gas exploration and production activities as well as coal, industrial, and aggregate minerals mining operations.

- Allows integration of oil and gas resource data and state source water protection planning, a requirement of the Safe Drinking Water Act Revisions.

In March 2001, DOE honored the RBDMS project with an Energy 100 Award.

RBDMS is now a mission-critical tool for 22 state agencies.
GWPC offers multiple e-commerce interfaces for RBDMS and non RBDMS States:

- Data mining
- Production and UIC reporting
- Electronic Permitting
- Field inspection
- Laboratory data reporting for water quality and source water parameters

RBDMS (Risk Based Data Management System) is a client/server-based information management system originally designed for oil and gas regulatory agencies to use in managing oil and gas injection well data and in evaluating the risk injection wells pose to underground sources of drinking water (USDWs). It has been expanded over the last 14 years to include oil and gas well production tracking and comprehensive water data management.
RBDMS Hydraulic Fracturing Modules – under development

- Hydraulic fracturing in shale formations
  - Water withdrawals for consumptive use
  - Disposal of flowback water
  - Fate and transport of fracturing fluids
  - Well Construction
  - Pre and post fracturing monitoring

- National Data Portal
  - Chemical use in states and interstate basins
RBDMS Hydraulic Fracturing Module—

- State and Interstate use
- The quantities and quality of water used to support extraction and the sentinel indicators of effects on watersheds
- The methods and locations used to dispose of flowback
- The chemical constituents of fracturing fluids (or trade names) where required by states
- Down-hole pressures within wells and formations
- Well mechanical integrity
- Other (operator, location, and injection volumes)
Shale gas plays nationwide

- Many in RBDMS states: NY, PA, IN, IL, MI, AL, MS, AR, OK, KS, NE, CO, ND, MT
Why Use RBDMS for Hydraulic Fracturing?

- Core functionality exists, some update needed
  - Data collection from field and laboratories
  - Well locations linked with construction and inspection data
  - Area of review
  - GIS, source water protection area coverages
  - Well schematic diagramming

- Required functionality linked to permitting, compliance monitoring modules
Facets of the RBDMS Initiative:

- Analytical Insight
- Process Understanding
- Issue Communication
- Data Assimilation
- Training
- Peer Support
RBDMS Data Mining

Data analysis across state boundaries targets wellhead protection areas and trends across wide-scale extents.
RBDMS Data Mining

- Construction and related well information is readily accessible.
Lab data can be reported in EPA water quality schema-compliant format for e-submittals (http://www.epa.gov/storet/wqx.html)
RBDMS Water links map location to well construction and inspection data.
RBDMS update targets Marcellus Shale wells.

- NY will update RBDMS to track
  - Trade name, chemical name, CAS number, MSDS sheet
  - Supplier
  - Service company
  - Percentages of components by weight
  - Type of wells the product is used in
  - Primary function of the product (e.g., biocide)
  - Product loading information
  - Trade secrecy levels and appeals

- Both NY and PA now track
  - Permit information
  - Spud and drilling dates
  - Production
RBDMS Training

- April 10–13, 2011
- Lido Beach Florida
- Industry and regulatory agencies welcome
- Training in current modules
- Discussion on future development