

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

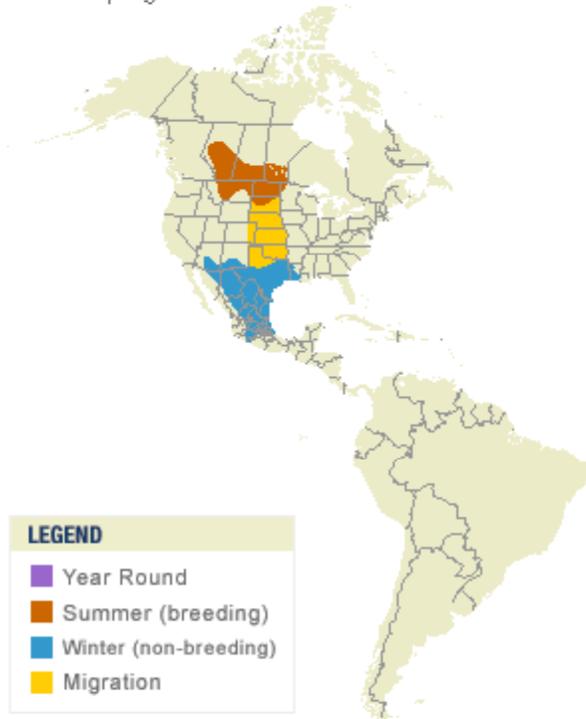
Sprague's Pipit

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

Source:

http://www.allaboutbirds.org/guide/Spragues_Pipit/lifehistory

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

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

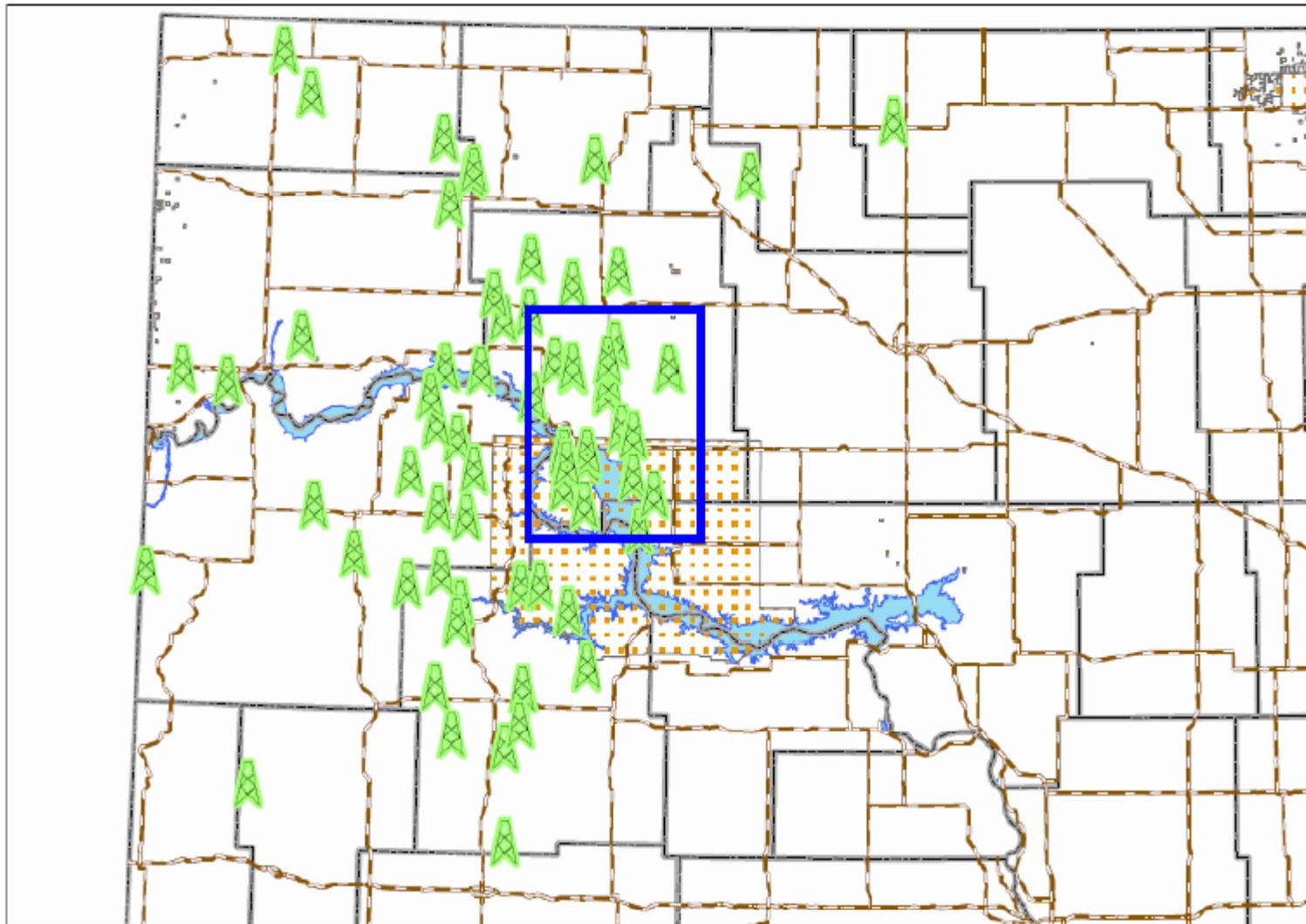
SB 2419 – Governor and Tribal Chairman just renewed the agreement.

- 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

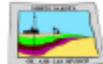
Parshall Area



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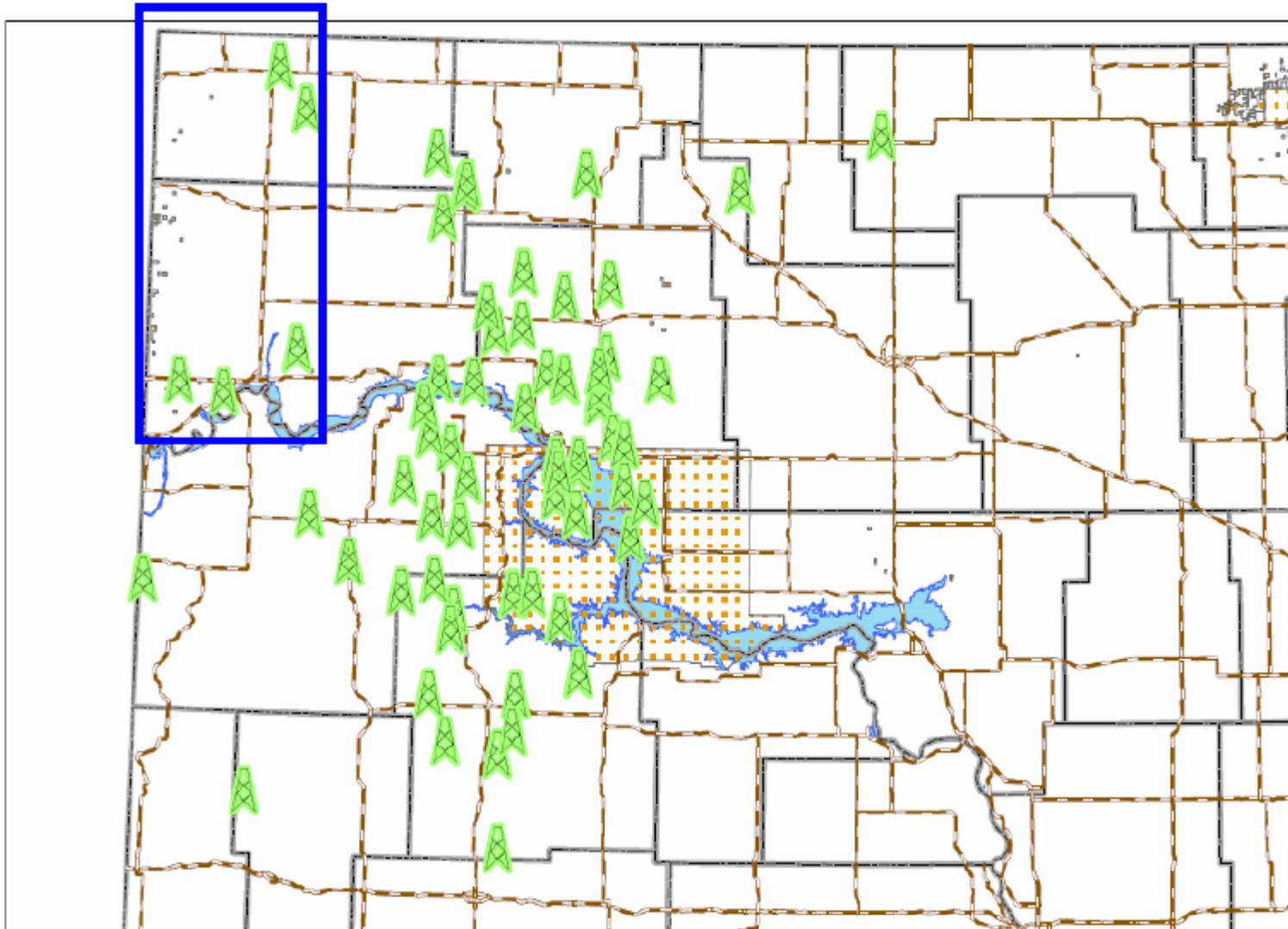
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Oil and Gas Division
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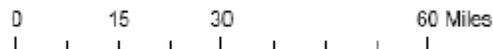
Parshall Area

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

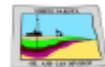
Williston Area



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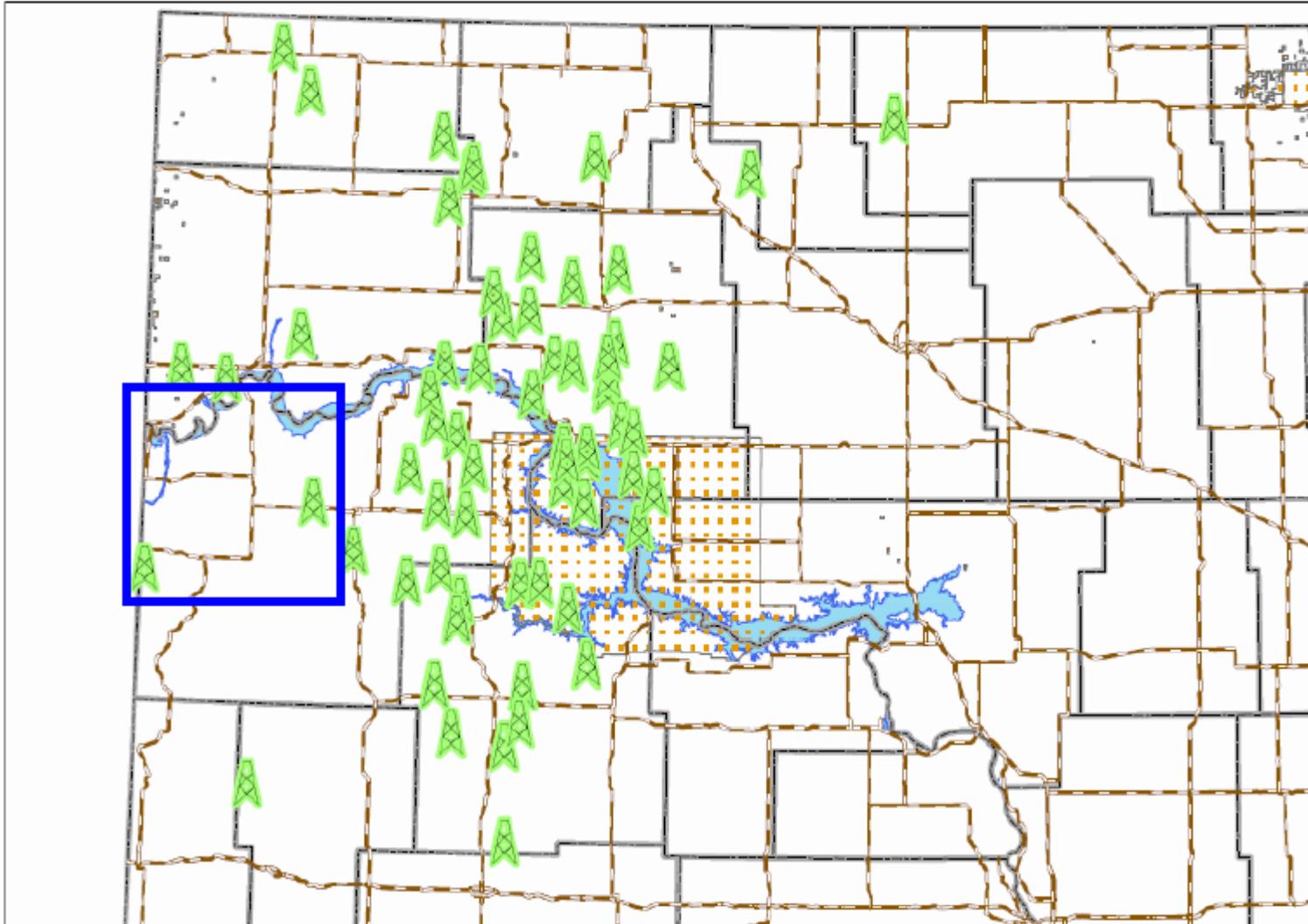
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Williston Area

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

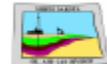
Alexander Area



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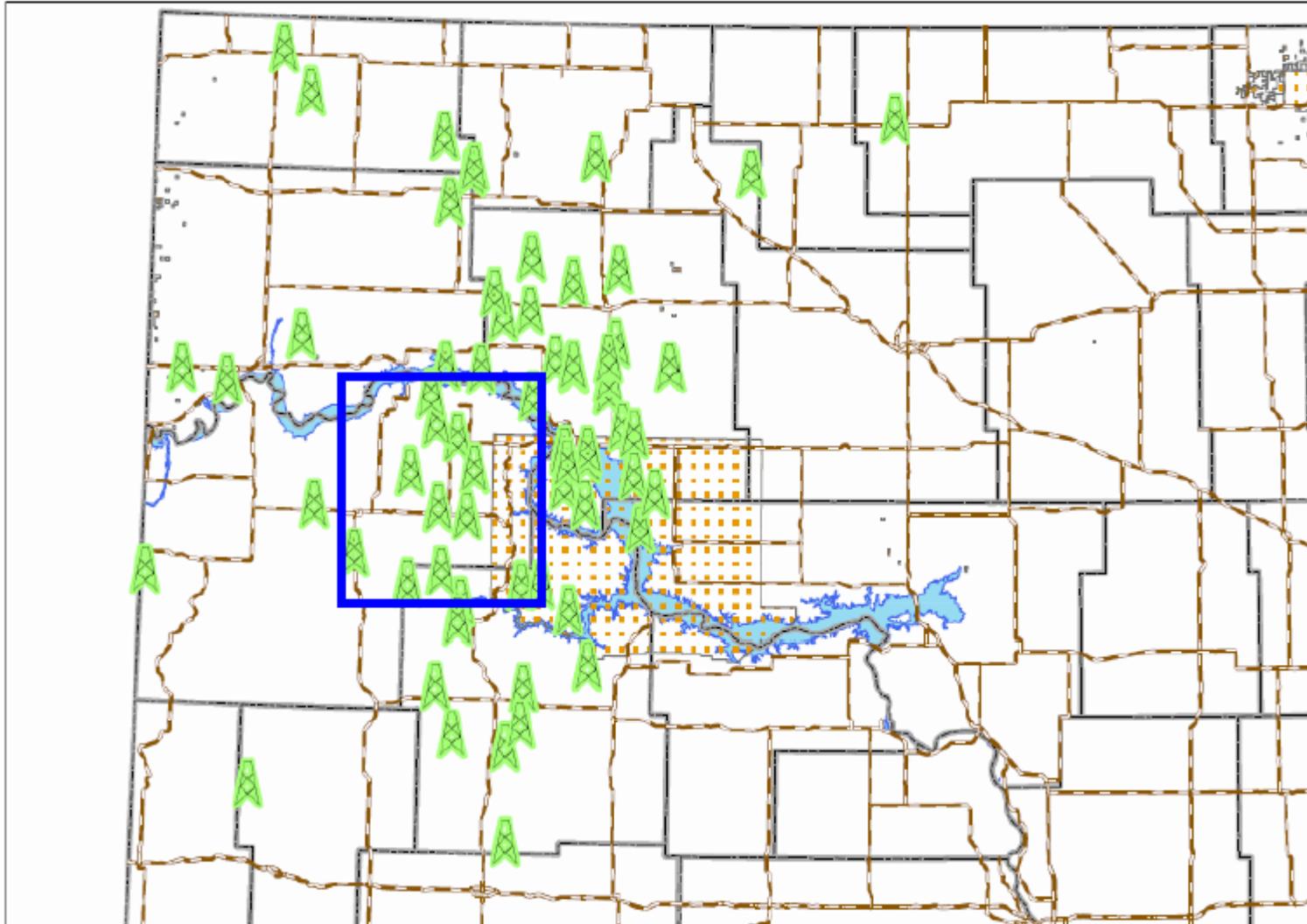
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Alexander Area

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

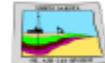
Watford City - Keene Area



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0 15 30 60 Miles

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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

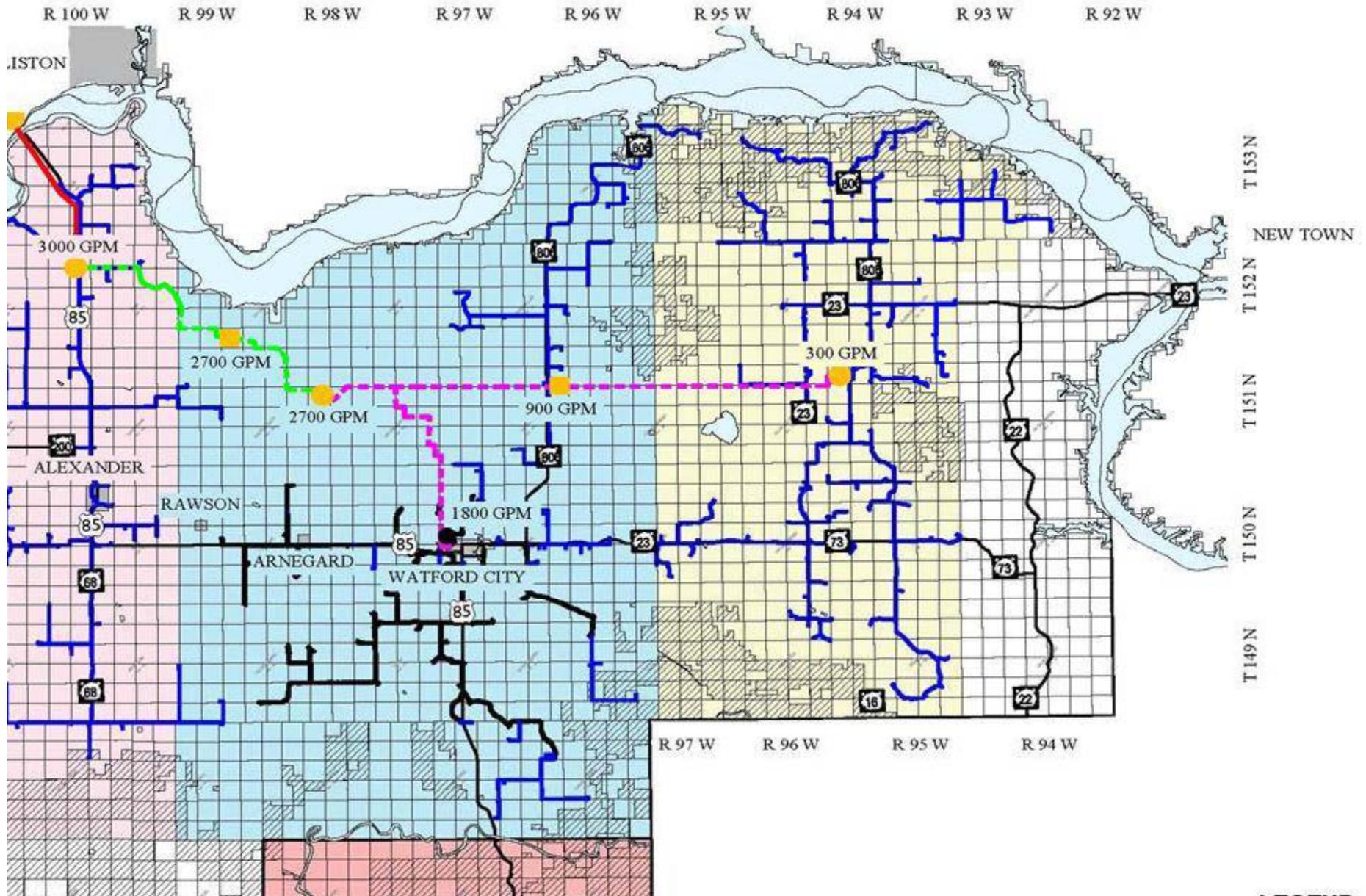
- **System One (Watford City Service area)**

-Total Project Cost \$2.45 Million

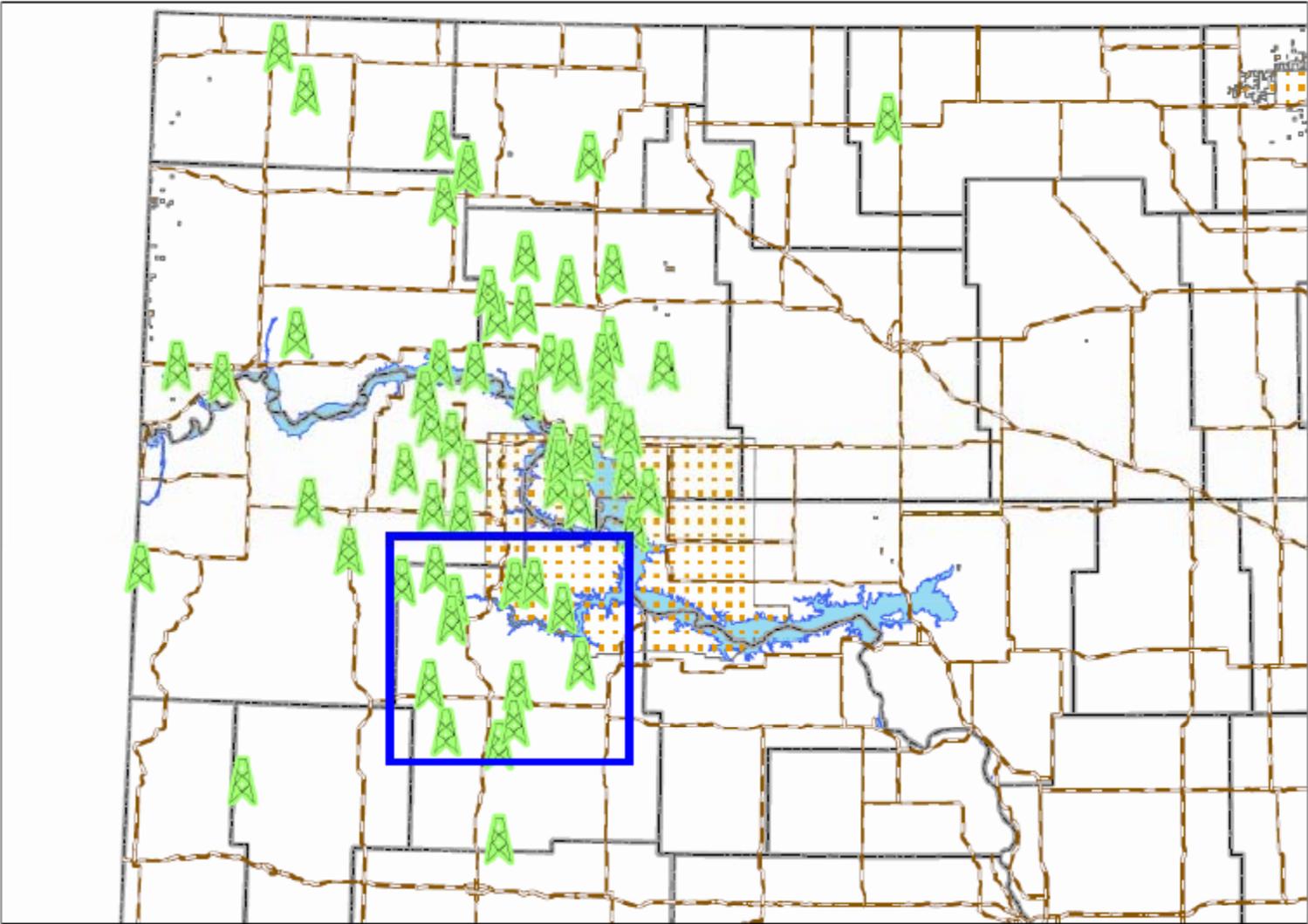
- Project would add over 100 additional rural users to the existing rural system

McKENZIE COUNTY WATER RESOURCE DISTRICT

WATER DEVELOPMENT & MANAGEMENT PLAN - DECEMBER 2009



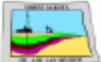
Killdeer Area



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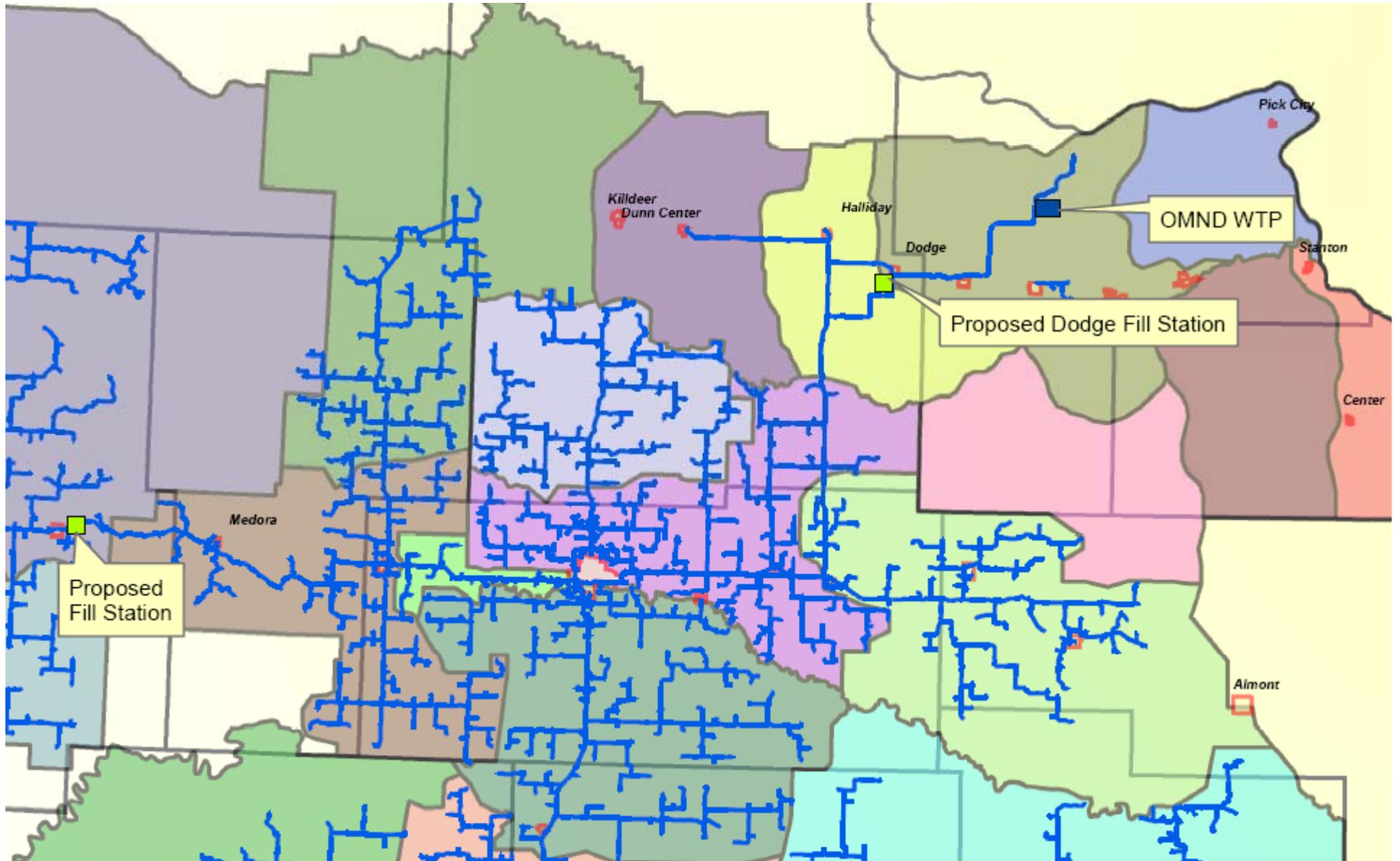


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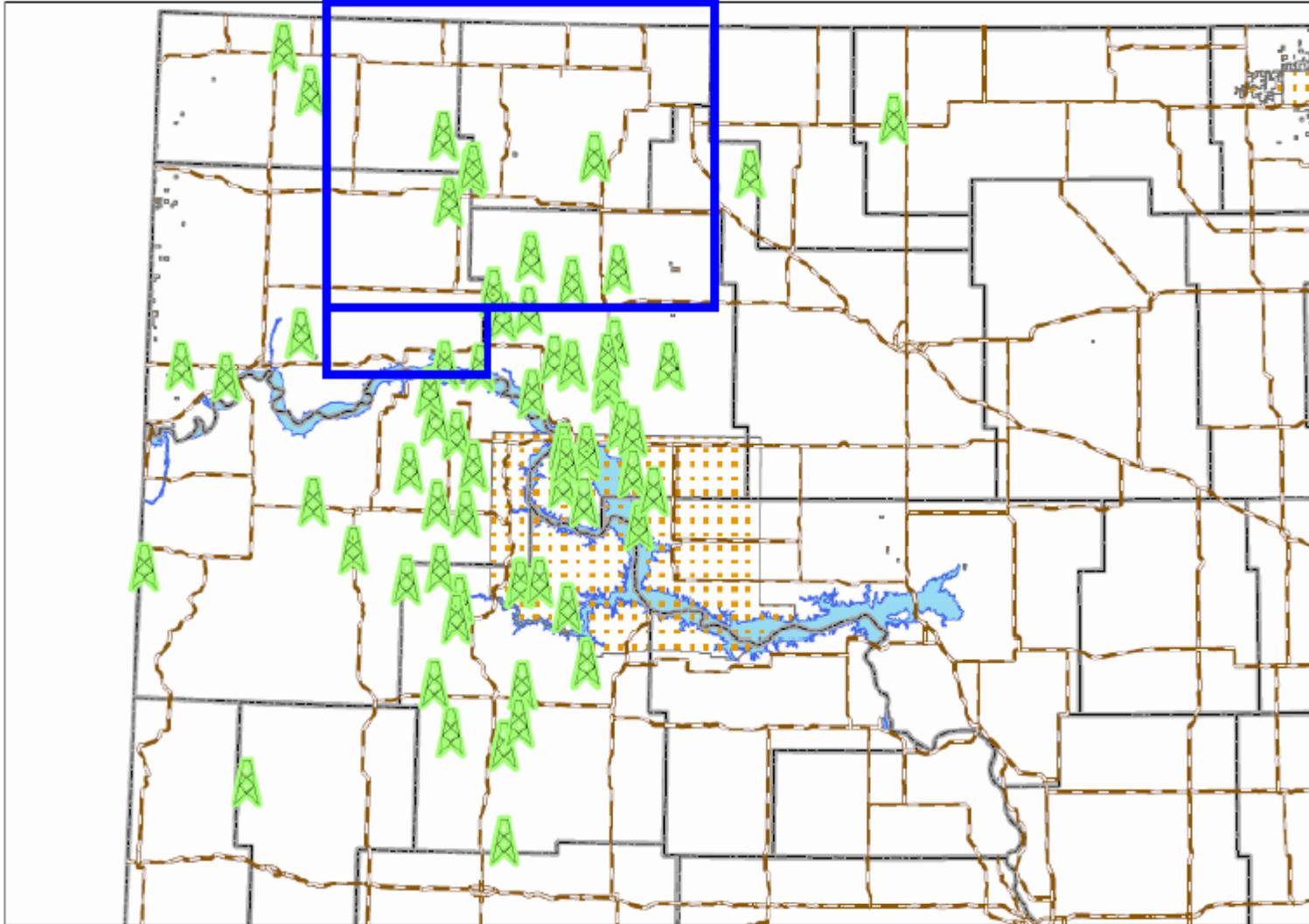


Killdeer Area

- 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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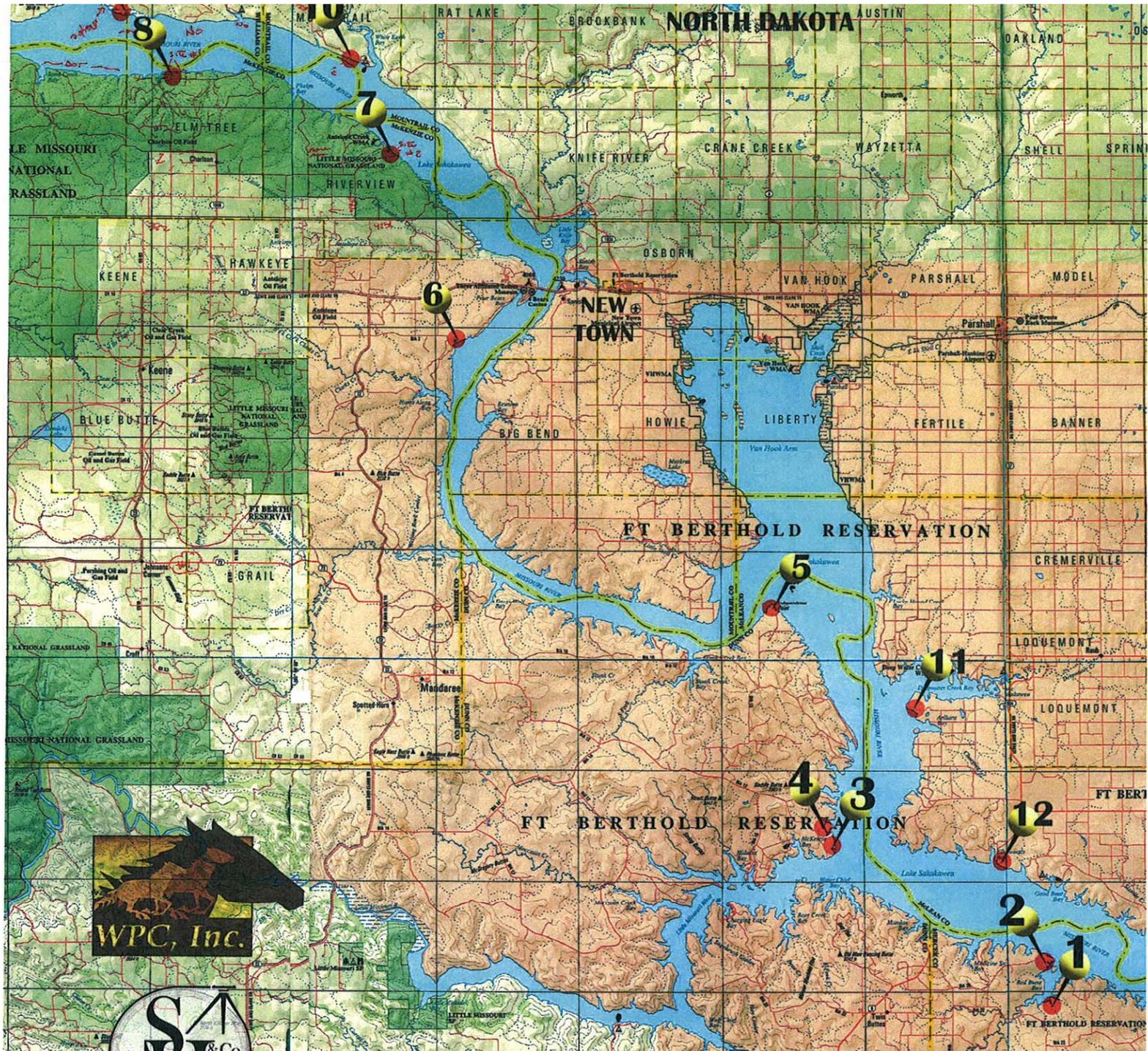
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Ray-Tioga Area

- 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