SOUTH DAKOTA WELLHEAD/SOURCE WATER PROTECTION PROGRAM

SAFE DRINKING WATER ACT

- Act was passed in 1974
- Requirements to provide safe drinking water to public water supplies
- Develop drinking water standards and maximum contamination levels

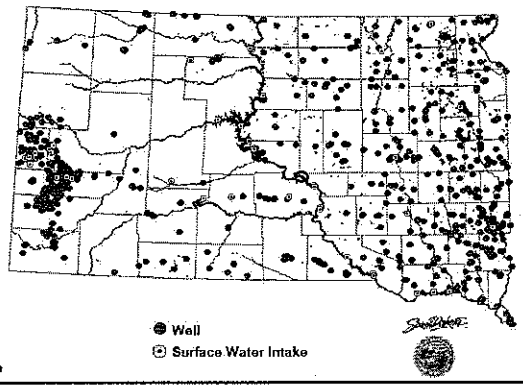
SDWA AMENDMENTS

- 1986 Amendments
  - Required states to develop WHP program document for local communities to use to protect PWS if they wish
  - Not apply to private wells or commercial wells
  - Not a regulatory program requiring local action
- 1996 Amendments
  - Required states to conduct source water assessments for all PWS systems and provide data to PWS
  - Not apply to private wells or commercial wells
  - Not a regulatory program requiring local action

Public Water Supply Systems

- 15 Service Connections
- 25 People Served
- Municipalities, RWS, schools, rest stops, campgrounds

Location of All Wells and Surface Water Intakes Used by Public Water Supply Systems in South Dakota



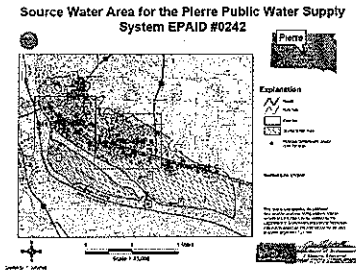
BASIC STEPS FOR BOTH WHP & SWP

- Determine critical area around PWS well or area upstream of surface water intake contributing water to PWS
- Identify potential contaminant sources in defined critical area
- Determine how to manage the potential contaminant sources in the critical area (local community decisions)

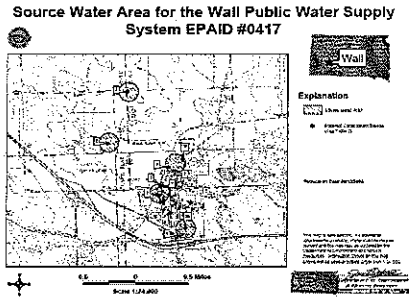
CRITICAL WHP & SWP AREAS

- GW – 500 foot radius to 1-10 miles in length depending upon number of wells, vulnerability, pumping rate and area hydrogeology
- SW – Primary area is 10 miles upstream from the PWS intake
- Black Hills – Done differently because of karst topography, gw/sw interactions and recharge zones

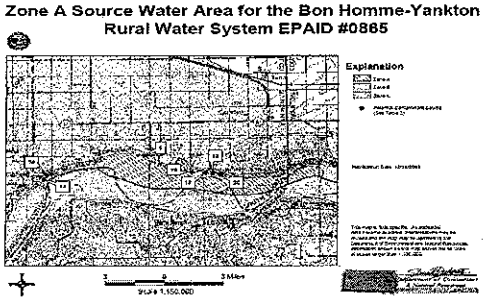
VULNERABLE GW SOURCE



NON VULNERABLE GW SOURCE



VULNERABLE SW SOURCE



MANAGEMENT MEASURES

- Regulatory
  - Zoning: Overlay Protection Districts
  - Permits/Restrictions
- Non-Regulatory
  - Best management practices
  - Public education (pamphlets, clean up days, school visits)
  - Land acquisition or easements
  - Early detection monitoring wells

WHP vs SWP

- WHP
  - State required to develop generic program document
  - Only applicable to gw systems
  - Authorized by State law (regulatory zoning authority)
- SWP
  - State required to conduct delineation and contaminant inventory and give report to local PWS
  - Contacted all PWS in SD via SWP report
  - Applicable to gw and sw systems
  - Not authorized by State law

State Authority for WHP

1989 Centennial Environmental Protection Act
(Sections 42-44)

State Authority (Cont.)

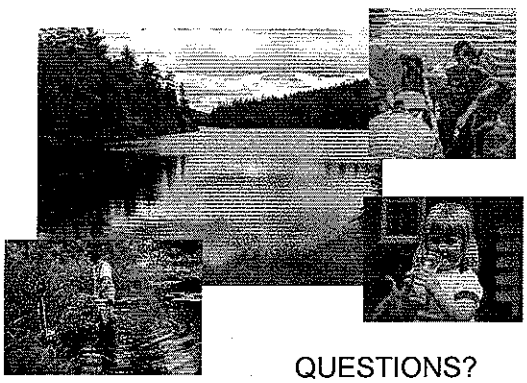
- SDCL 34A-3A-17: Department required to develop voluntary WHP program with accompanying guidelines for local communities to use
- SDCL 7-18-20: Gave counties authority to adopt ordinances to protect ground water to implement WHP program
- SDCL 9-12-17: Gave municipalities authority to adopt ordinances to protect ground water to implement WHP program

LOCAL ORDINANCES

- Approximately 20-25 % of counties have GW protection ordinances
- Approximately 20-25 % of counties have no zoning ordinances

PIPELINES AND WHP/SWP

- DENR provided WHP/SWP information to TransCanada for both the Keystone and Keystone XL projects early in the company's route planning process
- TransCanada provided preliminary route information and compared that to WHP/SWP locations
- TransCanada used the WHP/SWP information to avoid routing the pipelines through these critical areas



QUESTIONS?