

# **Appendix R**

## **Tom Brandner's Presentation on the DENR's Source Water and Wellhead Protection Programs**

## 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

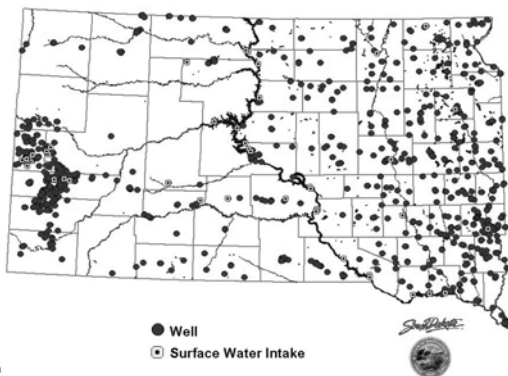
## SDWA AMENDMENTS

- 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

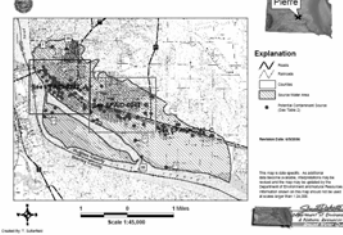
- Determine critical area around PWS well or area upstream of surface water intake contributing water to PWS
- Identify potential contaminant sources in defined critical area
- Determine how to manage the potential contaminant sources in the critical area (local community decisions)

## 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

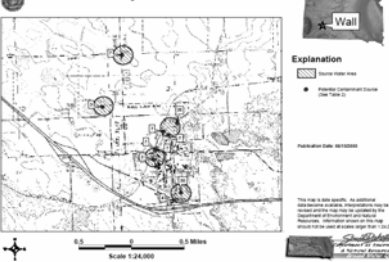
## VULNERABLE GW SOURCE

Source Water Area for the Pierre Public Water Supply System EPAID #0242



## NON VULNERABLE GW SOURCE

Source Water Area for the Wall Public Water Supply System EPAID #0417



## VULNERABLE SW SOURCE

Zone A Source Water Area for the Bon Homme-Yankton Rural Water System EPAID #0865



## MANAGEMENT MEASURES

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Regulatory             <ul style="list-style-type: none"> <li>– Zoning: Overlay Protection Districts</li> <li>– Permits/Restrictions</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Non-Regulatory             <ul style="list-style-type: none"> <li>– Best management practices</li> <li>– Public education (pamphlets, clean up days, school visits)</li> <li>– Land acquisition or easements</li> <li>– Early detection monitoring wells</li> </ul> </li> </ul> |
|--|--|

## WHP vs SWP

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• WHP             <ul style="list-style-type: none"> <li>– State required to develop generic program document</li> <li>– Only applicable to gw systems</li> <li>– Authorized by State law (regulatory zoning authority)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• SWP             <ul style="list-style-type: none"> <li>– State required to conduct delineation and contaminant inventory and give report to local PWS</li> <li>– Contacted all PWS in SD via SWP report</li> <li>– Applicable to gw and sw systems</li> <li>– Not authorized by State law</li> </ul> </li> </ul> |
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## 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

