LEGISLATIVE REVIEW of the DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR)

State One-Stop Environmental Shop for Land, Air, & Water

DENR & the Environment in South Dakota

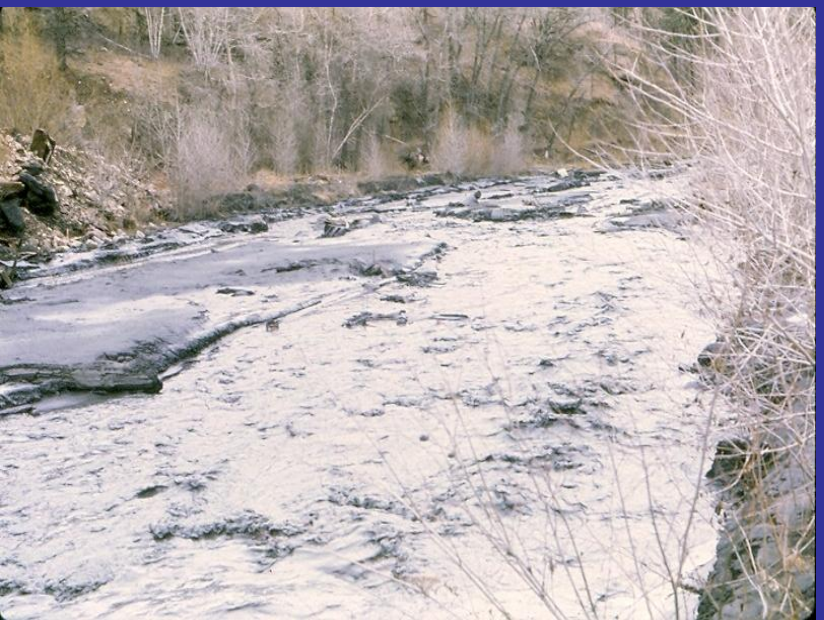
A Snapshot of *"Then and Now"*

"BACK THEN"

Federal environmental programs began 30 to 40 years ago:

- 1970 – Federal Clean Air Act
- 1972 – Water Pollution Control Act
- 1974 – Federal Safe Drinking Water
- 1976 – Federal Resource Conservation and Recovery Act

"Back Then" - South Dakota's Number One Pollution Problem



BACK THEN

- Whitewood Creek
- Homestake Mining discharged raw mine tailings

Whitewood Creek

BACK THEN

- Daily pollutant loads in tailings:
  - 300 pounds of Cyanide
  - 240 pounds of Zinc
  - 70 pounds of Copper
  - 2,700 tons of Solids

- Pollution stretched from Whitewood Creek, to the Belle Fourche River, to the Cheyenne, and to Missouri River

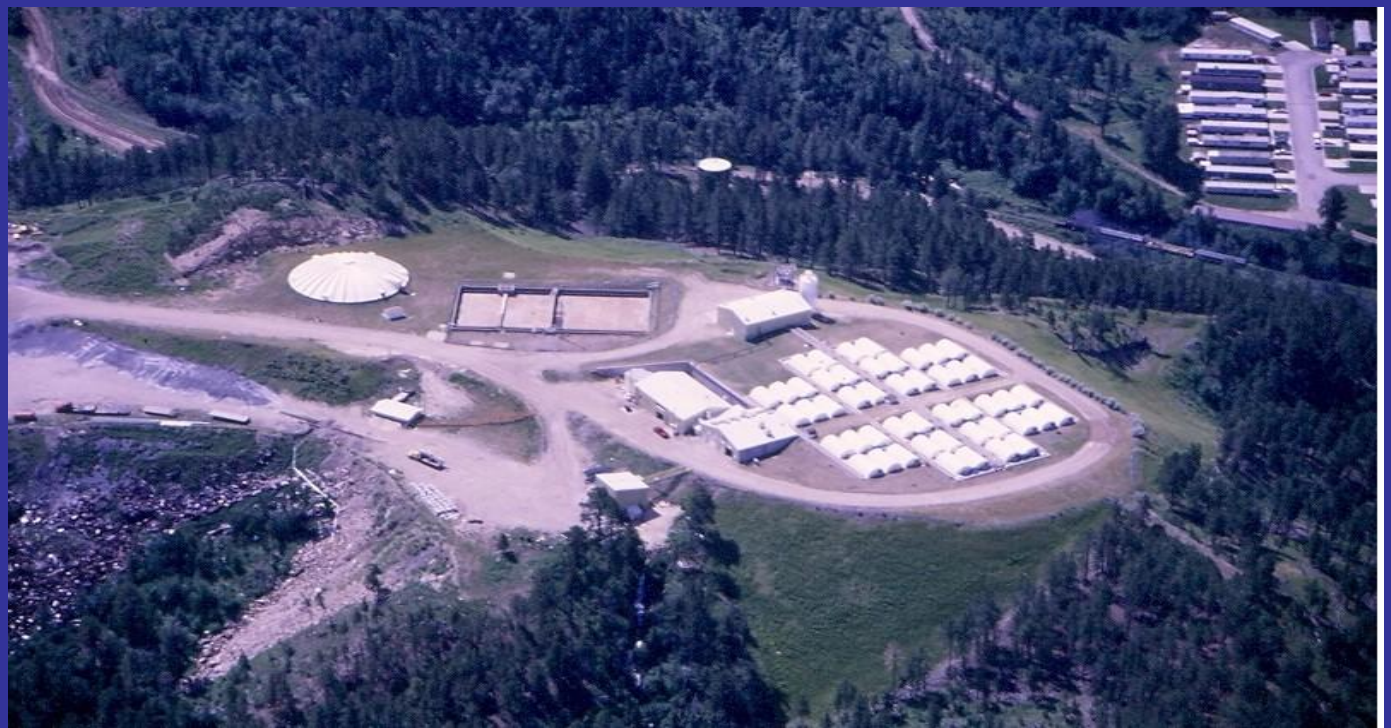
Whitewood Creek

BACK THEN

- Pollution not just industrial wastewater
  - cities of Lead and Deadwood had no wastewater treatment
  - raw sewage discharged directly into Whitewood Creek too

Whitewood Creek Cleanup

- Homestake - $20 million cleanup
  - 1977 - Grizzly Gulch tailings dam
  - 1985 - Innovative state-of-the-art cyanide treatment plant



Whitewood Creek Cleanup

- Lead/Deadwood Sanitary District
  - 1978 – innovative, fully enclosed wastewater treatment plant

Whitewood Creek

BACK THEN

- 1976 – dead stream

NOW

- A first-class, blue ribbon trout stream

Wastewater Treatment Statewide

BACK THEN

- 1976 – Whitewood Creek was not the only polluted stream
  - municipalities had elementary treatment
  - poor quality effluent
  - frequent fish kills

Wastewater Treatment

BACK THEN

- 1976 – poor quality

NOW

- Major municipalities have advanced - tertiary plants
- High effluent quality
- No fish kills for years

Safe Drinking Water

BACK THEN

- 1976 – Safe water determined by about 20 tests

Safe Drinking Water

BACK THEN

- 1976 - About 20 parameters

NOW

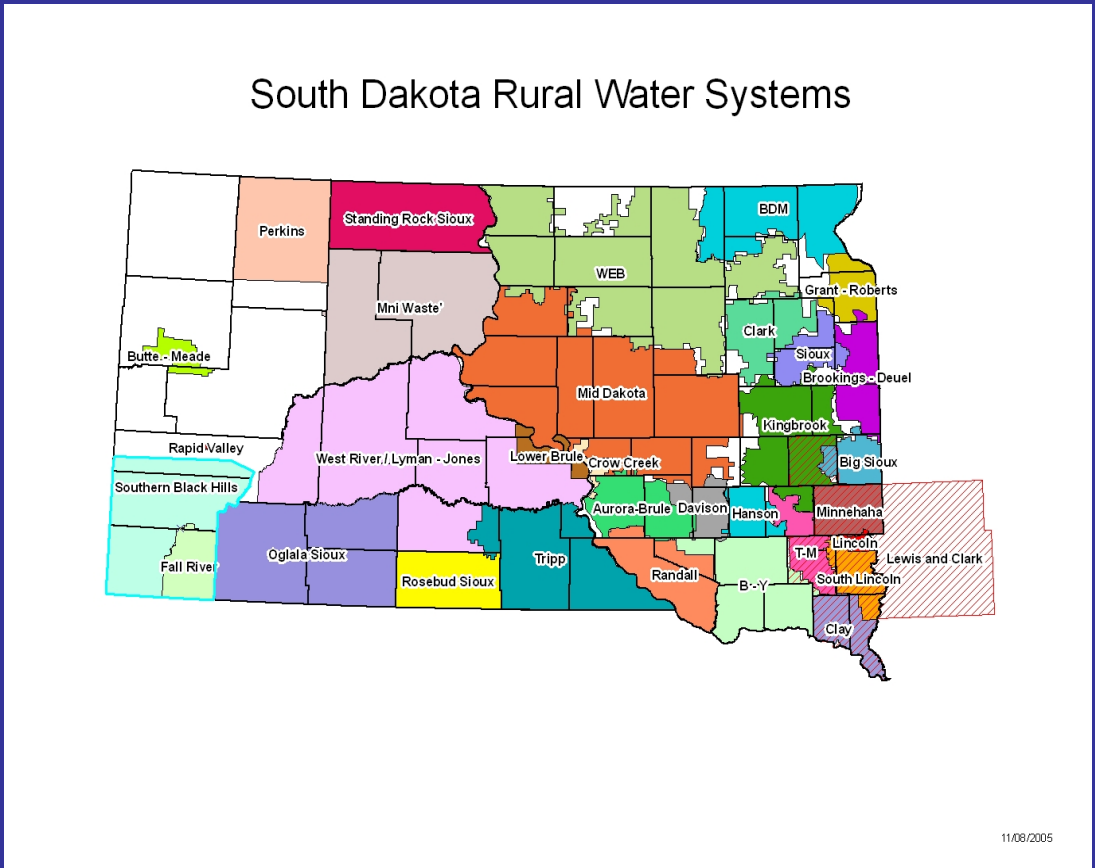
- Test for more than 90 parameters
- No drinking water related health outbreaks since 1997

Rural Water Systems

BACK THEN

- 1967 – Rapid Valley (just east of Rapid City) is first rural water system in South Dakota

Rural Water Systems



NOW

- Rural water nearly blankets the state
- Thousands of rural users; 237 towns
- Reliable, high quality, safe water

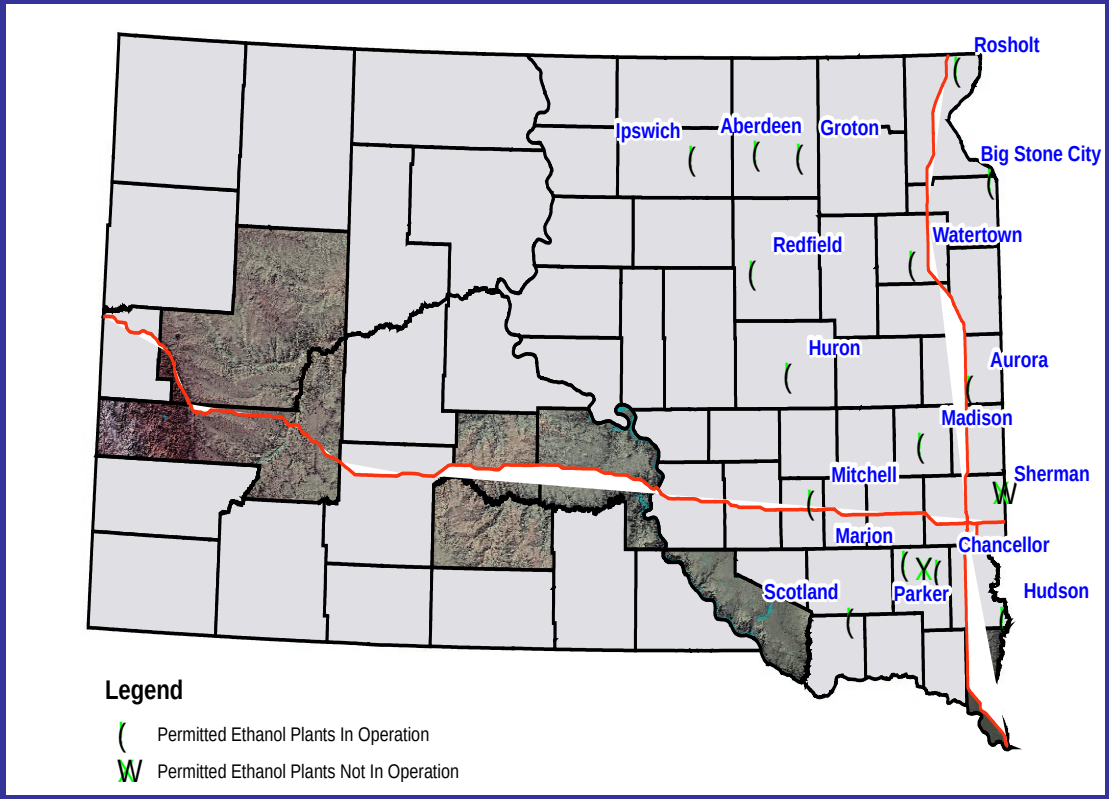
Quality Drinking Water Brings Economic Successes

BACK THEN

- 1988 – 1 small ethanol plant in SD

Quality Drinking Water Brings Economic Successes

Permitted Ethanol Production Facilities



NOW

- 16 ethanol plants; 1 billion gallons
- About half use rural water

State Water Funding

BACK THEN

- 1992 – no coordinated water funding

  - individual water projects came to Appropriations Committee

  - annual fights for funding

State Water Funding

BACK THEN

- 1992 - Annual legislative fights

NOW

- 1993 – Dedicated Water Funding
- State water plan developed by Board of Water & Natural Resources
- Governor's Omnibus Water Bill

Ground Water

BACK THEN

1974 – ground water was primary water supply, but we had little or no knowledge about:

- quantity
- quality
- location
- potential pollution sources

Ground Water/Geology

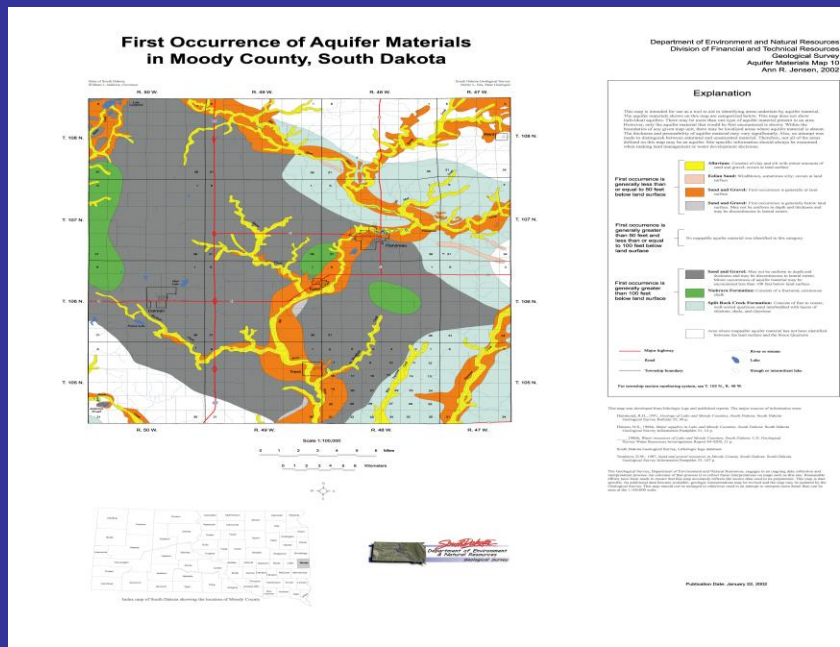
BACK THEN

- 1976 – little knowledge

Test hole at a medical waste site, Mellette County; September 1990

NOW

- DENR operates monitoring networks
  - quantity
  - quality
- Aquifer mapping



Ground Water/Geology

NOW

- Ground water & well construction standards
- Pollution sources regulated/removed
- Water rights protects uses

BOTTOM LINE:

Ground water protected for future generations

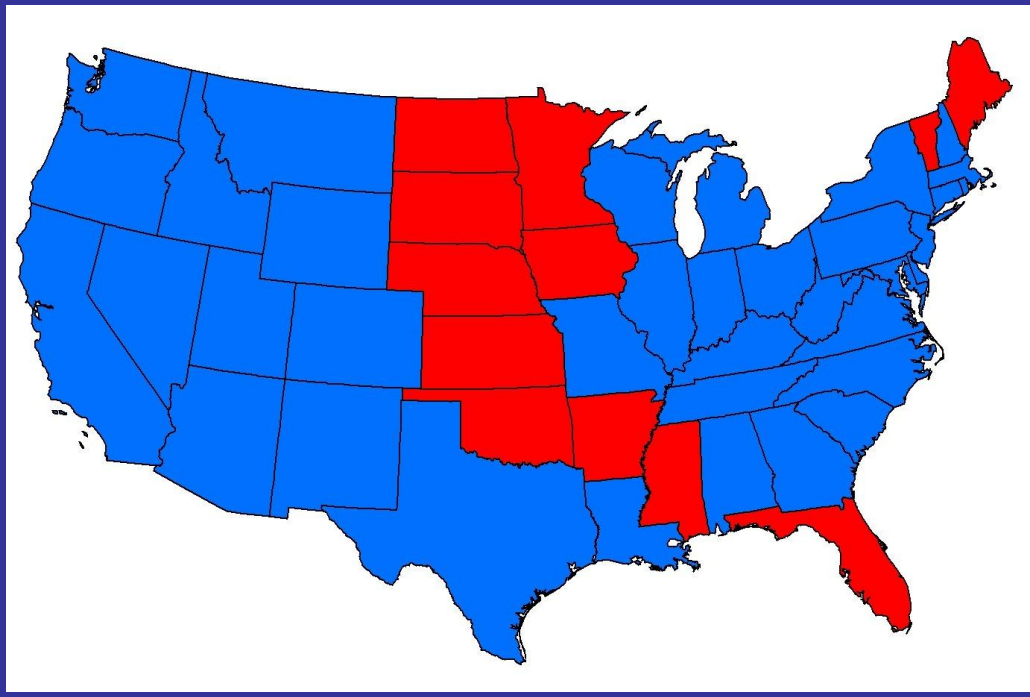
Air Quality

BACK THEN

1979 – Rapid City nearly in violation (nonattainment) due to high dust levels

NOW

South Dakota 1 of only 13 states in full attainment of standards



Solid Waste Disposal

BACK THEN

- 1990 – 190 smoldering dumps with no pollution controls; no recycling

Solid Waste Disposal

BACK THEN

- 1990 – 190 smoldering dumps

NOW

- 15 regional landfills in full compliance with federal solid waste rules
- Recycling in many municipalities

SUMMARY

BACK THEN

- Higher risks to public health
- Higher air, land, and water pollution

NOW

- Lower risks to public health
- Cleaner air, land, and water

Accomplishments - Fewer People

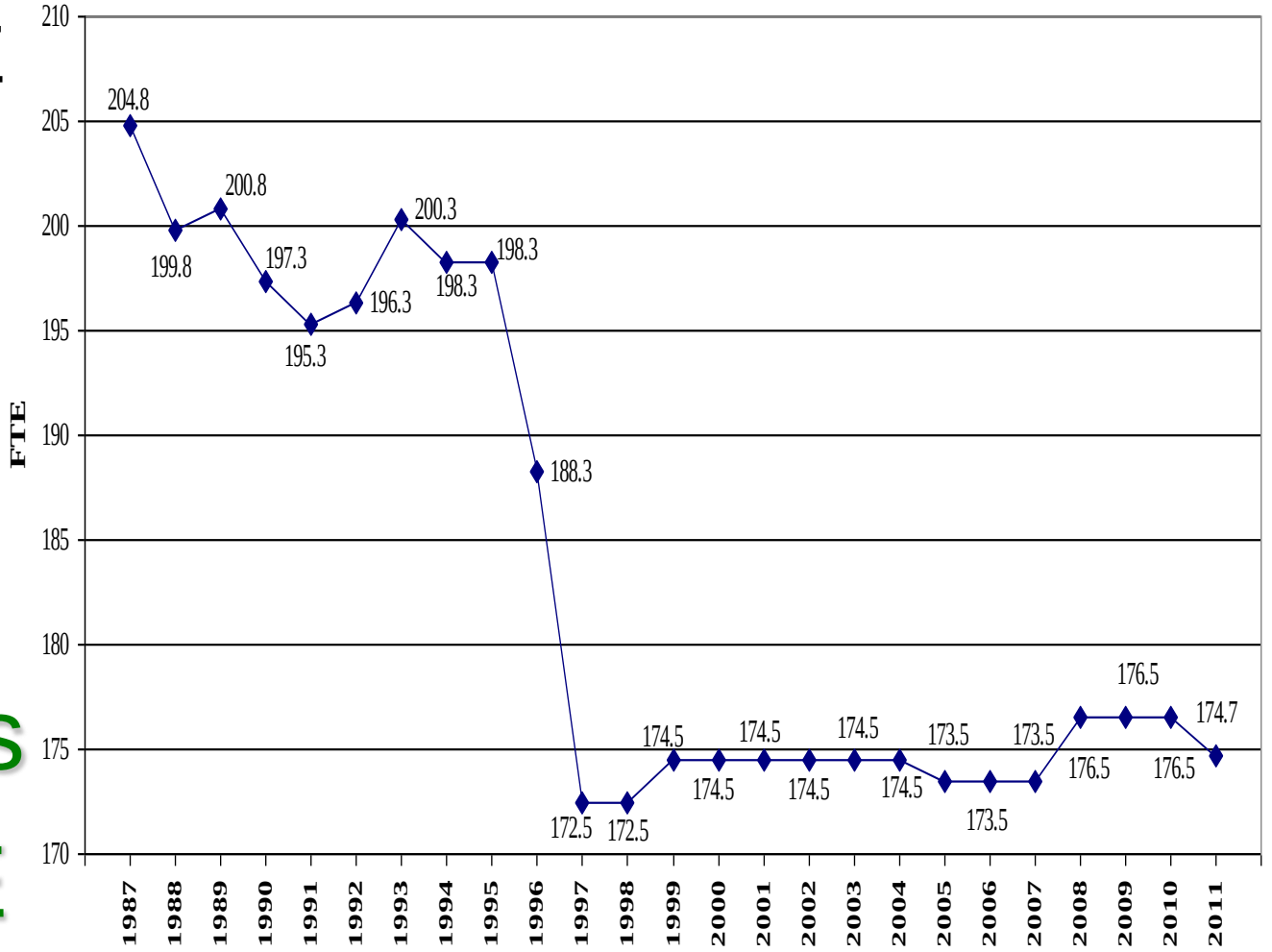
BACK THEN

1987 - 5 Divisions

- 204.5 FTE

NOW

- 2 Divisions
- 174.7 FTE



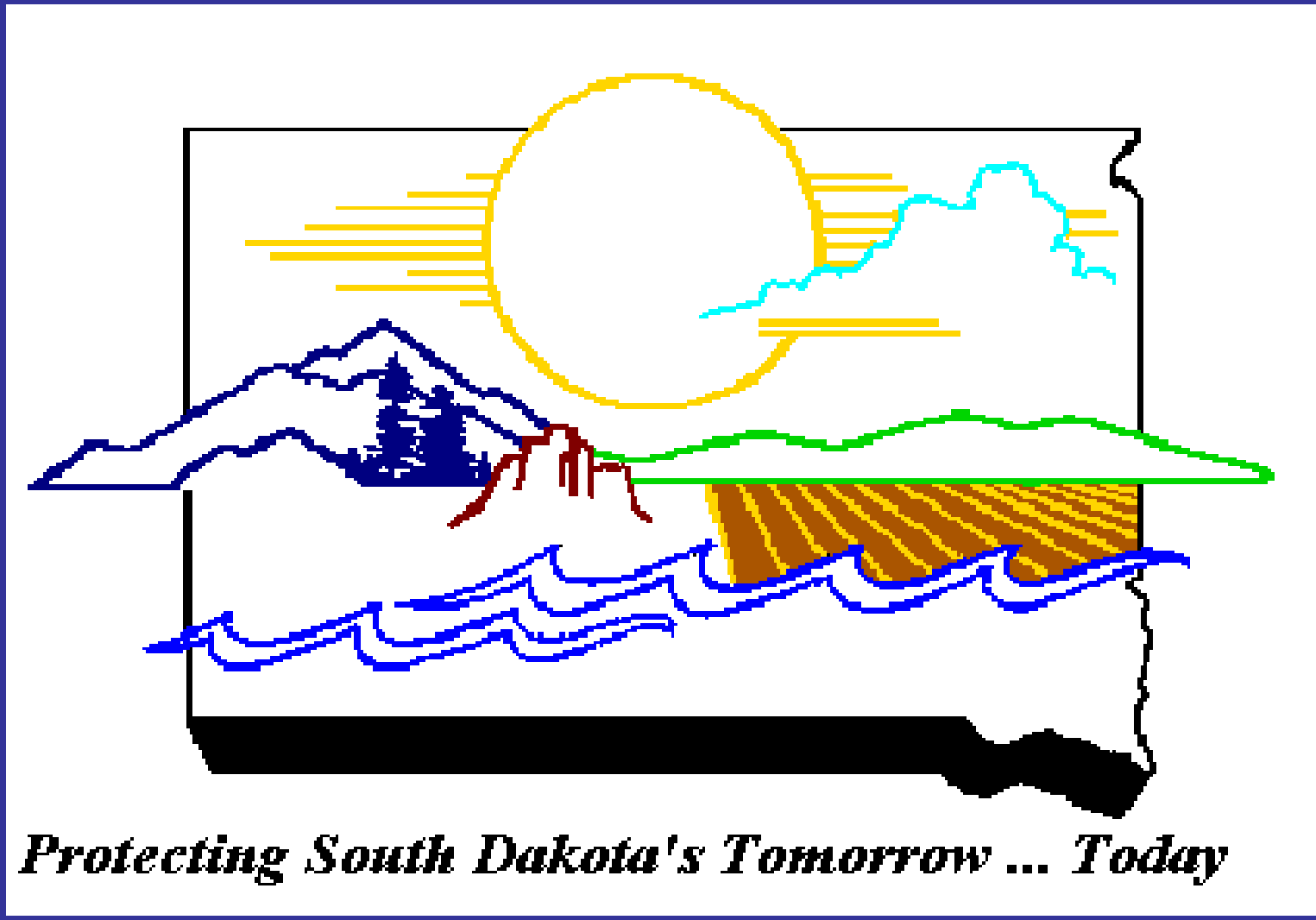
DENR Employees Get the Job Done!

The DENR Team today:

- 174.7 FTE
- Engineers, scientists, geologists, hydrologists, and support staff
- 46 - average age
- 17 - average years of service
- Experience, expertise, & dedication make DENR employees environmental natural resource experts in SD

End of DENR'S Past

DENR



On To Present & Future Challenges