

# Western North Dakota infrastructure, water opportunities and impacts of federal legislation and regulations



# Federal Legislation & Rules

## Impacts to Refining/Marketing

- **Waxman/Markey Climate Bill**
  - Refiners have invested billions to reach 1990 emission levels.
  - Puts transportation on refiners back.
  - Essentially become a gas tax in ND of \$.77 cents per gallon.
  - **Must be Global or it will destroy and outsource U.S. refining.**
- **Low Carbon Fuel Standard**

# Upstream Federal Issues

- Regulation of Hydraulic Fracturing
- Taxation –
  - \$80 billion in President's Budget
  - Repeal of expensing well costs and exploration expenses.
  - Reduce Bakken investment by 30-40% = fewer jobs, tax revenues, and wealth.
- Access to Federal Lands
  - Imposing GHG Impacts on Permits
  - Leasing Restriction/Fee Increases/Endangered Species

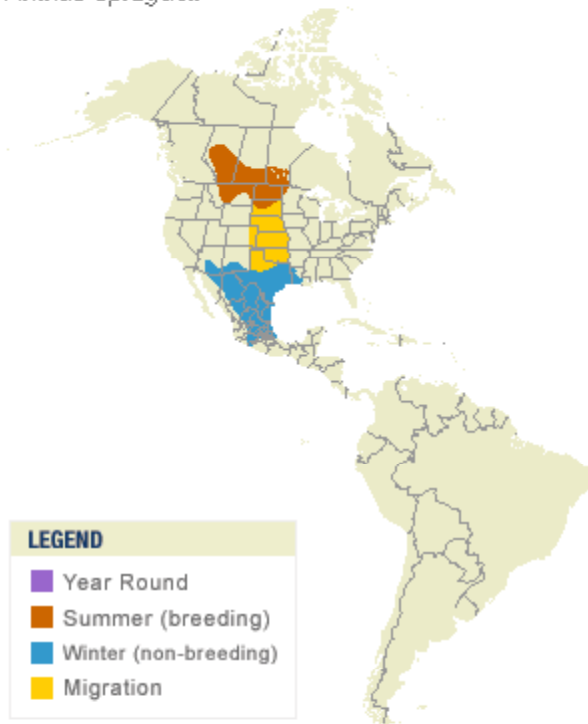
# Sprague's Pipit

Habitat: Breeds and winters in open grassland with good drainage and no shrubs or trees.

Source:

[http://www.allaboutbirds.org/guide/Spragues\\_Pipit/lifehistory](http://www.allaboutbirds.org/guide/Spragues_Pipit/lifehistory)

Sprague's Pipit  
*Anthus spragueii*



Map by Cornell Lab of Ornithology  
Range data by NatureServe



Photo courtesy:

[http://www.schmoker.org/BirdPics/Photos/Waxwings/SPPI\\_CO\\_16.jpg](http://www.schmoker.org/BirdPics/Photos/Waxwings/SPPI_CO_16.jpg)

# EPA End-Run on Climate

- EPA Gone Wild – EPA on Steroids
  - New Rule Per/Day Per Week?
  - Intent Clearly to Impose Carbon Legislation
  - ✓ CO2 Endangerment Finding
  - ✓ Aggregation of wells
  - ✓ Tailoring Rule
  - ✓ Lowering Ozone Standard
  - ✓ Too Many New Rules to Keep Up

# Onslaught Threatens Western Producers



## Legislation/Regulation

## Consequences

### Financial

- **New Taxes**
- **Derivatives Reform**
- **Royalty Rate Increase**

Less capital available to independent producers, decrease in domestic energy production, and increased prices for consumers

### Climate Policies

- **EPA Endangerment Findings**
- **Renewable Portfolio Standards**

Will increase energy costs for American households, may create a greater reliance on foreign oil, inefficient means of reducing emissions

### Environmental Regulation

- **FRAC Act would expand regulation of hydraulic fracturing to the Federal level**
- **Air Quality**

2,869,000 jobs lost, a 20% reduction in new wells drilled, and a 10% decrease in U.S. natural gas production

### Public Lands Access

- **Reduced Leasing / Unissued Leases**
- **Regulatory Limbo on Environmental Analysis**
- **Increased Permitting Fees**
- **Eliminating the Usefulness of Categorical Exclusions**

Will discourage responsible development of oil and natural gas on federal lands

# Western North Dakota Infrastructure Issues

**SB 2419** – Governor and Tribal Chairman just renewed the agreement.

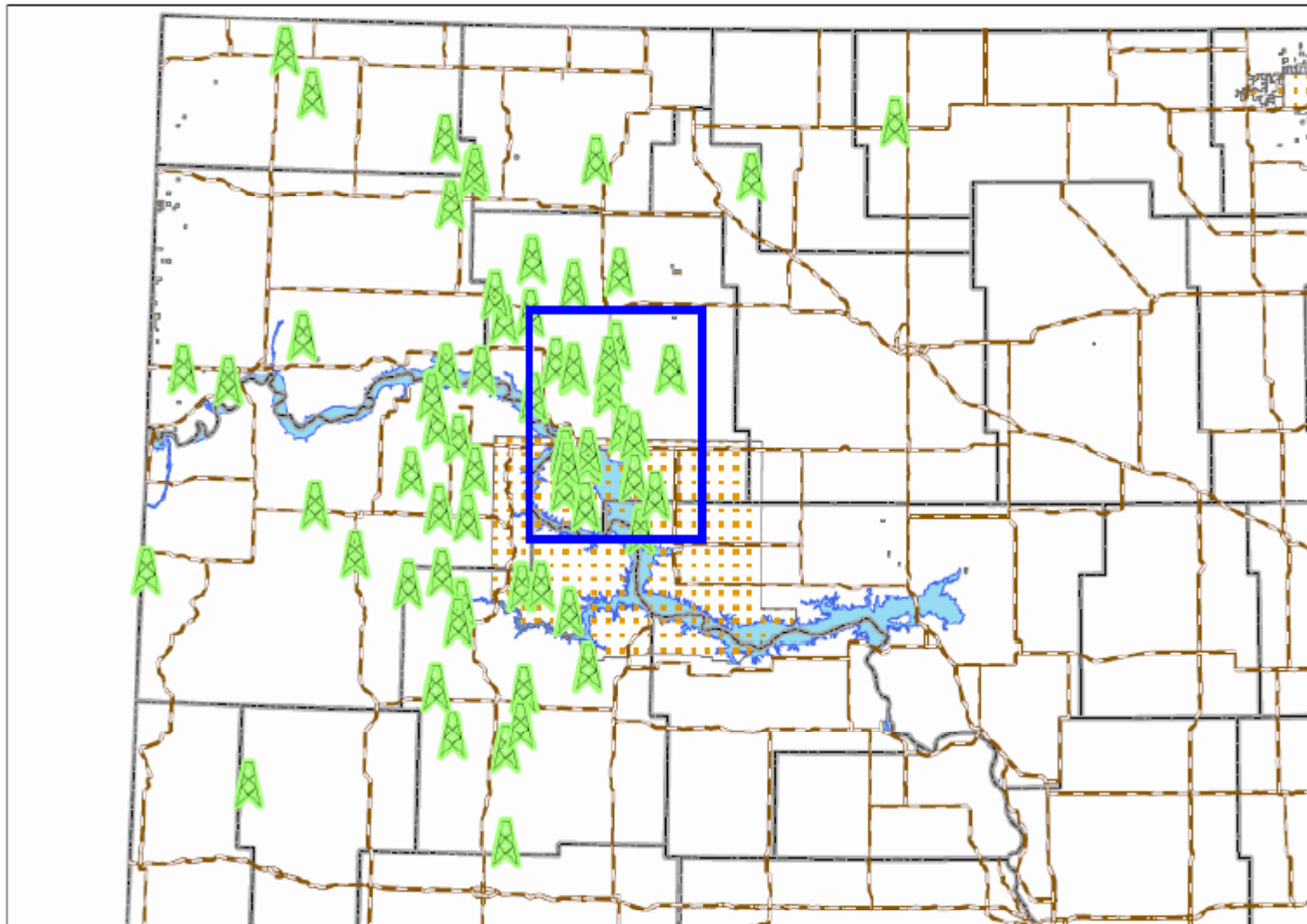
- Workforce – Need Many and Growing
  - Conducting New Workforce Survey
- Housing – Extremely Difficult & Expensive
- Roads – Planning & Safety is Needed

# Frac Water Use for the Bakken

- Up to 1.500 million gallons water per frac.
- For comparison:
  - In ND, the approximate volume of water used to irrigate  $\frac{1}{4}$  section of land using center pivot is 1,380,000 gallons per day.
  - Typical daily water use for a 50,000-person Midwestern city is 10,000,000 gallons.
- Relatively small amount of water for a very high value use.
- Utilize Lake Sakakawea Resource



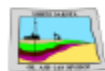
# Parshall Area



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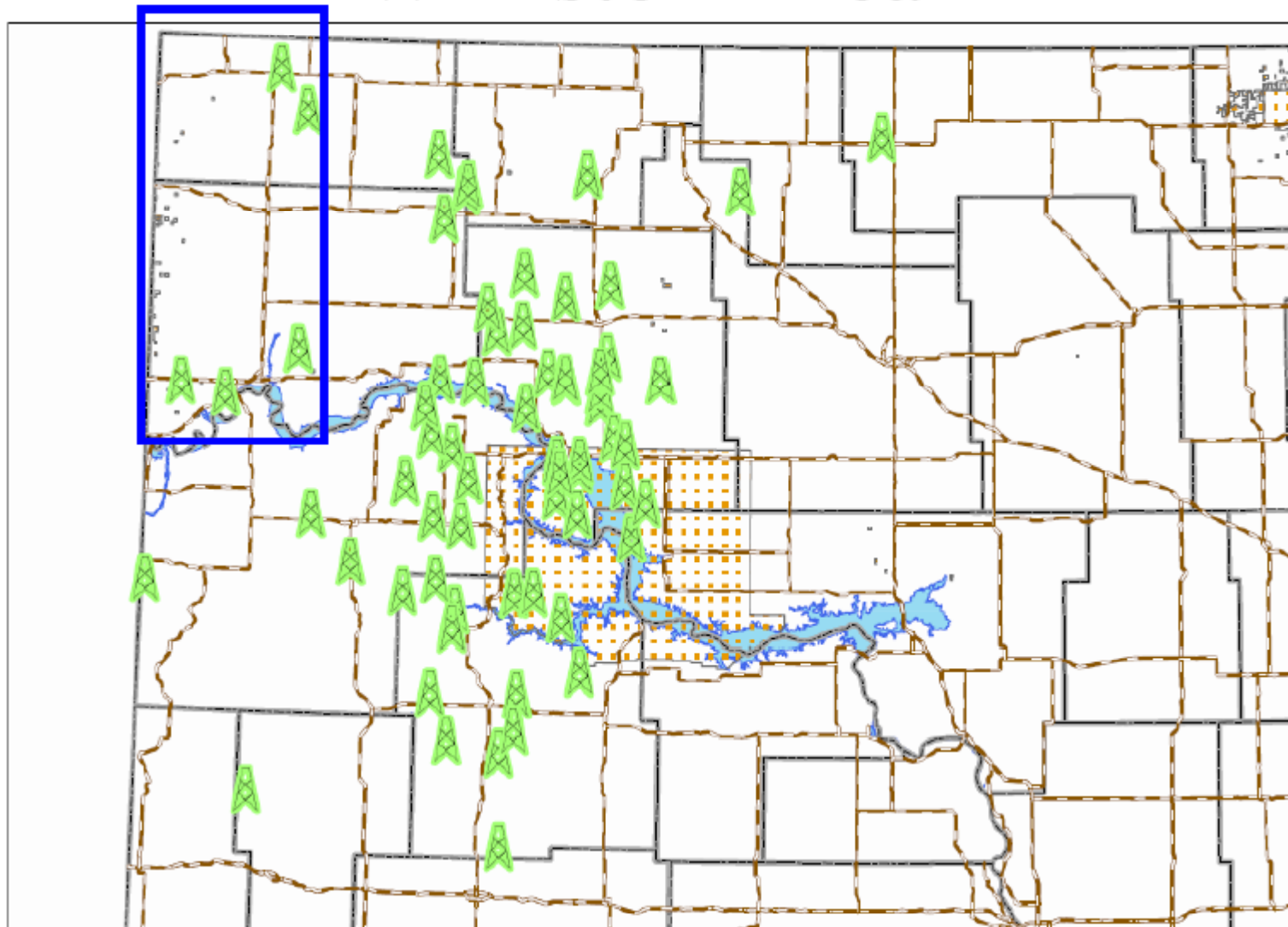
Prepared by N.D.I.C.  
Oil and Gas Division  
DATE: 10/6/2009  
Time: 9:52:51 AM



## Parshall Area

- 375 to 470 wells per year
- 1.5 million – 2.0 million gallons fracturing water per day May through December
- 7 to 8 years

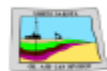
# Williston Area



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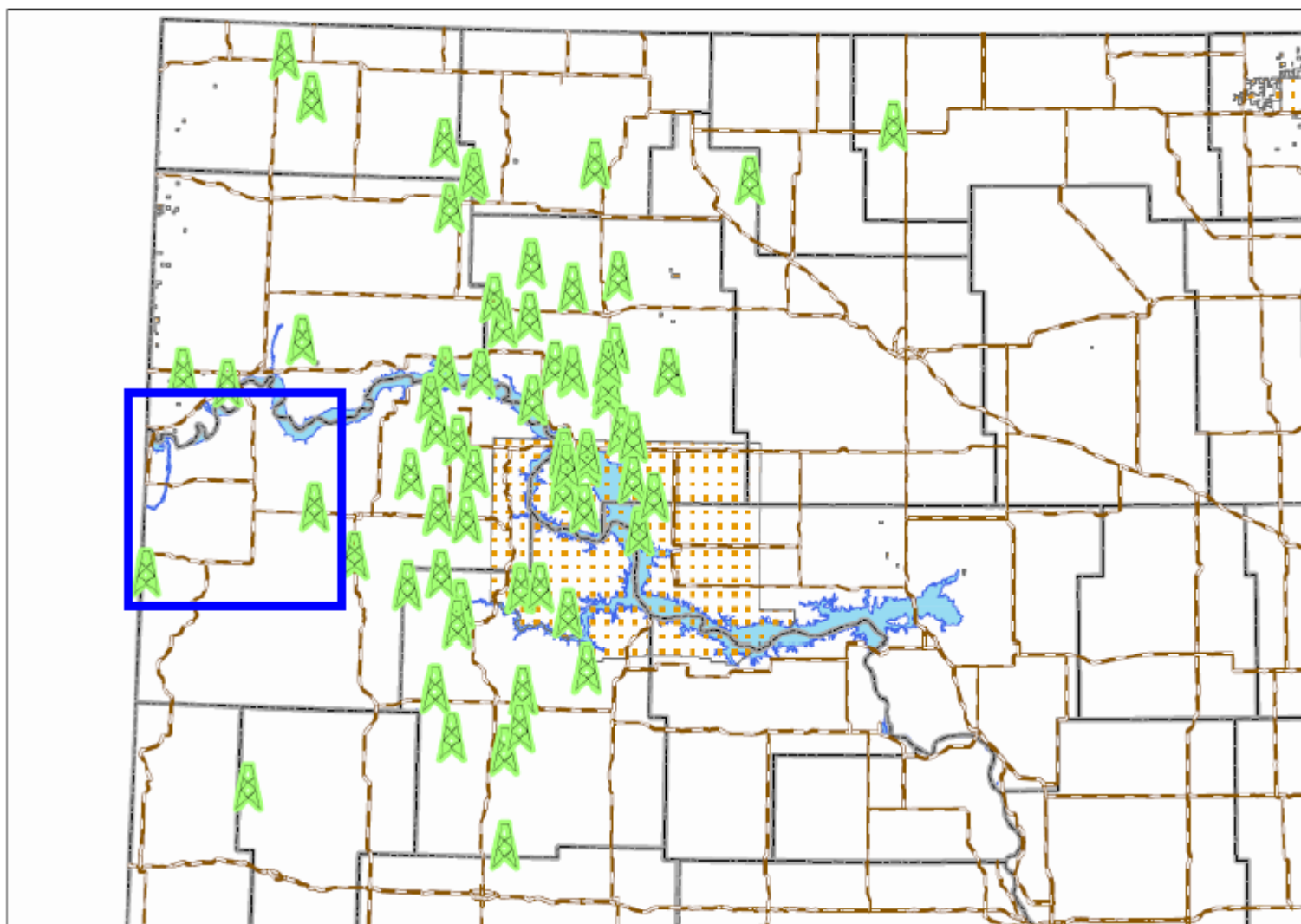
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Oil and Gas Division  
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# Williston Area

- 70 to 90 wells per year
- 0.9 million – 1.1 million gallons fracturing water per day May through December
- 8 to 20 years

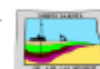
# Alexander Area



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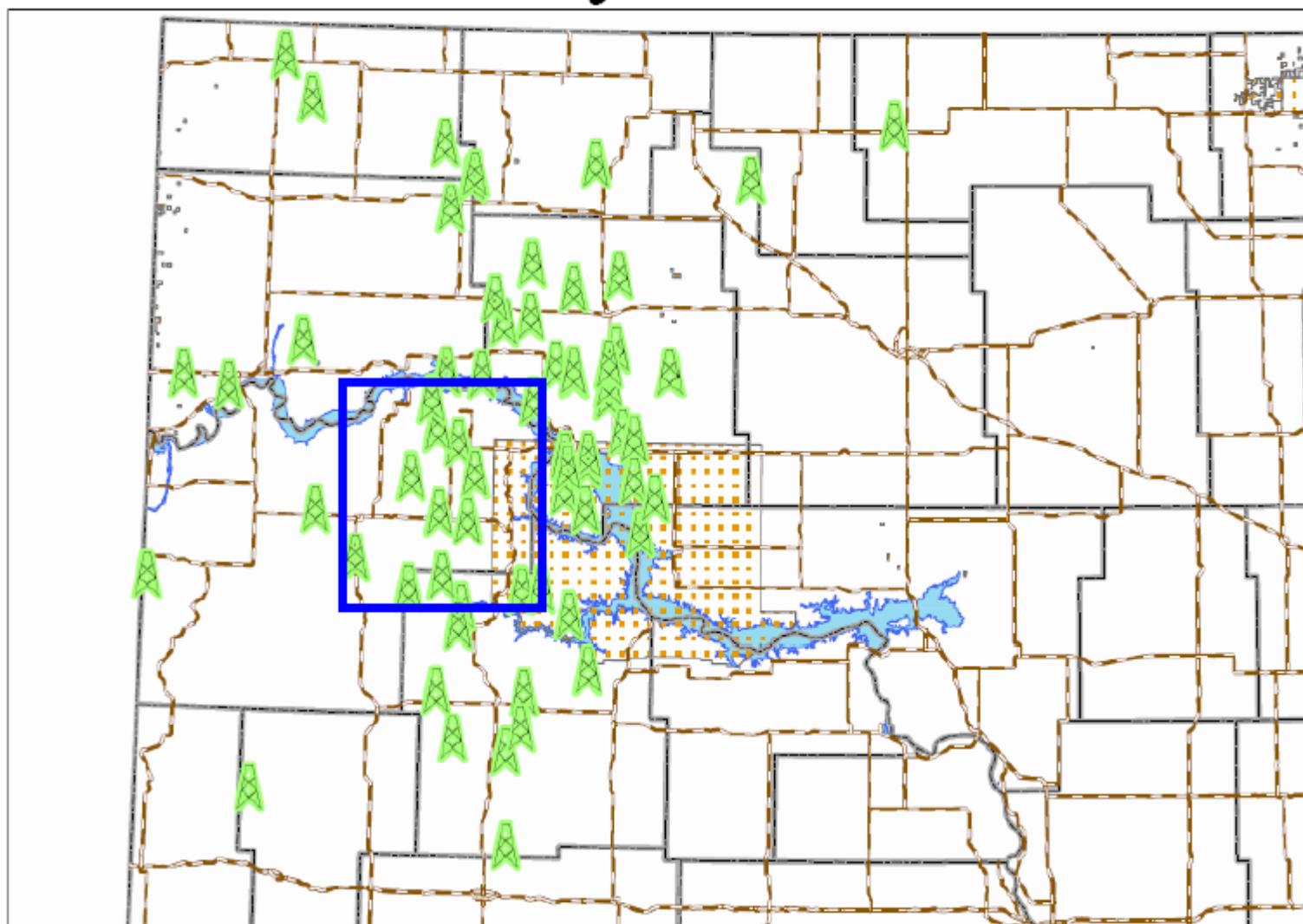
Prepared by N.D.L.G.  
Oil and Gas Division  
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# Alexander Area

- 120 to 150 wells per year
- 1.4 million – 1.8 million gallons fracturing water per day May through December
- 12 to 15 years

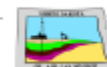
# Watford City - Keene Area



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Oil and Gas Division  
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Time : 9:55:51 AM



## Watford City - Keene Area

- 250 to 310 wells per year
- 2.0 million – 2.6 million gallons fracturing water per day May through December
- 5 to 7 years



# Planned Projects

- **Regional Water Supply from Williston Regional Water Plant to city of Watford City (4 MGD)**

- Total Project Cost \$24 Million

- Project would serve long term residential needs of McKenzie County, including the rural areas and the city of Watford City as well as serving a portion of the immediate and future oil industry needs of the county
      - **Phase 1 (\$7 Million)** - Eight miles of pipeline from Williston Regional Water Plant into McKenzie County near Alexander, ND, includes 1 million gallon storage tank, pump station, and 6 truck bulk fill station, and create access for System 4 rural water system
      - **Phase 2 (\$9 Million)** - Seventeen miles of pipeline, includes 1 million gallon storage reservoir, pump station, and additional 4-6 truck bulk fill station
      - **Phase 3 (\$8 Million)**- Nine miles of pipeline to city of Watford City and Twenty one miles of pipeline to supplement existing rural water system in Eastern McKenzie County

- **System Four (Alexander Service Area)**

- Total Project Cost \$4.5 Million

- Project would serve approximately 100 rural users and 10 industrial oil sites with water from Williston Regional Water Plant

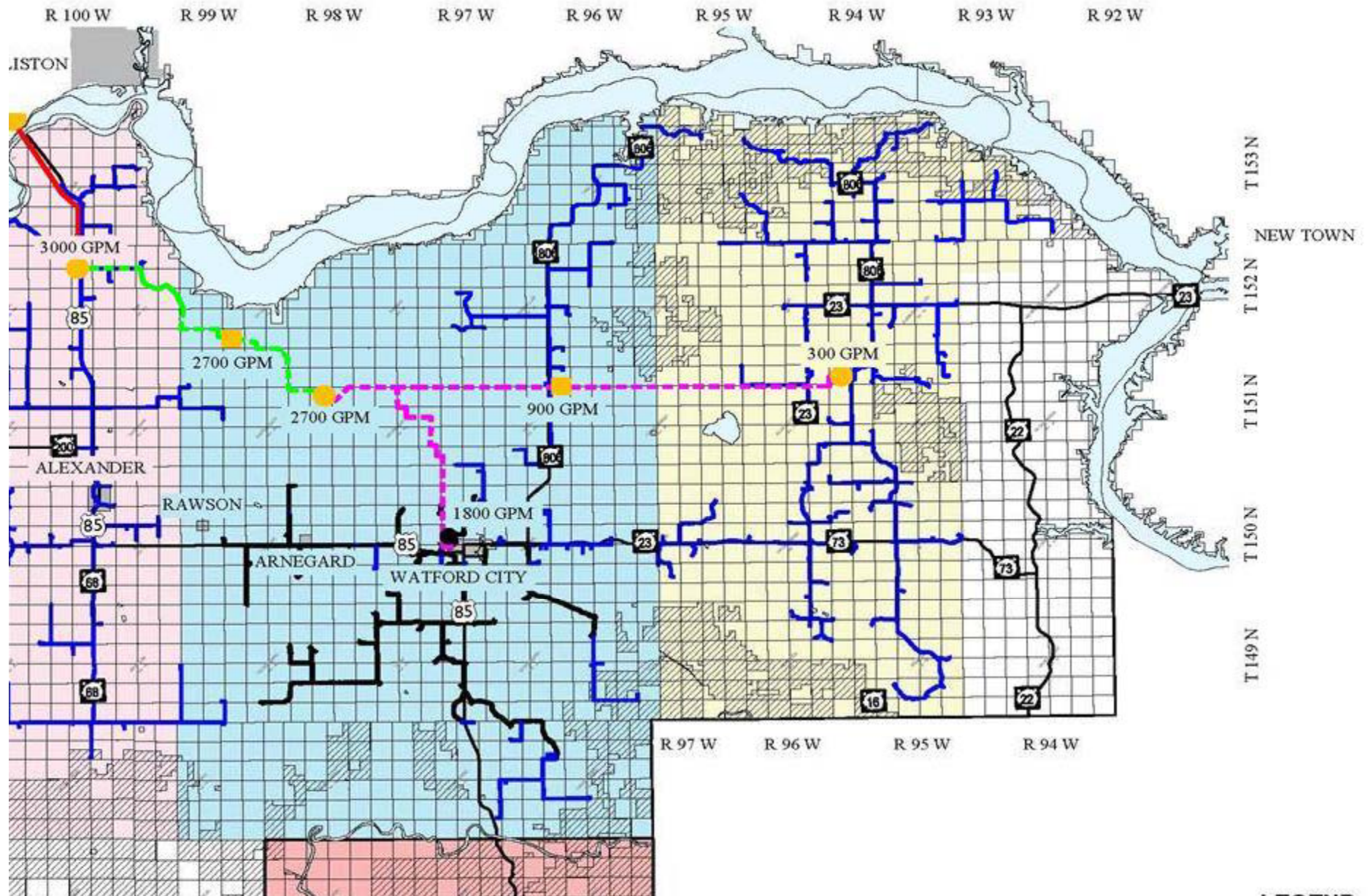
- **System One (Watford City Service area)**

- Total Project Cost \$2.45 Million

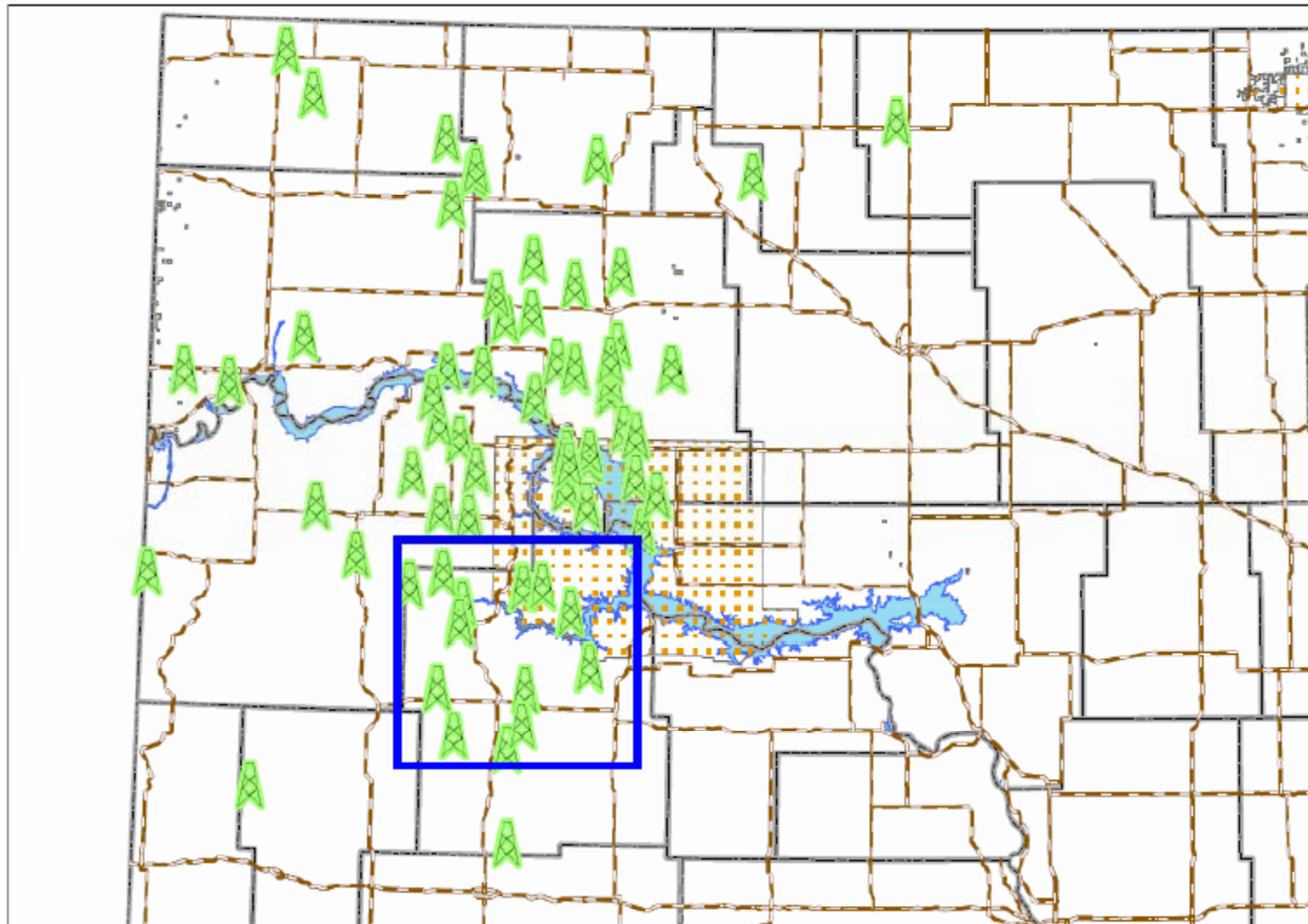
- Project would add over 100 additional rural users to the existing rural system

# McKENZIE COUNTY WATER RESOURCE DISTRICT

## WATER DEVELOPMENT & MANAGEMENT PLAN - DECEMBER 2009



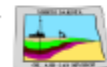
# Killdeer Area



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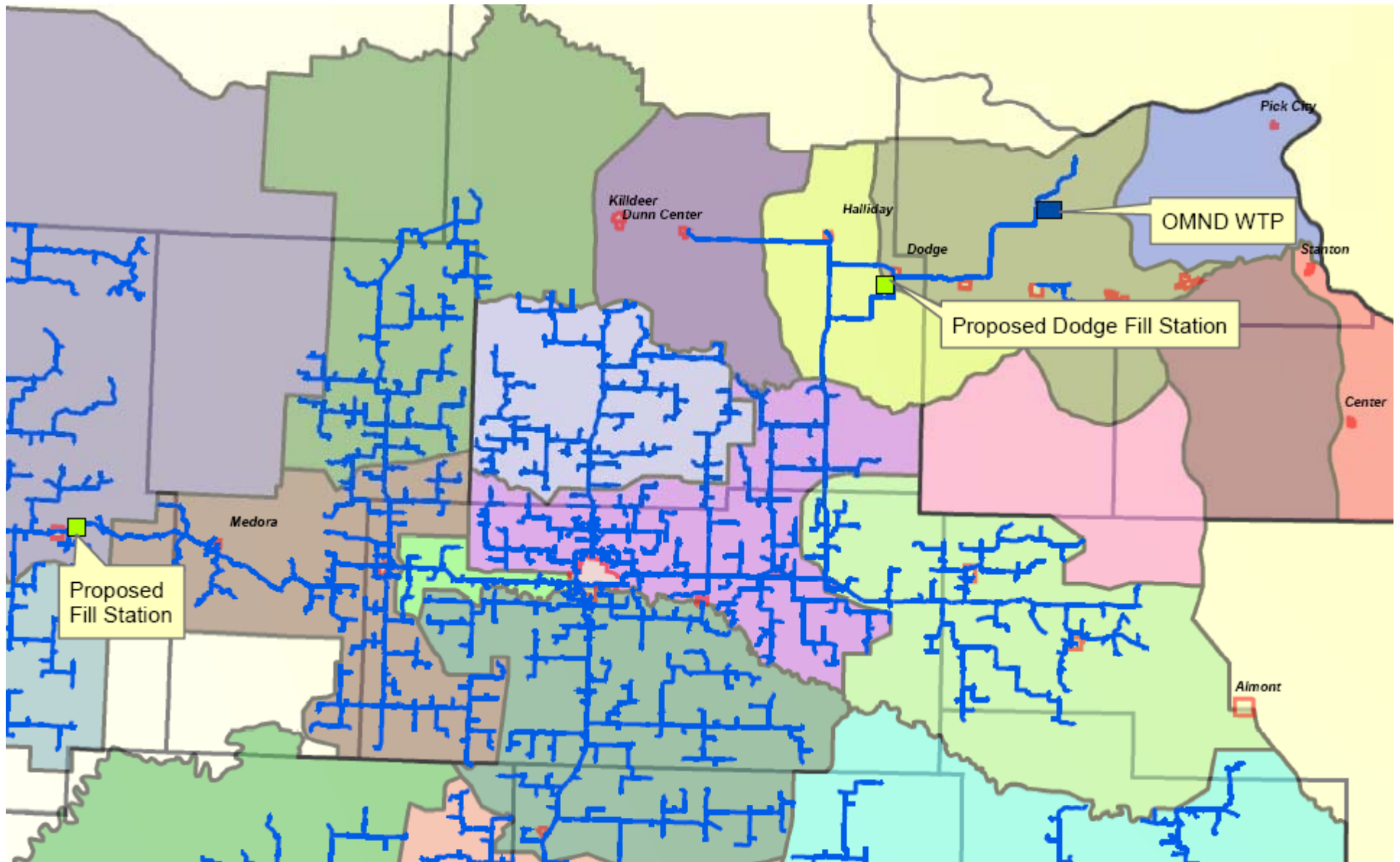
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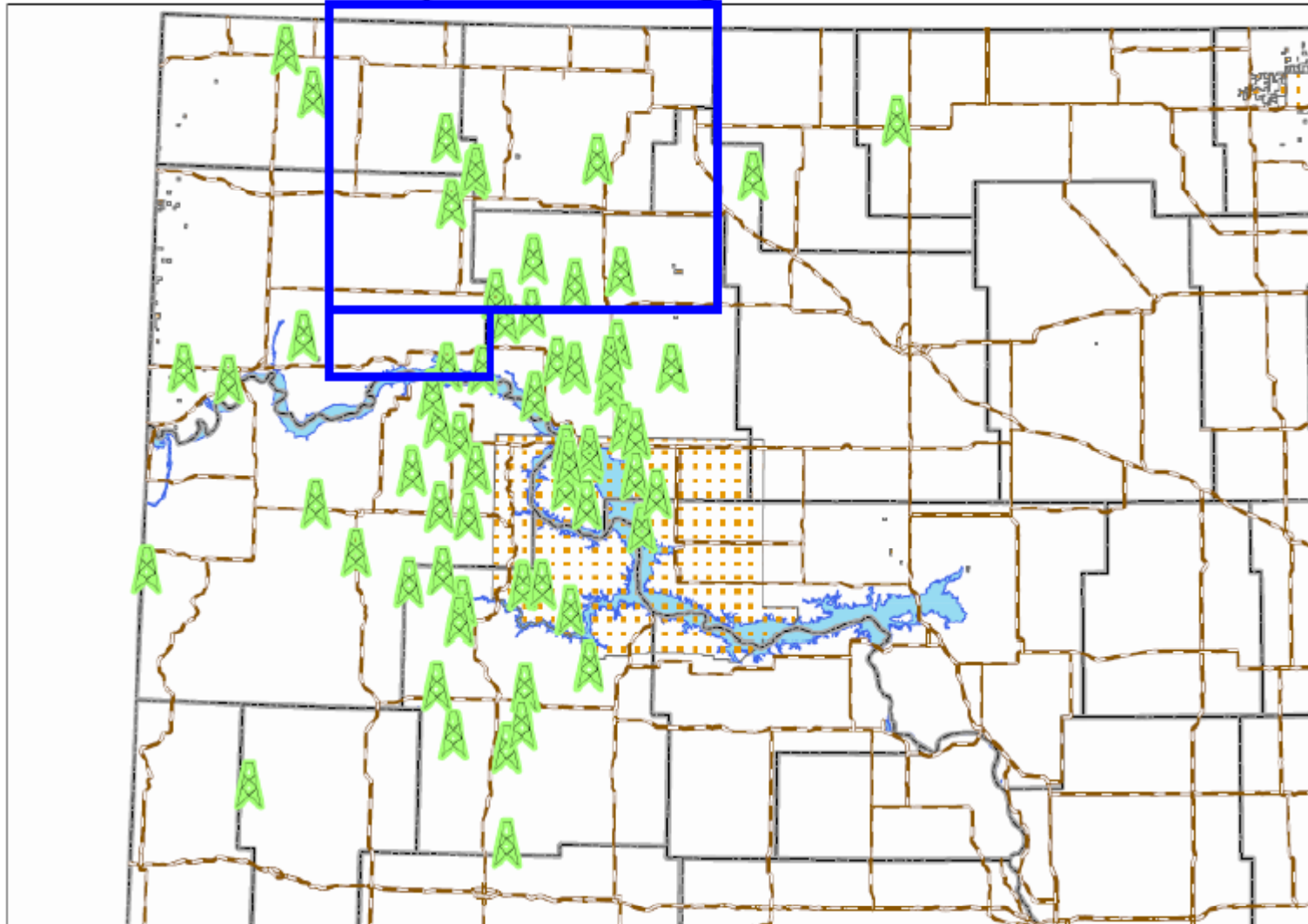
# Killdeer Area

- 235 to 290 wells per year
- 1.0 million – 1.2 million gallons fracturing water per day May through December
- 6 to 8 years





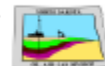
# Ray - Tioga Area



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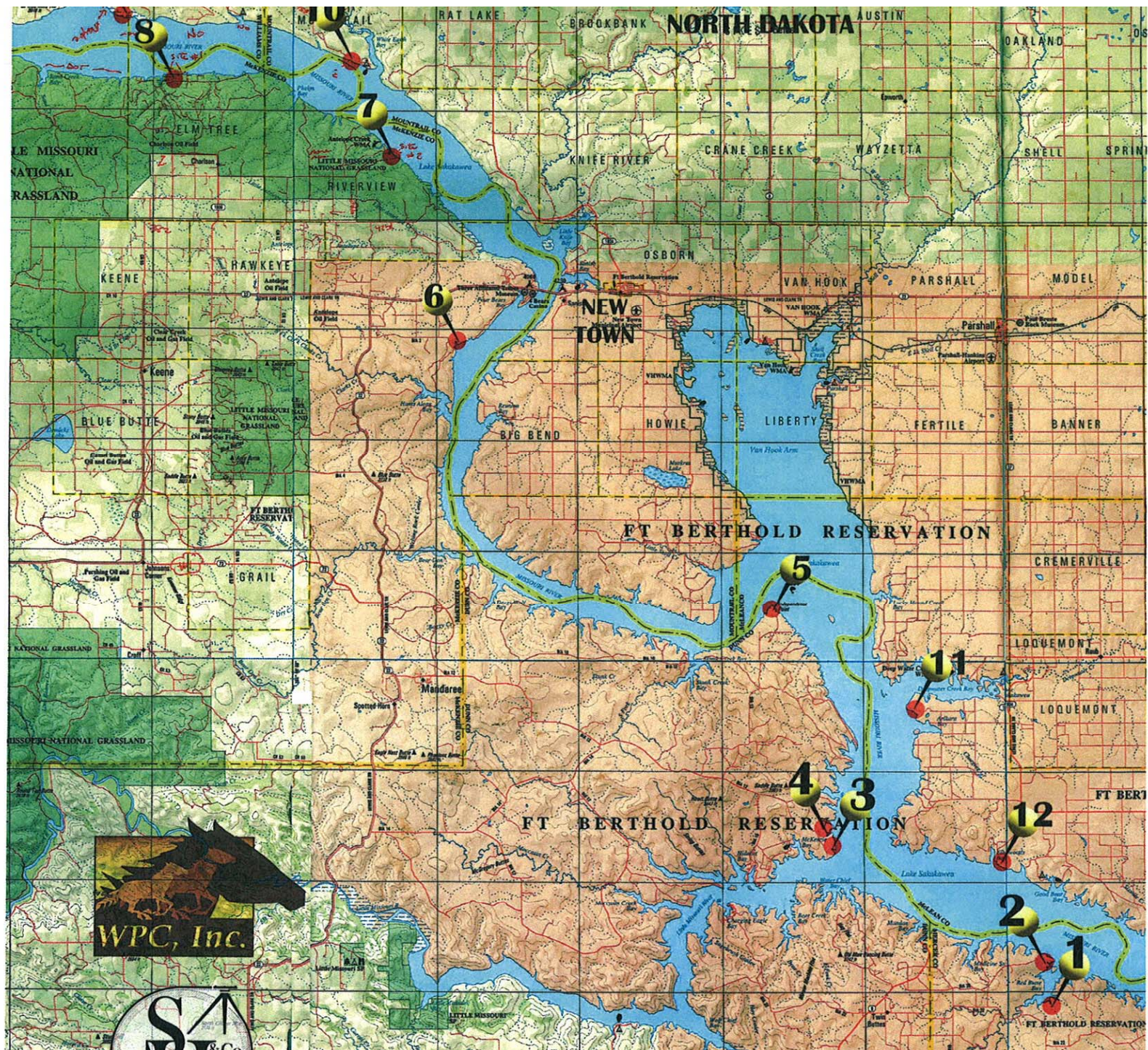
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## Ray-Tioga Area

- 430 to 540 wells per year
- 3.5 million – 4.5 million gallons fracturing water per day May through December
- 11 to 14 years







**Thank you – I would be happy to answer any questions**



# Oil Tax Structure

- Working to identify an oil tax structure that is competitive, fair, predictable, and easier to understand and implement.
- The Triggered Horizontal Well Incentive passed by the 2009 Legislature was instrumental in keeping activity and jobs going. It has paid huge dividends to ND.

# Bakken Rocks CookFest

July 27 – Tioga

July 29 – New Town

Aug 26 Legislative Tour  
Stanley



™ 2008 North Dakota Petroleum Council

Please Join Us for the Bakken Rocks  
**COOK FEST**  
*We cook it, you eat it.*



**Everyone Welcome**  
Come be the judge of the oil industry's best BBQ  
& enjoy music by local entertainers.

**July 29 Killdeer Area**  
5:00-8:00 pm MT  
Lions Park - Killdeer, ND

**July 30 Stanley/Parshall Area**  
5:00-8:00 pm CT  
Doug Kinnoin's Farm - 12 miles south of Stanley  
& 1 mile east on Belden Rd (51st St NW)

Learn a little - Eat a lot

- Bakken/Three Forks Geology - Kathy Neset
- Legislative Changes - Vicky Steiner
- What's new in the Oil Patch - Ron Ness & Lynn Helms
- Pipeline Information - Justin Kringstad

For planning purposes, please RSVP by  
**www.ndoil.org**  
or call 701-223-XXXX



