South Dakota Department of Environment and Natural Resources



Protecting South Dakota's Tomorrow ... Today

DENR FY 2015 BUDGET REQUEST

presented to the

JOINT APPROPRIATIONS COMMITTEE Joint Subcommittee 5

February 20, 2014

DENR Mission Statement: To protect public health and the environment by providing environmental monitoring and natural resource assessment, technical and financial assistance for environmental projects, and environmental regulatory services; all done in a manner to protect South Dakota's environment and natural resources for today and tomorrow while treating everyone as our customer and exceeding their expectations.

DENR MAKES A DIFFERENCE BY:

- Protecting public health and the environment
 - Maintaining a business-friendly climate
 - Treating everyone as our customer









1. DENR Operating Budget

- DENR utilized 90% of its total budget authority (excluding authority for the Regulated Substance, Environmental Livestock, and PRCF Info Budgets)
- DENR utilized 100% of its general funds
- No transfers between personal services and operating were needed
- DENR utilized 96.7% of its FTE allocation
- DENR's turnover rate was 9.9%

2. Informational Budgets

- Regulated Substance Response Fund
 - a. Created by the 1988 Legislature to deal with environmental cleanups
 - b. Life of Fund expenditures \$3,879,623
 - c. Utilized \$142,998 last year on 2 sites
 - d. FY 2013 end-of-year balance \$2.93 million
 - e. Future liabilities to the Fund
 - Environmental cleanups about 200 to 250 spills per year
 - EPA Brohm Mine Superfund site state must provide 10% match for the projected \$80 million EPA Superfund cleanup; the state is then 100% liable for long-term water treatment costs after EPA leaves

• Environmental Livestock Cleanup Fund

- a. Created by the 1998 Legislature to act as a safety net for environmental livestock cleanups; the Legislature capped the fund at \$2 million
- b. Life of Fund expenditures \$258,602
- c. Utilized \$0 last year
- d. FY 2013 end-of-year balance \$1.21 million
- e. Future liabilities to the Fund
 - Potential and filed bankruptcies pose largest risks

• Petroleum Release Compensation Fund

- a. Created by the 1988 Legislature to financially assist tank owners with the cleanup cost of petroleum releases and to meet the federal financial responsibility requirements for regulated underground tank owners
- b. Life of Fund expenditures \$84.0 million
- c. Utilized \$606,391 of the informational budget to manage 150 cases
- d. FY 2013 end-of-year balance \$5.41 million; includes \$703,125 Chevron settlement
- e. Future liabilities to the Fund
 - Reimbursement for cleanup of leaks and spills from tanks
 - Abandoned underground tank removals
 - Training to tank owners to comply with federal training requirements





DENR FY 2015 BUDGET REQUEST



• Status Quo Budget Request

- a. DENR is requesting NO expansion in FTEs
- b. DENR is requesting NO expansion in personal services
- c. Only increase is \$28,199 in operating for Bureau Billings as calculated by BFM
 - * \$8,754 General Funds
 - * \$12,335 Federal Funds
 - * \$7,110 Other Funds
 - * \$28,199 Total
- DENR will continue to manage its existing resources to efficiently get the job done



DENR's Budget History



DENR General Fund Budget History

DENR's Budget History:

- DENR's 2015 general fund budget request is (\$592,990) less than its FY 2009 budget.
- DENR's 2015 general fund budget request has fewer general funds than in FY 2006.
- DENR'S 2015 budget request has (24.3) fewer FTE than FY 1987.

DENR BUDGETED FTE HISTORY





DENR's FTE Preparing for the *"Changing of the Guard"* at DENR

2012 — 4 DENR employees retired out of 16 who left							
No.	Name	Classification	Years	Left For	Date		
1	Max Voller	Env. Scientist	30	Retired	Jan 2012		
2	Randy Anderson	Program Assistant	25	Retired	Jan 2012		
3	Jeffrey Puthoff	Nat. Res Tech	4	Went to Yankton County	Jan 2012		
4	Hayes Haas	Engineer I	7	Went to federal BIA	Jan 2012		
5	Rose Kracht	Secretary	3	Went to college	Feb 2012		
6	Paul Oien	Engineer II	14	Went to John Deere Co.	Mar 2012		
7	Jay Cofer	Env. Scientist II	33	Deceased	Mar 2012		
8	Jim Goodman, PE	Engineer V	38	Retired	April 2012		
9	Terri Fields	Env. Scientist	3	Went back to school	April 2012		
10	Kelli McCormick	Senior Geologist	12	Teaching at SDSM&T	May 2012		
11	Ken Madison	Env. Scientist III	25	Retired	June 2012		
12	Holly Rilling	Senior Secretary	19	Personal Issues	June 2012		
13	Janile Lewis	Engineer I	2	Went back to school	Aug 2012		
14	Dale Healey	Engineer II	6	Went to SD DOT	Sept 2012		
15	Ben Thate	Engineer II	4	Went to SD DOT	Sept 2012		
16	Jim Anderson	Engineer II	8	Went to GCC Dacotah	Dec 2012		

2013 — 7 DENR employees retired out of 15 who left

No.	Name	Classification	Years	Left For	Date
1	Stacy Froelich	Engr Manager I	10	Went to federal BOR	Feb 2013
2	Garland Erbele	Engr Manager III	35	Retired	Mar 2013
3	Hannah Albertus	Env. Scientist I	3	Went to AMEC Envir & Infr	April 2013
4	Nick Wuebben	Program Assistant	1	Went to SD Dept. of Ag	April 2013
5	Marc Macy	Engineer II	9	Went to SD Public Safety	April 2013
6	Anthony Mueske	Engineer II	7	Went to City of Austin in Texas	May 2013
7	Dave Templeton	Division Director	39	Retired	June 2013
8	Colleen Odenbrett	Word Proc. Super.	42	Retired	June 2013
9	Lee Baron	Env. Scientist III	39	Retired	June 2013
10	Lita Magedanz	Senior Secretary	27	Retired	June 2013
11	Bob McDonald	Env. Scientist II	28	Retired	June 2013
12	Sheldon Hamann	Env. Scientist II	30	Retired	June 2013
13	Erin Dreis	Engineer I	3	Went to POET	July 2013
14	Emily Schock	Engineer I	2	Went to Wisconsin	Sept 2013
15	Andrew Renner	Engineer I	2	Went to SD DOT	Oct 2013

SUMMARY OF RECENT PAST AND FUTURE RETIREMENTS DENR lost due to retirements during 2012 and 2013 - 6% of workforce; 358 years of experience

Eligible for retirement today - 18.5%

Eligible for retirement in 5 years - 37.0%

Eligible for retirement in 10 years - 46.9%





DENR Programs



PROGRAM HIGHLIGHTS:

- 1. Geological Survey Program and Minerals and Mining Program Making DENR's Oil and Gas Initiative Better to Increase Development
- 2. Water and Waste Funding Program— Building Infrastructure to Protect the Environment, Improve the Quality of Life, and Grow Our Economy
- 3. Drinking Water Program Protecting Human Health: Drinking Water Case Study
- 4. Feedlot Permit Program Protecting Water Quality by Growing Our Livestock Economy
- 5. Water Rights, Ground Water Quality, & Minerals and Mining Programs Proposed Powertech In Situ Uranium Mine



Geological Survey & Minerals and Mining

Programs - Making DENR's Oil and Gas Initiative

Better to Increase Development







DENR's Oil and Gas Initiative Keeps Getting Better

- On-line searchable databases and interactive map contain geologic files from 100,000 holes.
- Last year DENR added boundaries of oil fields and enhanced recovery units to the interactive map.
- This year, DENR added production data for every oil and gas well that has been drilled in South Dakota, either in searchable databases or by clicking on an individual well on the interactive map.
- DENR went a step further and has also provided links to the interactive map and searchable databases that show total production data by month and year for entire oil fields and enhanced recovery units.
- The on-line database companion to the interactive map now also contains a listing of the names and geologic age of each formation drilled through for each well, the depth of the formation top, and its elevation.
- As a result, visits to DENR's Oil and Gas Initiative database have doubled and tripled.
- Changes made to streamline laws and rules allowed DENR to approve a record 36 oil and gas orders in 2013 which resulted in 171 wells producing an all-time high of 1.85
 Harding County 2013 Oil and Gas Activity Map





Transfer Oil and Gas Initiative Technology to DENR's 37 FoxPro Databases Conversion Project

DENR's Vision for Using Technology – boost productivity, efficiency, effectiveness, communication, and services to our customers.

 Drinking Water example - an EPA performance audit of Drinking Water showed DENR uses 64% fewer staff than the staffing model (i.e. 10.4 vs. 29 FTE). EPA wrote: "A large part of this success is based on DENR is one of only ten states that has built its own monitoring and compliance database using FoxPro. The EPA Review Team was impressed with the ease of use as well as many beneficial automation features that DENR has built within the Fox-Pro application."



- Microsoft has announced no FoxPro support after 2015
- Status of individual conversions are below

Database Name/Description

		25. Drillers - lists and tracks well	
Database Name/Description	Database Name/Description	drillers licensed in South Dakota	
1. Airdatabase - track air pollutants air permits, fees, models - 4% complete	13. ConAgg - tracks licensed construction aggregate mines - 100% complete	26. Pump Installers - lists and tracks pump installers licensed in SD	
2. Environmental Fees - wastewater, water, air, solid waste– 6% complete	14. EXNI - tracks mineral exploration and mine permits	27. Iquest - generates and tracks annual irrigation water use reports	
3. New Well - track water quality samples from new domestic wells	 15. Air - tracks permitted asphalt plant and nonmetallic mineral processing plants 16. Wells - tracks permitted oil, gas, and underground injection wells 	28. Lakeinfo - lake data to include id, name, legal, high & low water marks	
4. Operator Certification - water and wastewater operators, hours, and tests	17. Feedlots - tracks permitted concentrated animal feeding operations	 29. Lakelev1 - tables of water levels measured semi-annually in lakes 30. Ln - dam/dugout notices that include legal, owner, dates, and size 31. Logs - well construction data to include legal, depth, log, and driller 32. Obs94a - water right observation wells to include legal, yield, and depth 33. Snatdam2 - state Safety of Dams inventory to include legal, owner, size 34. Wlevel - observation well measurements 35. Wpapp - track new applications for water right permits 36. Wrinfo - series of water right Tables and water use data 	
5. SYSNames - track regulated public drinking water systems & water quality	18. Storm Water Database - tracks permits from construction and industrial		
6. MEGABASE - track plans for water, wastewater, waste - 29% complete	sites 19. Surface Water Discharge Database -		
7. Source Water Assessments - source water areas & pollution sources	tracks permits/feeds ICIS- 24% complete 20. Temporary Dewatering Database -		
8. Environmental Events Database - internet spill tracking–48% complete	tracks approved dewatering operations 21. Recycling Database - inventory of all		
9. TANK DATABASE - tracks underground & above ground tanks	recycling facilities in state - 97% complete 22. Hazardous Waste Database - tracks		
10. Tier II & TRI - SARA chemical storage reports and toxic release data	hazardous waste generators - 84% complete 23. Asbestos Database - certification data		
11. Ground Water Monitoring - water data from facilities on shallow aquifers	from workers and demolition notices - 9% 24. Solid Waste Database - tracks		
12. MIS or Abandoned Mined Lands - Black Hills inventory	permitted solid waste disposal sites - 4% complete	37. Lookup Tables - tables to replace abbreviations in reports and Caspio	



ConAgg - Model for FoxPro Conversions

Track, Find, and Inspect 519 Construction Aggregate Licenses issued to Mine 20,769 acres in 1,638 Pits



Statewide map showing each sand and gravel pit.

🌸 🕘 South Dakota Official Stat... 🗃 Google 🚾 Pierre Weather Forecast a... 🛛 Technology Use Policy - sd



Zoom in to get specific



Click on a point; dropdown boxes list all operators licensed to mine that pit together with pictures taken on-site.



Water and Waste Funding Program -Building Infrastructure to Protect the Environment, Improve the Quality of Life, and Grow Our Economy





Ellsworth Development Authority Regional Wastewater Facility Under Construction

During FY 2013:

- DENR provided \$81.3 million in grants and low interest loans to drinking water, wastewater, solid waste, and recycling projects statewide
- Examples of the 113 projects funded that lay a foundation for economic development, protect the environment, and improve the quality of life are:
 - Ellsworth Development Authority loan package to construct a wastewater interceptor line from Ellsworth Air Force Base to the Authority's Regional Wastewater Treatment Plant and a water line from Box Elder to the regional plant.
 - **Britton** grant and loan package for second phase of a project to replace existing old vitrified clay wastewater collection pipes with new PVC pipe throughout the city.
 - o **Sioux Falls** loan to construct Phase 2 of the Sioux River South Interceptor Project which involves replacing 8,600 feet of 36- and 42-inch sanitary sewer pipe with 54-inch pipe and the lining of smaller sewer lines at various locations throughout the city.
 - **Spearfish -** loan to construct a 2-million gallon water storage tank and install 4,200 feet of 16-inch water main to connect the tank to the drinking water distribution system.
 - Grant-Roberts Rural Water System loan to install a water main to serve new customers in the Milbank area, construct a new water storage reservoir, and install satellite read meters and a SCADA telemetry system.









Drinking Water Program -Protecting Human Health: Drinking Water Case Study

Public Health Outbreak at Sheridan Lake Highlands Subdivision Averted – After *E. coli* were found throughout the system, DENR worked with the certified operator to notify the 60 homeowners to stop drinking the water, get the system super chlorinated, and install an in-line chlorine analyzer. The following chronology documents how the drinking water regulations worked to protect public health.

<u>Chronology</u>

<u>Saturday, 7/13</u>: System operator, AI Sage, called DENR. Mark McIntire from DENR had weekend phone duty. Earlier in the week a home owner decided to take a bacteriological sample at his home to be sure all was well after a lengthy absence. The results came back from the lab as unsafe and positive for both total coliform and *E. coli*. This prompted the homeowner to call Mr. Sage, who went out to check the system and found the chlorinator at the well was not operating appropriately. Al collected more samples all of which came back positive for *E. coli*. He had a "**Do Not Drink/Boil**" order posted on each home and super chlorinated the system.



<u>Monday, 7/15</u>: Al Sage called us again to consult with what he needed to do. We told him to collect both additional raw and treated water samples from the well and water distribution system.

<u>Wednesday, 7/17:</u> Al Sage called back with results from Monday's samples. All of the raw well water samples we requested came back positive for *E. coli*. All of the distribution system samples came back safe. We told Al that based on this sampling and the positive *E. coli* results in the well, the federal ground water rule requires a minimum disinfection level that will inactivate 99.99% of the bacteria. An official source of the *E. coli* contamination was not known, but could be from septic tank/drainfields. Al went back out to the development in the afternoon and super chlorinated the well. He flushed the well until he no longer detected chlorine residual and collected more samples. We also stressed that he continue to keep residents aware.

<u>Friday 7/19:</u> Al called us Friday afternoon to ask what DENR could do to help determine the source. He understood the rules allowed them to disinfect to the 99.99% level to be in compliance, but felt the home owners would want to determine the source of the *E. coli* contamination and have that source isolated or removed so that it didn't continue to contaminate the well. Linda Harris from DENR's Rapid City office met Al on site late Friday afternoon. They concurred there were a few homes with older septic tank systems that would be a likely place to start investigative efforts.

<u>Wednesday, 7/24:</u> DENR called AI to discuss our calculations for the length of chlorine contact time needed under the rules. The good news was the time was relatively short - about 8 minutes at a concentration of 1 mg/l chlorine. AI said he consulted with the developer and there is about 1,000 feet of 3" water main that extends from the well to the 60,000 gallon tank on top of the hill. Travel time in the line will give the system the chlorine contact time necessary to meet the requirements.

<u>Friday, 8/2:</u> Al Sage emailed his proposal to install an in-line chlorine analyzer in the well house. Linda Harris verified the flow and volume. The in-line analyzer will not only provide continuous chlorine levels, but will also send an alarm if the chlorine level drops.



Feedlot Permit Program -Protecting Water Quality by Growing Our Livestock Economy



* Concentrated Animal Feeding Operation (CAFO)

DENR Permits Help Livestock Industry to Continue to Grow

- 1. **NEW** during FY 2013, DENR approved permit applications for coverage under the General Water Pollution Control Permit for:
 - 1 new cattle feedlot
 - 7 new swine confinements
 - 1 new dairy



- 2. **EXPANSIONS** during FY 2013, DENR also approved permit applications for coverage under the General Water Pollution Control Permit for:
 - 5 expanding cattle feedlots
 - 6 expanding swine confinements
 - 3 expanding dairies
 - 1 expanding poultry operation
- 3. Of the 24 approved applications, 14 built and are operating, 5 under construction, 5 on hold





Proposed Powertech In Situ Uranium Mine

POWERTECH proposal is extremely controversial due to:

- Uranium;
- Water Quantity Used; and
- Water Quality/Potential for Pollution

EXECUTIVE CHRONOLOGY OF POWERTECH IN SITU URANIUM MINE

- 2006 Legislature passed DENR's bill (SB 62) authorizing in situ mine rules.
- 2007 Board of Minerals and Environment adopted new in situ mine rules.
- 2007 First exploration permit issued to Powertech.

2008 - Water Management Board adopted Class III in situ injection well rules.

2008 - Board of Minerals and Environment revised in situ mine rules.

- 2011 The Legislature passed Powertech's bill (SB 158) tolling DENR's in situ rules.
- Tolls Class III well rules until the Underground Injection Control Program is delegated to DENR by EPA and tolls DENR's in situ mining rules until DENR becomes an agreement state with the Nuclear Regulatory Commission (NRC) to eliminate duplicate regulation.
- Because the bill makes EPA and NRC the primary regulators, DENR established a Powertech page on its website at <u>http://denr.sd.gov/Powertech.aspx</u> to make it easy for the public to follow all state and federal permits and Environmental Impact Statements.

March 9, 2012 - Powertech submitted an application for a ground water discharge permit to allow land application of wastewater from its 10,580-acre in situ mine.

- December 19, 2012 DENR public noticed its recommendation for conditional approval.
- 253 parties submitted objections.

June 12, 2012 - Powertech submitted two applications for water right permits.

- One application is for 8,500 gpm from the Inyan Kara with 98% recirculated for a maximum net withdrawal of 170 gpm.
- Second application is for 551 gpm from the Madison Aquifer for aquifer restoration of the Inyan Kara after mining.
- November 14, 2012 DENR public noticed its recommendation for conditional approval.
- 111 parties submitted objections.







Water Rights, Ground Water Quality, & Minerals and Mining Programs -Proposed Powertech In Situ Uranium Mine

October 1, 2012 - Powertech submitted an application for a large-scale mine permit.

- April 15, 2013 DENR public noticed its recommendation for conditional approval.
- 125 parties submitted objections.
- 26 parties want to fully participate in the contested case hearing "A" interveners.
- 78 "B" interveners want to make an opening statement.

February 8, 2013 - Water Management Board consolidated all three water permit applications from Powertech for purposes of holding a contested case hearing.

- 26 parties want to fully participate in the contested case hearing "A" interveners.
- 22 "B" interveners want to make an opening statement.
- 70 parties willing to rely on their petitions to object.

August 20, 2013 – Rapid City Council passes resolution to oppose Powertech.



Intersection of Mountain View and Omaha

Four Weeks of Contested Case Hearings Scheduled in Rapid City.

- September 23-27, 2013 Board of Minerals and Environment (BME) began hearing.
 200 attended first day; 54 public commenters; 13 "B" and 20 "A" interveners.
- October 28–November 1, 2013 Water Management Board (WMB) began hearing.
 - * 100 attended first day; 23 "B" interveners and 15 "A" interveners.
- November 11-14, 2013, and December 9-13, 2013 each board had another full week scheduled for hearings.

Hearings Continued

- November 5, 2013 Board of Minerals and Environment issued order postponing hearings until the Nuclear Regulatory Commission and EPA have ruled and set the federal surety and the state Water Management Board has decided the water rights because the Board of Minerals and Environment can not fulfill its statutory duties (i.e. ensure compliance with all state and federal laws, adequate surety, aquifer protection) until those are completed.
- November 25, 2013 Water Management Board issued order granting Powertech's motion to continue the hearing until after the Nuclear Regulatory Commission and EPA have issued the federal permits and set the federal financial sureties.

January 30, 2014 - Summary of Nuclear Regulatory Commission 1,310-page Final Supplemental Environmental Impact Statement: *"The report concludes there are no environmental impacts that would preclude licensing the facility."*



In Situ Wells at Crown Butte Mine in Nebraska



Hazardous Waste Generators



Spill Sites Cleaned Up Since 1972







Irrigation Permits Issued by Fiscal Year







Water Right Permits Regulated





137 -80 Calendar Year

Number of Producing Oil Wells in South Dakota







Key Environmental Indicators: Environmental Standards Maintained -Water Quality

Percent of Fecal Coliform samples that meet South Dakota Surface Water Quality Standards





Percent of Total Suspended Solids Samples that meet South Dakota Surface Water Quality Samples



Key Environmental Indicators: Environmental Standards Maintained -Air Quality

PM10 Trends in South Dakota

■Rapid City Dioux Falls









Key Environmental Indicators: Environmental Standards Maintained -Air Quality

Ozone Trends for South Dakota



DENR's LEGISLATIVE AGENDA FOR 2014

- 1. SB 87 Governor Daugaard's 2014 Omnibus Water Funding Bill
 - Passed Senate 35-0
- 2. HB 1015 An Act to create an equitable process to handle water right applications submitted for aquifers determined to be fully appropriated
 - Passed House 63-4

SUMMARY RECAP OF DENR'S FY 2015 BUDGET REQUEST

- Status Quo Budget Request
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 - **b.** DENR is requesting NO expansion in personal services
 - c. Only increase is \$28,199 in operating for Bureau Billings as calculated by BFM
 - * \$8,754 General Funds
 - \$12,335 Federal Funds
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- DENR will continue to manage its existing resources to efficiently get the job done