

FORT BELKNAP INDIAN COMMUNITY

**Department of Energy
Office of Energy Efficiency & Renewable Energy
Tribal Energy Program
2006 Program Review**

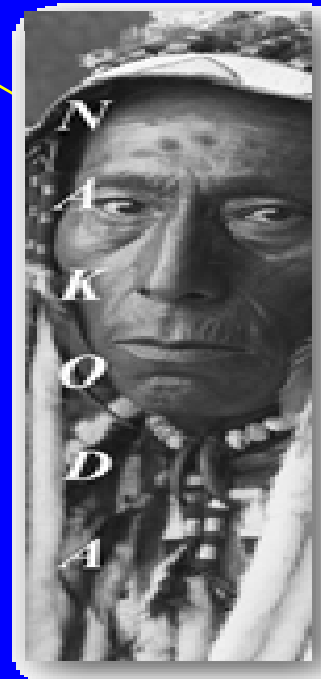
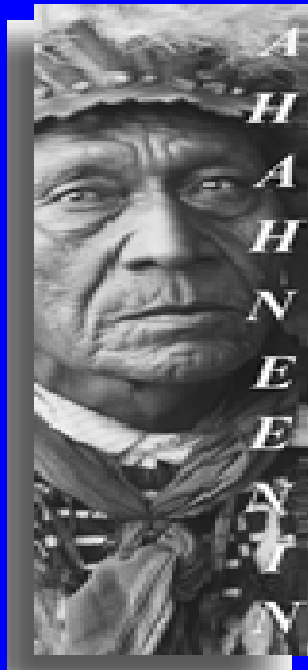
October 25, 2006



FORT BELKNAP INDIAN COMMUNITY

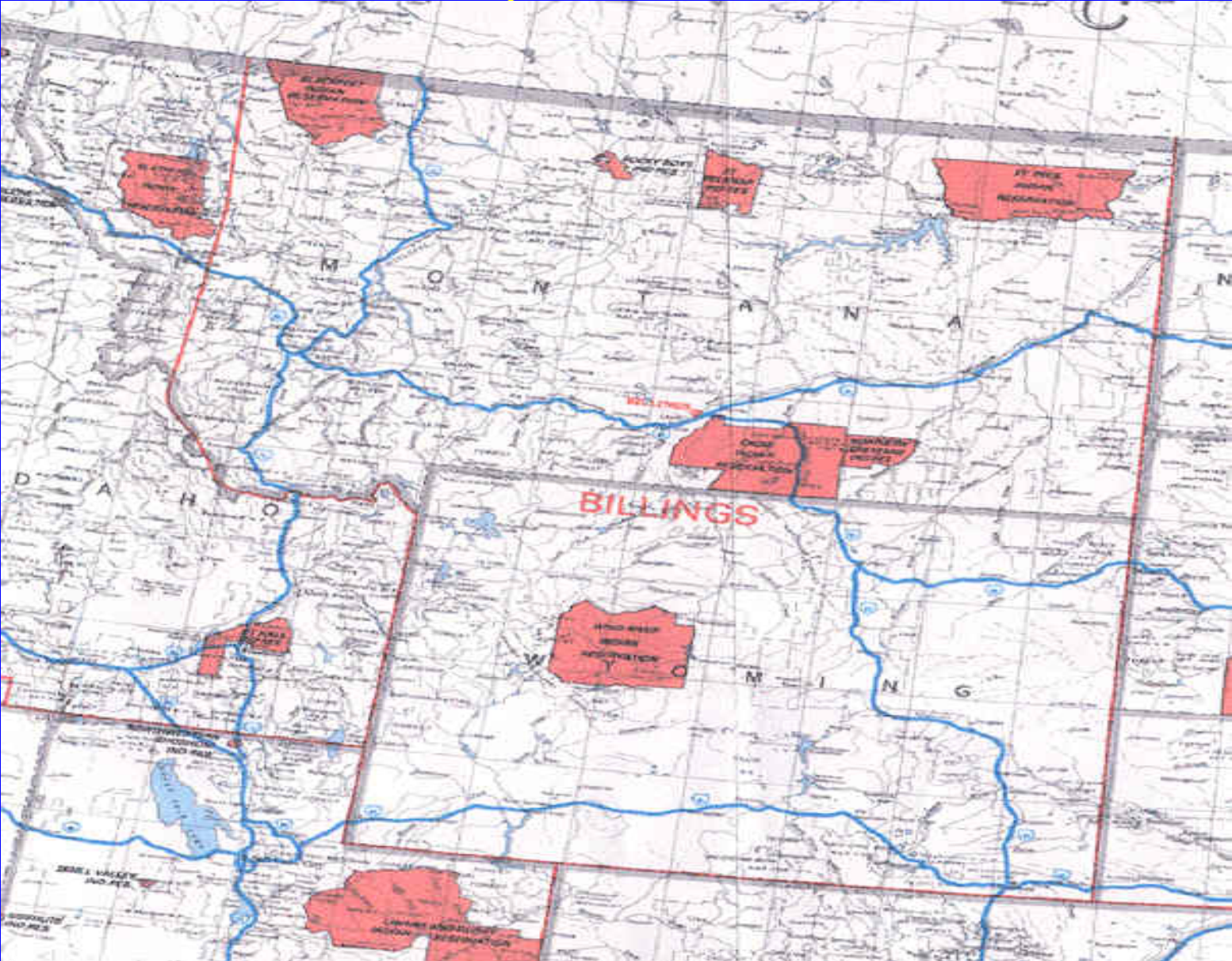
- History
- Location
- Project Overview
- Project Participates
- Objectives
- New Projects
- Relevant Background Information
- Project Status
- Future Plans

FORT BELKNAP INDIAN COMMUNITY

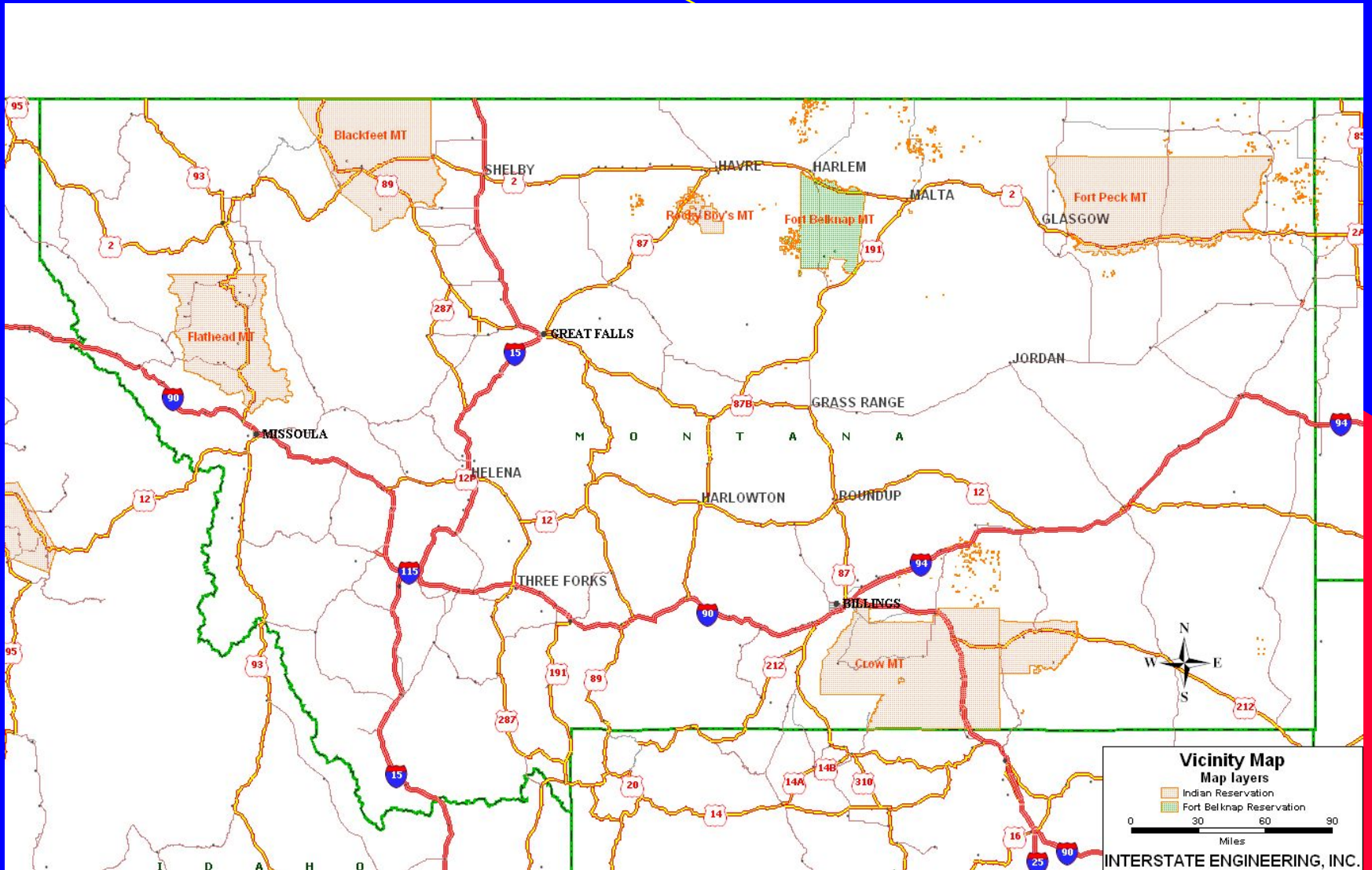


Established in 1869, the Fort Belknap Reservation is the home to two distinct Northern Nations, the Gros Ventre and the Assiniboine tribes. The reservation is located in north central Montana about 36 miles from the Canadian border. Fort Belknap was established in 1869 near the present town of Chinook, Montana. The new fort served as a trading post and became the government agency for the Gros Ventre and Assiniboine Indians living in the area. On May 1, 1888, a congressional act set aside the land for the Fort Belknap Reservation. Later that year, the agency moved from Chinook to its present location five miles east of Harlem, on the northwest corner of the reservation.

LOCATION



LOCATION



Fort Belknap Indian Reservation

The Fort Belknap Indian Reservation is located in north central Montana near the town of Harlem. Its northern border runs along the Milk River generally north of US Highway 2 for a distance of about 32 miles. State Highway 66 bisects the reservation on the west side from the Blaine County / Phillips County line (the south border of the reservation) north to US Highway 2. The reservation is approximately 28 miles wide in the east/west direction and approximately 37 miles long in the north/south direction. The total land area of the reservation is approximately 1,011 square miles. Most of the reservation is located in Blaine County, while the eastern most five miles are located in Phillips County.

Project Overview

Recognizing that Montana ranks fifth among all states in wind energy potential the Applicant has chosen to investigate the opportunities for wind energy development on the Reservation. Previously, on November 6, 2002, the Applicant installed a 20 meter meteorological tower in the northwest portion of the Reservation. That installation was accomplished with equipment on loan through the National Renewable Energy Laboratory (“NREL”) Equipment Loan Program and with advice from the NREL staff.

Project Overview

Contracted with Distributed Generation Systems, Inc. (“Disgen”) of Lakewood, Colorado to assist in the preparation of the DOE application and to conduct the Study in cooperation with the FBICC’s staff.

Install a new 50 meter meteorological tower in the northwest portion of the reservation, move the existing 20 meter meteorological equipment to a location near an elementary school in the community of Lodgepole, in the southern portion of the reservation and to install meteorological equipment on a communications tower near Route 66 in the center of the Reservation.

Project Participants

- Fort Belknap Indian Community Council
- FBIC Transportation Planning Department
- FBIC EPA
- Disgen Native American Programs and Resources (Cost Sharing Partner)
- Meteorologist Ed McCarthy

Objectives

The Study's objective is to fully evaluate the Reservation's potential for wind energy development both for use on Reservation and for export off Reservation. In addition, the FBICC's seeks to evaluate the potential for wind/electric water pumping and modern wind/mechanical water pumping systems for remote areas of the reservation and for wind/hybrid systems that may be used on Reservation in ways that may assist the Applicant in managing its energy costs.

New Projects

Currently working on a small turbine project to off set the energy cost for the bikeway/pedestrian path lighting system that was funded through a Montana Department of Transportation grant.

Type of turbine: 10 kw Bergy, will have to utilize a few different funding sources for the whole package as the overall cost will be between \$45-50,000.00

Relevant Background Information

Previous Strategic Planning Session

November 13, 2002
Havre, MT

November 9, 2004
Fort Belknap, MT

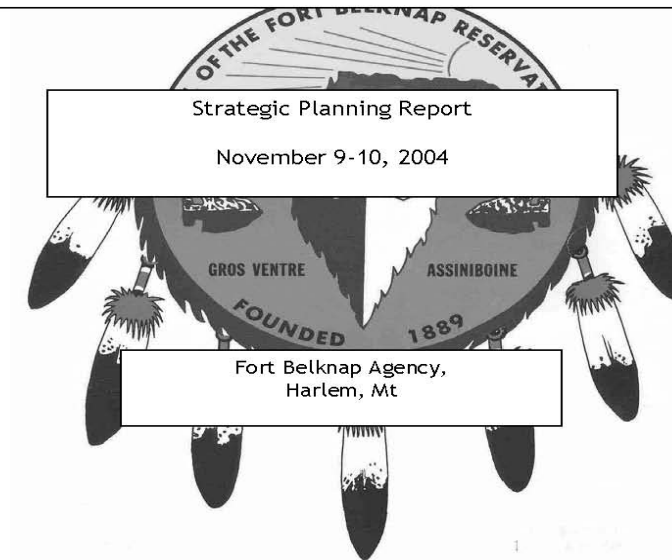
January 3, 2006
Chinook, MT

Fort Belknap Indian Community

Strategic Planning Report

November 9-10, 2004

Fort Belknap Agency,
Harlem, Mt



(Excerpt from the Strategic Plan).

INFRASTRUCTURE – GOALS 3-5 YEARS

Water treatment facility
 Increase Community Collections Since Funding Agency Has Collections as their Top Priority before Assisting the Tribe.
 Water Meters for Homes
 Have Council Support
 Address other Stipulations the Funding Agency is requiring of the Tribe
 Provide Increased Opportunities for Businesses, Industry, Health Facilities, etc.

2. Moving/Cleaning transfer Sites

Close Dumps at Night – Employee at Site When Open
 Integrated Solid Waste Management Plan
 Open Dump Clean-Up Grant through EPA
 Recycling Center
 ICDBG for Dump Clean-Up, Or Other Grants
 No IHS Funding
 Public Education

3. Wind Technology Development:

Research/Find Funding for Feasibility Study

4. Scattered Site Water Quality

No IHS Funding – Look at Other Funding Sources

8. INFRASTRUCTURE

WHAT

WHEN

WHO

1. Water Treatment Facility – Agency

November 2006

IHS Community Environmental Health, Utilities Commission, Sanitation, Council, Rural Development, Housing, Extension

2. Transfer Sites Clean-Up

June 2006

Community, Midwest Assistance Program, Environmental

Health,

IHS, Rural Develop., Council, Sanitation,



3. Water Quality at
Scattered Sites

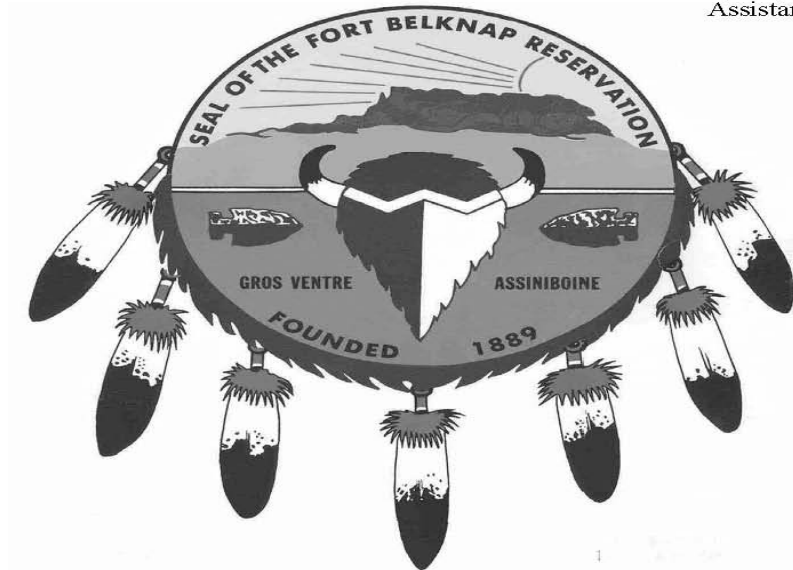
November 2005

4. Wind Technology Development:

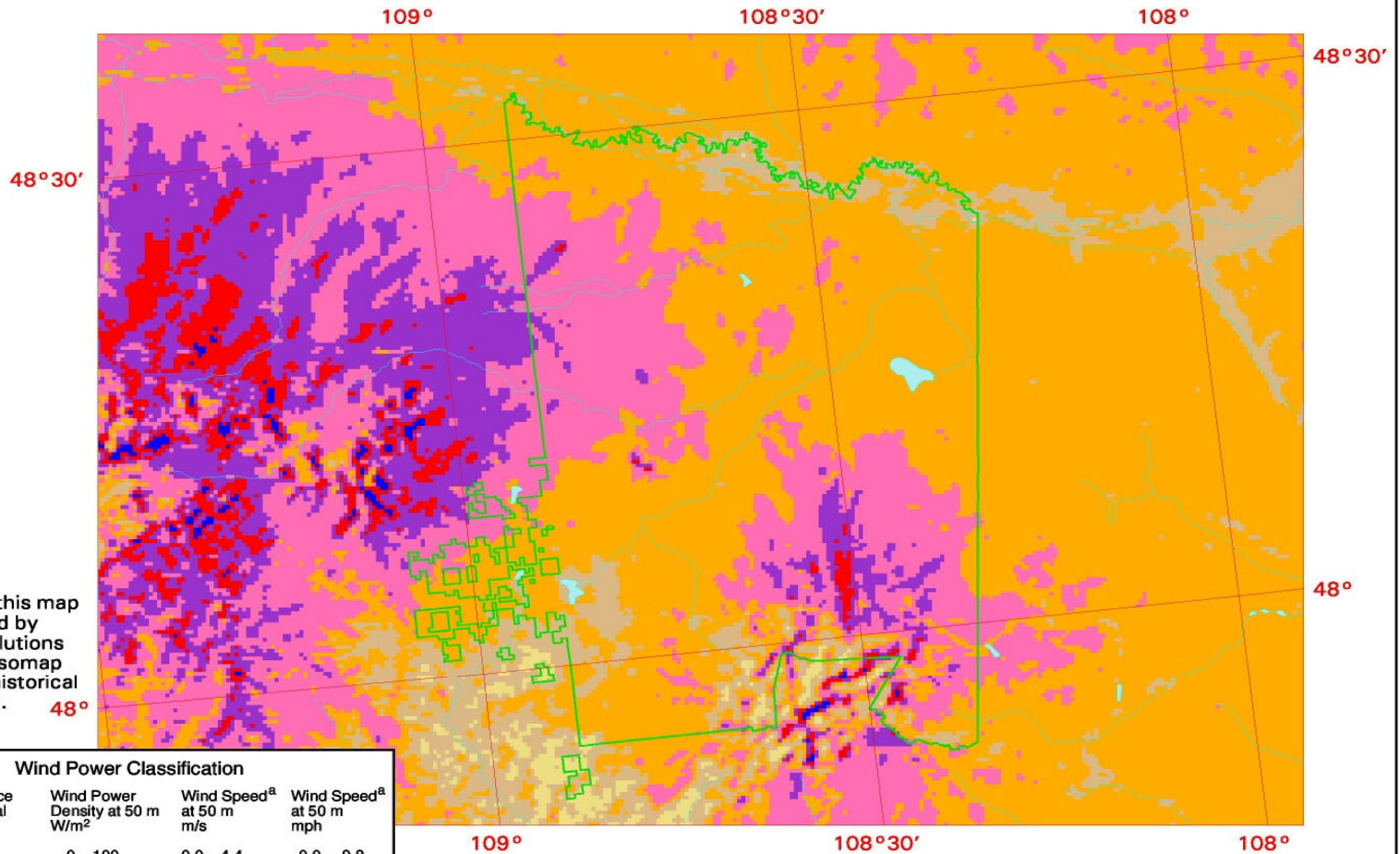
*Research
Education
Funding

February 2005
November 2005
October 2005

Planning Department
Environmental
Protection, Air
Quality, Mid-West
Assistance Program



Fort Belknap Reservation - Wind Power Resource Data



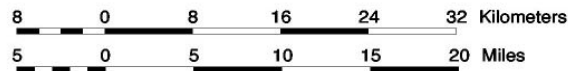
The data for this map was produced by TrueWind Solutions using the Mesomap system and historical weather data.

Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m ²	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
1	Poor	0 - 100	0.0 - 4.4	0.0 - 9.8
2	Poor	100 - 200	4.4 - 5.6	9.8 - 12.5
3	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
4	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
5	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
6	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
7	Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7
	Superb	> 800	> 8.8	> 19.7

^aWind speeds are based on a Weibull k value of 2.0

**DRAFT
NOT FOR PUBLICATION**



U.S. Department of Energy
National Renewable Energy Laboratory



19-JAN-2002 1.1.19

NREL Anemometer

Site #1

South of Hays, Mt

Monitoring period ran for 21 mo.

Avg. annual wind speed (at 20 meters [66']) measured at the site is 5.6 m/s (12.4 mph). This average annual wind speed would suggest a moderate wind source, capable of supporting a small grid connected project. One small project that was discussed is a grid connected turbine to off set energy costs at the Hays-Lodgepole High School.



NREL Anemometer

Site #2

In November/2002 the Anemometer Tower was relocated to the second site for data collection on the northern portion of the reservation. This is located on tribal land North West of the Fort Belknap Agency at, T31N,R22E,Sec.4, SE1/4,SW1/4,SW1/4.

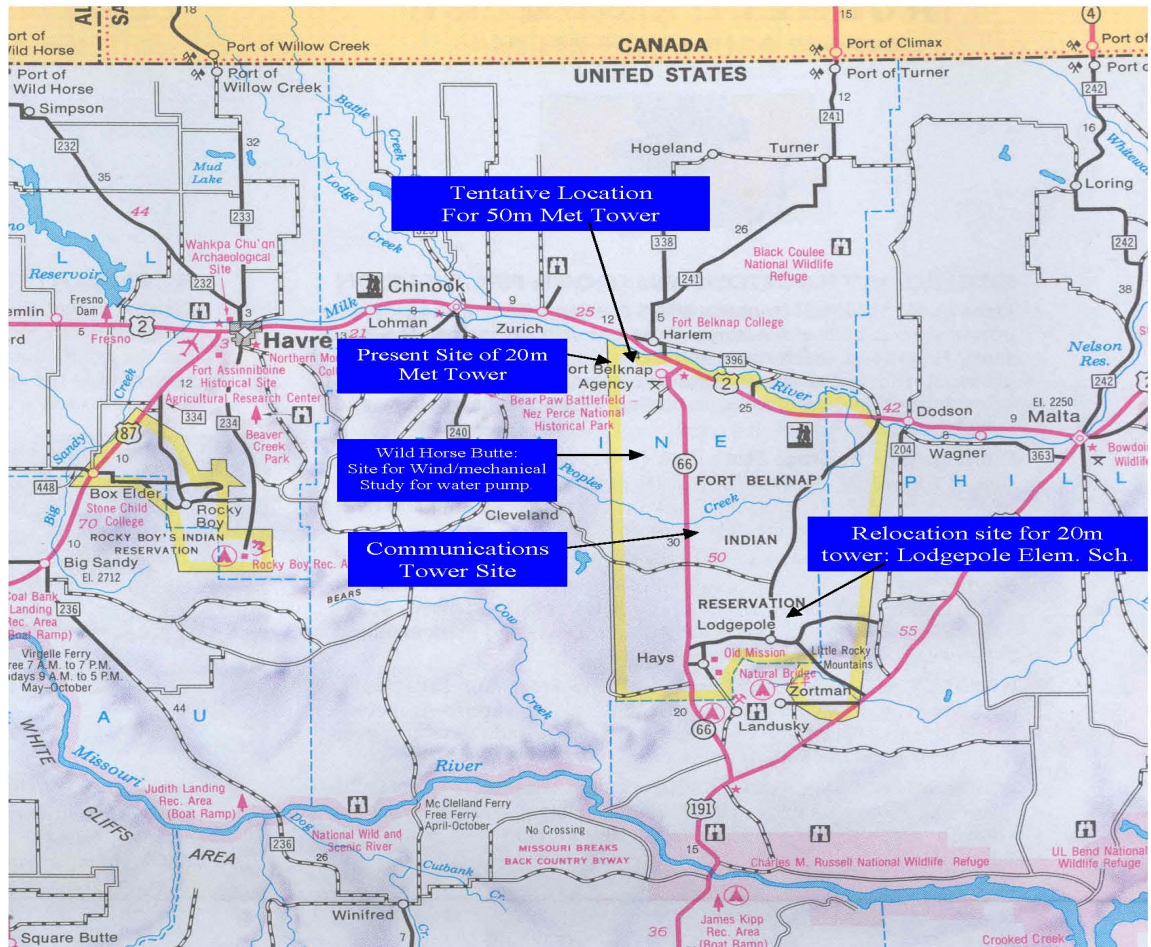


Fort Belknaps Energy Future

DRAFT:

Energy Policy demonstrates environmental leadership and provides direct economic and environmental benefits to the Fort Belknap Community.





Requested Technical support

- Equipment loan through the National Renewable Energy Laboratory (“NREL”) Equipment Loan Program.
- DOE Grant Submission

On-going projects

- Fort Belknap Indian Community (FBIC) is presently studying the feasibility of operating a community-sized ethanol production facility, feeding the wet distillers' byproducts (WDB) to feeder cattle in a climate-controlled feedlot, and building an anaerobic digestion (AD) system to create biogas from the animal waste which powers the ethanol plant. It is anticipated that this three-fold production process will create dynamic economic synergies to produce a profitable renewable energy business venture as an employment and economic development project on Fort Belknap Reservation. The ultimate goal is to site, design, engineer, construct, and operate such an integrated bio-refinery (IBR) facility, on Fort Belknap Reservation, if feasible.

INFRASTRUCTURE

- | | |
|--|---|
| <p>»» Need for an Assisted Living Center</p> | <p>»» Proceed on development of Roads: Reconstruction, Guard Rails, Delineations, Private Road Maintenance, 638 Contracts</p> |
| <p>»» Establish Human Infrastructure: Suicide Preventions, Support Groups, Mental Health Needs, Elderly Needs, Elders as Resource, Drug Abuse, Alcohol Abuse, Detox Center</p> | <p>»» Transportation - Develop transit system and improved highways such as Three-Butte's Road with road signs and GPS system</p> |
| <p>»» Strengthening Family</p> | <p>»» New Administrative Building</p> |
| <p>»» Fire Protection/Prevention and Volunteer Fire Departments</p> | <p>»» Develop Trade School: Carpentry, Plumbing, Electrical, Heavy Equipment, Roads, etc.</p> |
| <p>»» Health - Dialysis and Inpatient Treatment</p> | <p>»» Lack of Tribal Land for Community Expansion</p> |
| <p>»» Lack of Zoning</p> | <p>»» Develop Water Infrastructure</p> |
| <p>»» Strengthen judicial system - Jail</p> | <p>»» Water Compact</p> |
| <p>»» Develop Transportation Codes</p> | <p>»» Fort Belknap Reservoir</p> |
| <p>»» Need for Office Space</p> | <p>»» Lack of Infrastructure</p> |
| <p>»» Community Water System/Quality, Solid Waste, Security System</p> | <p>»» Seek Community Facility: Multi-Purpose, River District, Mountain District</p> |

ECONOMIC DEVELOPMENT

- | | |
|--|---|
| <ul style="list-style-type: none"> »»» Keep our dollars on the reservation »»» Identification and Develop Natural Resources: Oil and Gas, Timber, Water, Gravel, Coal, Gold, Silver, Ranching/Farming, Air »»» Establish a Hotshot Crew »»» Develop the Tribes' Natural Resources, i.e., establish a saw mill. Windmill Farms/Energy, improve forest resources »»» Business Code »»» Manage BLM's Land base, i.e. campgrounds, suppression »»» Establish a branch bank »»» Parks and Recreation Department »»» Offer training programs at FBC to fill positions with qualified employees. | <ul style="list-style-type: none"> »»» Youth Jobs and Entrepreneurship »»» Develop jobs at Lodgepole Store, Entrepreneurship, Ethanol Plant and Water Compact »»» Create a plan of action »»» Education and Training Money: Post Office, Financial Institutions, Small Businesses, Lumber yard, Job Creation »»» Support local businesses »»» Lack of Economic Opportunities »»» Upgrade Technology to expand resouces »»» Tourism Opportunities »»» Water Compact |
|--|---|

Fort Belknap Indian Community

On-going projects

Little Rockies Meat Packing Company

Little Rockies meat packing is proudly and successfully owned and operated by the Assiniboine and Gros Ventre tribes of Montana. **Pride of the Little Rockies Smoke House** The Pride of the Little Rockies is a Tribal enterprise, 100% owned by the Fort Belknap Indian Community and is a subsidiary of Fort Belknap's Little Rockies Meat Packing, Inc. Our products which are Beef and Bison Jerky, Meat Snack Sticks, and eventually Sausage Products, will be manufactured in a smokehouse facility on the Fort Belknap reservation in Montana where the existing commodity building is located. The established smokehouse will produce healthy smoked meat snacks made from beef and bison raised on the Fort Belknap Indian Reservation and the surrounding communities of North Central Montana. This smokehouse will provide employment opportunities for the Fort Belknap Indian Reservation and the surrounding communities.

We will be branding the **Pride of the Little Rockies** as a Native American enterprise within the Montana market, because of the many competitors and which only a few are Native American owned. We will also be promoting the bison products which will be our niche and what will set us apart, because our tribe, the Fort Belknap Indian Community, manages a bison herd of approximately 600 head on the reservation



Project Status

- “Kick-off Meeting Held
- Order/scheduling Met-tower installation
- Radio Tower Communications
- Remote water site

Activities Yet to Be Completed

- Phase I Avian Screening
- Permit Process (to be completed)
- Transmission capability review
- Collection of wind data
- Marketing Analysis

Future Plans

- This Study will help determine whether the wind resources at specific sites on the Reservation are capable of being developed economically.

Fort Belknap Indian Community Wind Development Plan

Goals & Objectives

Updated: January/2006

Short-Term Present - 1yr. January/01 to Jan/2002	Mid-Range 1 yr - 3yr. January/02 to Jan/2005	Long-Range 3 yr – 10 yr. January/05 to Feb/2015	Notes:
Letter submitted to Tony Jimenez, NREL, Jan/01 regarding Data Collection.			Wind Technology Project: Research Anemometer Tower for data collection.
February 6, 2001 Marty Wilde, Wilde Coyote Engineering, presentation to Tribal Council, regarding Wind Energy and the data collection phase, on the same day we erected the data collector at a location south of Hays.	Submit for: Announcement Number DE-PS36-04GO94003, Entitled “Renewable Energy Development on Tribal Lands” Award letter dated January 27, 2006		Data will be collected at this site for a minimum period of one year. The monitoring site is located about 2 miles southwest of Hays, Mt at an elevation of 1180 m. (N 47.967°, W 108.713°). Instrumentation consisted of an NRG Wind Explorer system including cup anemometer, wind vane and data logger. The instruments were mounted on a 20-meter (66-foot) tilt-up tubular tower. The data consists of 10-minute average wind speed, wind speed standard deviation and wind direction. June/2006 “Kick Off Meeting” held w/Tribal Council.
	Re-locate 20 m Anemometer		The monitoring period ran from 7 February 2001 to 6 November 2002. The annual average wind speed (at 20 meters [66’]) measured at the site is 5.6 m/s (12.4 mph). The annual average measured wind power density is 205 watts/m ² .
	Anemometer Tower relocated with the assistance of John Walden, National Center for Appropriate Technology.		New site will be on the Northwest side of the reservation where wind data indicates a good area, and closer to larger transmission line.
		Research Wind Development curriculum for Tribal College Course	Received info from: Timlynn Babitsky, Director, North American Rural Futures Institute MSU-Northern Havre, Mt

		Introduce a Wind Development curriculum at the Fort Belknap Tribal College	Courses will be in the Technical Side & Maintenance Side.
		Feasibility study: how can wind development & proposed ethanol refinery complement each other.	
		Feasibility study: how can wind development & existing Carbon Off Set Program complement each other.	
		Re-locate 20 meter met tower to Lodgepole on the Southern part of the Reservation	Set up near Lodgepole Elementary School, and get involved in the Green School Program.
		Survey/Poll Questionnaire	Conduct Poll of the community members as to their interest in Wind Development.
	Draft Mission/Purpose Statement For Utilities Commission	Assessment of Mission/Purpose Statement	
	Adopt Goals & Objectives For Utilities Commission	Evaluation of Goals & Objectives Utilities Commission	Eventually the Wind Development Program will be turned over to the Utilities Commission.

FORT BELKNAP INDIAN COMMUNITY

Questions?

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