

# **SPOT DUST CONTROL**

## **2008 ROAD DUST MANAGEMENT PRACTICES AND FUTURE NEEDS CONFERENCE**

By Hiene Junge

Pennington County Highway Superintendent

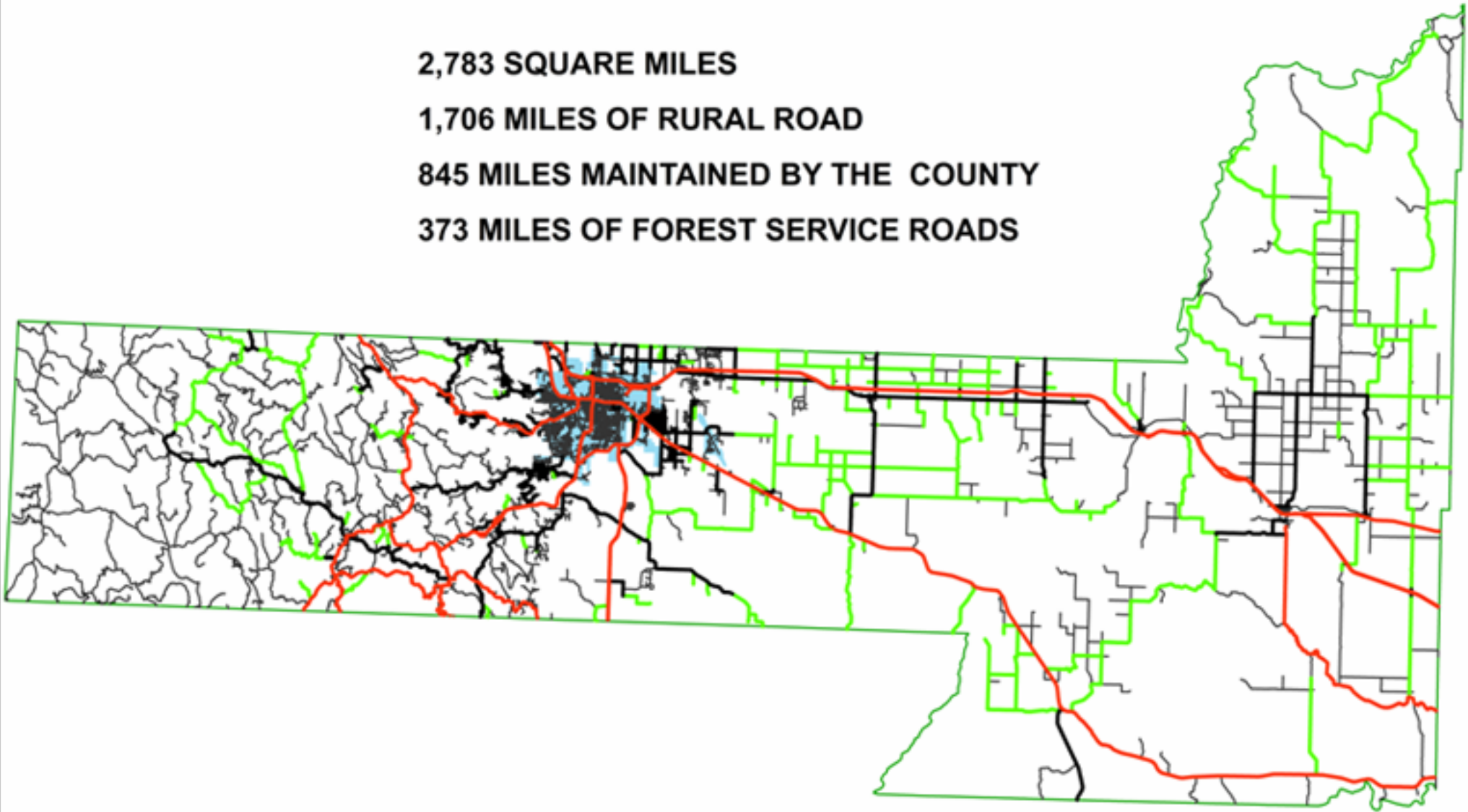
# PENNINGTON COUNTY

**2,783 SQUARE MILES**

**1,706 MILES OF RURAL ROAD**

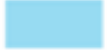



**845 MILES MAINTAINED BY THE COUNTY**

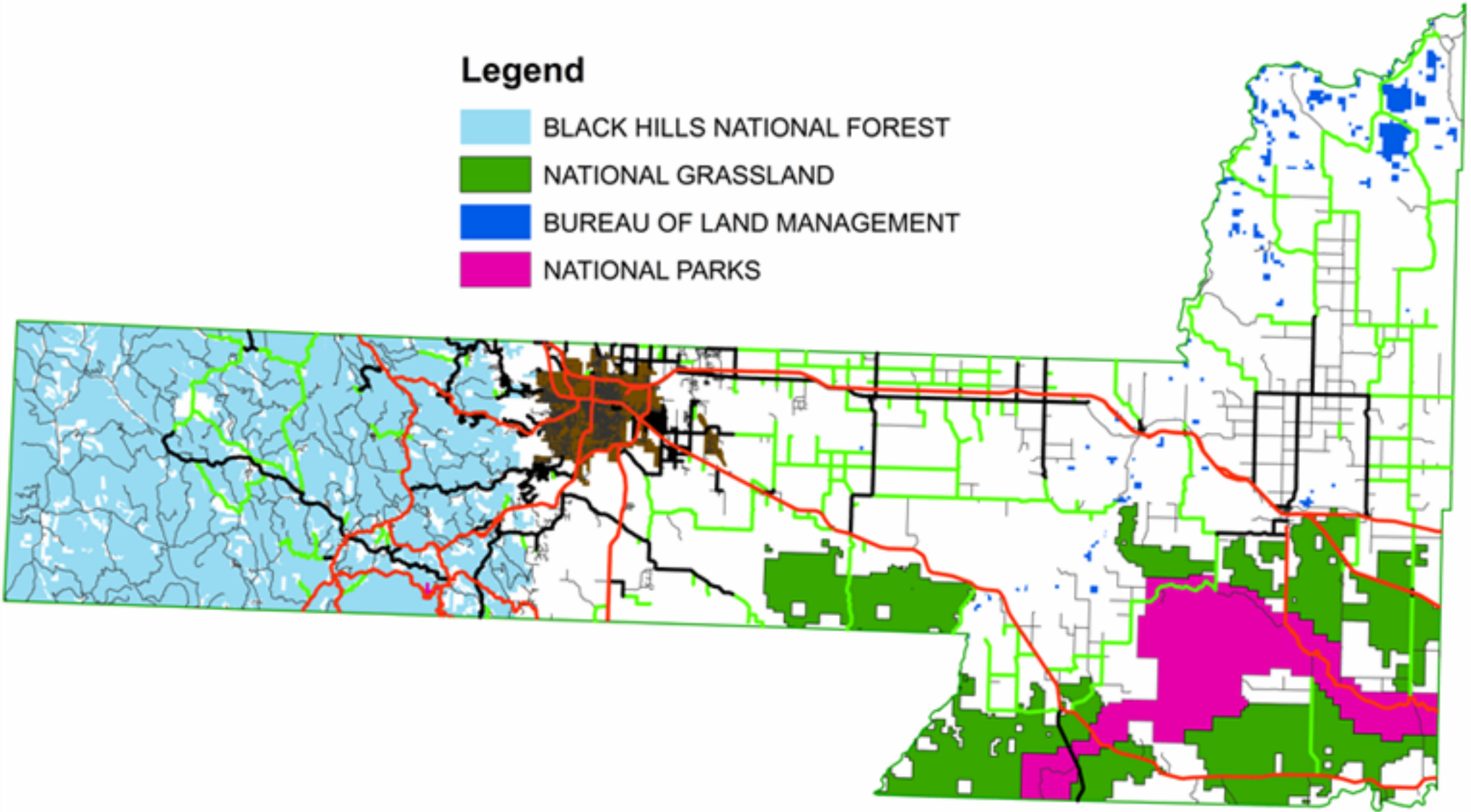
**373 MILES OF FOREST SERVICE ROADS**



# PENNINGTON COUNTY

## Legend

-  BLACK HILLS NATIONAL FOREST
-  NATIONAL GRASSLAND
-  BUREAU OF LAND MANAGEMENT
-  NATIONAL PARKS



# **DUST CONTROL PRIOR TO 2000**

**We did not have a policy on this issue.**

**We were simply reacting to citizen complaints.**

**Only 20 miles was based on traffic and volume?**

**It was mainly to control dust in front of residences.**

**Every one was not being treated fairly.**

**Dust control budget was exceeding \$150,000**

# **DUST CONTROL POLICY ADOPTED 2001**

**Funds for Dust control cut from budget.**

**New policy required the resident to pay for material at county bid price.**

**County provided labor and equipment.**

# **DUST CONTROL 2007**

**18 Residents requested dust control.**

**Pre-payment was required.**

**We treated 10 different road segments for a total of 2.35 miles.**

**The material cost was \$5,454.00.**

**Labor and equipment cost was \$3,800.00**

# **SPOT DUST CONTROL**

**There are three primary things that make spot dust control successful:**

- Preparation – shaping, and drainage.**
- The quality of the surface gravel.**
- The application of the product.**





**Shaping and preparation.**





**Good Quality Gravel**



**Very good crown, material nicely shaped with 1 to 2 inches of loose material.**





**Good application equipment.**



**Prewetting is advised when treating dry aggregate.**





**Dust control is very, very effective when done well.**



**Untreated section**

**Treated section**









**Outstanding performance**



**Treated in May, blade maintenance done only twice in season. Good performance continues in Oct.**





**But, when you break the rules, it doesn't work!**





**Poor penetration results in stripping and poor performance**





**Uneven application of product results in failure at outside edge of roadway.**





**Application on road with weak sub grade and too much deflection results in poor performance.**





**Good crown was never established, has poor drainage. Result is washboards and potholes.**





**Most of our stabilization is done with chlorides. We have seen some use of soy oil in our area.**

# **2008 DUST CONTROL POLICY**

- **Residents required to pay all material, labor and equipment cost.**
- **We only had 3 requests for dust control.**
- **0.52 miles was treated at a cost of \$1,859.00.**
- **Our application rate is 0.35 tenths of a gallon per sq, yd.**





11/07/2008





11/07/2008





11/07/2008



11/08/2008





11/08/2008



11/08/2008

**QUESTIONS**