

Potential Market & Economic Analysis
for the
Red River Valley Bird Observatory &
Gateway Nature Center

UNIVERSITY OF MINNESOTA



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EXECUTIVE SUMMARY

Increasingly, the nature-based and wildlife recreationist market is an attractive niche for communities seeking to enhance and diversify their economic base (Martin, 1997; Scott & Thigpen, 2003). According to the USFWS National Survey, between the period 1996 and 2001, Minnesota underwent a 94 percent increase in the number of days participants spent viewing wildlife away from home (USFWS 2003). According to a 2004 MN survey, the most important reason Minnesotan's participated in outdoor recreation was to enjoy nature. Further, passive recreation and learning (including nature observation and visiting nature centers) were among the most favored recreation activities with 40% participating. In Minnesota's northwest region, almost four out of ten (39.2%) cities reported the development need for nature or interpretive centers, between now and the next five years. Further, over a third (35.1%) reported the need for wildlife or nature observation areas. This information, coupled with local interest, spurred the market and economic analysis for a bird observatory and nature visitor center facility in Crookston.

Methods

Market: Secondary data analysis of market studies in the last 5 years coupled with estimations of regional visitors served as the primary tools for the analysis. Visitors who indicated an interest in nature or wildlife viewing or who actually participated in wildlife viewing were profiled. Then, estimates were made based on current participation and population.

Economic: Based on visitation estimates from the market assessment, IMPLAN analysis was utilized to assess economic impacts at a county level. Three market-draw estimates (low, medium and high) were used as a basis to estimate economic impacts depending on the level of

visitor activity the proposed observatory and nature center ultimately generates. Overnight and day visitors were estimated separately using 2001 IMPLAN data as well as visitor spending information from visitors to the Red River Valley.

Results

Market: Red River Valley survey respondents who indicated the natural environment and birding/wildlife viewing attributes as important were predominately middle-aged and possessed relatively high-income status. The three most frequently used information sources among both groups were recommendations from friend or relative, previous visit, and internet. Their stay in Red River Valley lasted approximately four days with an average group size of four people (3.7 and 3.9 people, respectively). Similarly, wildlife viewers who visited the North Central region were mature, Anglo, and possessed high income status. These regional wildlife viewers obtain wildlife viewing information from birding books (90.3%), brochures and/or pamphlets (85.1%), and magazines (83.4%). Approximately three quarters obtained information from family and/or friends (79.3%), newspaper (74.1%) and the Internet (73.6%). Respondents averaged 3.6 wildlife viewing trips to the area in the previous year which lasted an average of 2.7 days and consisted of relatively small travel parties ($M=2.6$ people).

Visitation potential: Based on current population bases and participation rates, possible visitation to the proposed facility varies from 36 600 to 97 600 under three scenarios (15-40% visitation). Certainly a variety of factors will influence actual visitation including facility fees, hours, and actual amenities.

Economic impact: The range of economic impacts based on three visitation scenarios is \$13.13 to \$33.5 million as well as 264 to 675 full and part-time jobs. The largest impacts come from the

highest projected level of visitors staying in the area the longest (\$33.5 million). Associated with that level of impact are approximately 675 full and part-time jobs tied to the annual spending by overnight visitors in the area. When day-trip visitors are included, total impacts reach over \$36 million in gross output and 732 jobs.

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INTRODUCTION

Increasingly, the nature-based and wildlife recreationist market is an attractive niche for communities seeking to enhance and diversify their economic base (Martin, 1997; Scott & Thigpen, 2003). The current market appeal is evidenced by the growing participation and economic contributions made by this important constituent group. According to data from the U.S. Fish and Wildlife Service, approximately four out of ten people in the U.S. participate in hunting, fishing or wildlife-associated recreation (USFWS 2002). A 2001 USFWS National Survey estimated that over 82 million U.S. residents (16 years or older) hunted, fished or watched wildlife and spent a total of \$108 billion to do so. Among wildlife recreationists, participants who engage in wildlife viewing accounted for the greatest number of participants, at 66.1 million, of which one-third participated away from home. Further, wildlife viewers spent \$38 billion on trips, equipment, and other items: a ten percent increase from 1996.

Birdwatching was the most predominant wildlife viewing activity (96 percent; USFWS 2002).

Within the U.S., the greatest percentage of wildlife viewing participants are found in the West North Central region that includes the following states: North Dakota, South Dakota, Minnesota, Kansas, Missouri, and Iowa (USFWS 2002). Specific to Minnesota, the number of days people spent viewing wildlife has risen sharply 1996-2001: a 94 percent increase in the number of days participants spent viewing wildlife away from home (USFWS 2003). Additionally, Minnesota ranked second in the nation in terms of people participating in wildlife-related recreation. In 2001, a total of 2.2 million residents and non-residents participated in wildlife recreation within the state, of which 634,000 traveled to do so. Further, Minnesota residents and non-residents spent 2.7 billion dollars on wildlife recreation in Minnesota, of which 40 percent was trip related.

Specific to birdwatching, Minnesotan's had the fifth highest participation rate among all the states (USFWS 2003). Results such as these indicate that wildlife recreation is a vital asset to the state.

Further illustration of the important role recreation plays within state is evidenced by a study conducted by the MN Department of Natural Resources. The 2004 Outdoor Recreation Participation Survey of over 2,500 Minnesota adults found that over half (57%) indicated outdoor recreation played a 'very important' role in their life, while an additional quarter (25%) found it 'moderately important' (MNDNR 2005). According to the survey, the most important reason Minnesotan's participated in outdoor recreation was to enjoy nature. Further, passive recreation and learning (including nature observation and visiting nature centers) were among the most favored recreation activities with 40% participating. Another study, conducted among traveler's in North Central Minnesota, found that the two most frequently engaged in outdoor recreation activities were sightseeing and visiting natural areas or state parks (Headwaters Regional Development Commission 1999).

Evidence of this burgeoning market suggests communities could undertake efforts to capitalize and draw upon the wildlife and nature-based travel segment. However, a recent study conducted by the Minnesota Department of Natural Resources found existent outdoor recreation facilities lacking in some areas (Sushak 2005). In the northwest region, almost four out of ten (39.2%) cities reported the development need for nature or interpretive centers, between now and the next five years. Further, over a third (35.1%) reported the need for wildlife or nature observation areas.

Purpose

The city of Crookston, Minnesota recognized the need for attractions to capture the potential impact of this important market segment and sought to investigate the feasibility of future infrastructure: the Red River Valley Bird Observatory and Gateway Nature Visitor Center. The assistance of the University of Minnesota Tourism Center was solicited to ascertain the current status of wildlife and nature-based travel in the region as data from previous studies focused on wildlife tourism in Minnesota and a profile study of visitors in Northwest Minnesota's Red River Valley. Therefore, the purpose of this report is to highlight the current status of wildlife and nature-based travel in the region, primarily assessed through secondary data analysis, to ascertain the market potential of the Red River Valley Bird Observatory and Gateway Nature Visitor Center facility.

In order to explore existent wildlife and nature-based recreationists in the Red River Valley, the following report is organized in four sections: an overview of travelers surveyed in the Red River Valley who had explicit interest in wildlife and nature-based recreation, travelers to the region for wildlife viewing, regional area market, and economic impact of potential visitors.

Travelers in the Red River Valley

A visitor study in the Red River Valley Region was conducted December 2002-November 2003. The data collection schedule was designed to reach a diverse cross section of tourists, thus survey sites, times, and days varied. Potential participants who self-identified as a tourist and were willing to participate were provided a questionnaire. A total of 562 parties agreed to participate and one questionnaire per household was administered (see Gartner and Salk 2004 for full description of methods).

The on-site questionnaire included a section on preferences of more than forty trip experience attributes. Respondents were asked generally how important each attribute contributed to their destination selection, rated on a scale from one to four (1=not at all important and 4=very important). Among the experience attributes, two were selected for this project: natural environment and birding/wildlife viewing. Respondents who rated either experience attribute a three or higher were selected for analysis. Therefore, the following results focus on Red River Valley visitor respondents for whom the natural environment or birding and/or wildlife viewing is generally an important or very important determinant for selecting a trip destination (n=230, 61.3%; n =248, 50.8%, respectively; Figure 1).

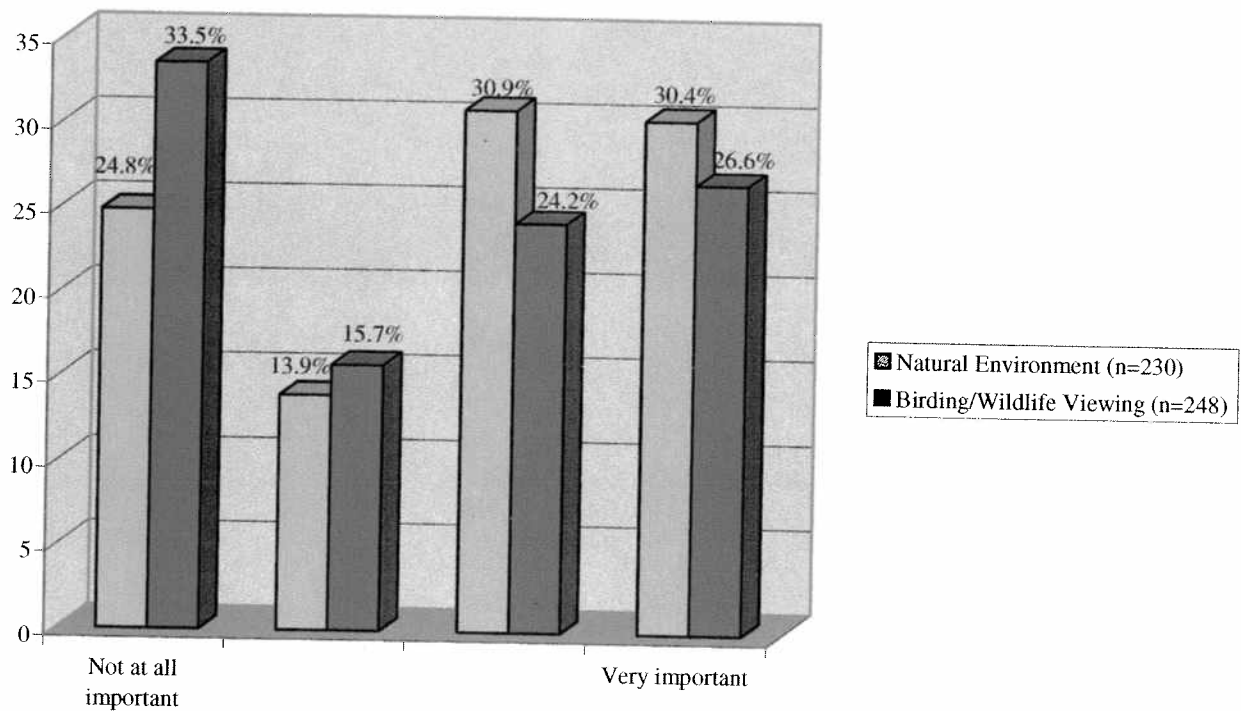


Figure 1. Percentage of respondents who indicated their level of interest in nature-based experience attributes among Red River Valley visitor profile survey respondents, 2004.

Results

Demographic Characteristics

Respondents who indicated the natural environment was important were predominately female (55.1%), middle-aged, and possessed relatively high-income status (Table 1). Respondents ranged in age from eighteen to 77 years, with a mean age of 44.2 years. A majority (63.6%) indicated an annual household income of \$50,000 or more. Further, respondents most frequently indicated their household composition consisted of either a couple with children under eighteen or a couple with grown children (38.2% and 33.6%, respectively). Respondents who indicated birding and/or wildlife viewing attributes important possessed similar demographic characteristics, with the exception that they were predominately male (64.0 %).

Information Sources

Respondents who indicated both natural environment and birding/wildlife viewing was important shared similar ratings on information sources used to create area awareness. The three most frequently used information sources among both groups were recommendations from friend or relative, previous visit, and internet (Table 2). Automobile clubs and travel agencies were rated the least important among both groups.

Table 1. Demographic characteristics of visitors who indicated attribute importance to nature-based activities among Red River Valley Visitor Profile survey respondents, 2004.

	Natural Environment		Birding/Wildlife Viewing	
	Frequency	%	Frequency	%
Gender				
Male	57	44.9	73	64.0
Female	70	55.1	41	36.0
Total	127	100.0	114	100.0
Age				
18-29	19	15.2	17	14.7
30-39	27	21.6	24	20.6
40-49	35	28.0	35	30.2
50-59	24	19.2	27	23.3
60-69	16	12.8	9	7.8
70 or greater	5	3.2	4	3.4
Total	125	100.0	116	100.0
Income				
Less than \$15,000	3	3.4	3	3.5
\$15,000-24,999	5	6.8	4	4.6
\$25,000-34,999	8	9.1	11	11.7
\$35,000-49,999	15	17.1	14	16.2
\$50,000-74,999	34	38.6	31	36.1
\$75,000-\$99,999	16	18.2	16	18.6
\$100,000 or more	6	6.8	8	9.3
Total	88	100.0	86	100.0
Household Composition				
Couple (children <18)	50	38.2	47	39.8
Couple (grown children)	44	33.6	38	32.2
Couple (no children)	15	11.5	12	10.2
Single (children <18)	2	1.5	4	3.4
Single (grown children)	6	4.6	3	2.5
Single (no children)	14	10.7	14	11.9
Total	131	100.0	118	100.0

Table 2. Information sources used to create awareness of the area among Red River Valley Visitor Profile survey respondents, 2004.

	Natural Environment		Birding/Wildlife Viewing	
	n	M ¹	n	M ¹
Recommendation from Friend/Relative	92	2.4	72	2.4
Previous Visit	81	2.3	65	2.4
Internet	87	2.0	65	2.0
Newspaper/ Magazine Ads	81	1.9	66	2.0
Area Tourism Information	90	1.8	66	1.6
Article/Documentary/News/TV Special	82	1.7	64	1.6
State Tourism Information	80	1.7	64	1.9
Radio/TV Ads	79	1.6	61	1.7
Recommendation from an Employer	78	1.6	60	1.7
Sports Show	79	1.6	61	1.7
Visitor/Welcome Center	81	1.6	61	1.6
Recommendation from Business	79	1.5	61	1.6
Automobile Club	81	1.5	60	1.5
Travel Agency	78	1.4	60	1.4

¹ Rated on a scale from 1 to 4, where 1=not at all important and 4=very important.

Travel Characteristics

Similar travel characteristics emerged among respondents. Among visitors who indicated the natural environment and birding and/or wildlife viewing was important, the average time away from home was five days (4.8 and 5.0 days, respectively; Table 3), while their stay in Red River Valley lasted approximately four days (4.3 and 4.6 days, respectively). Groups also exhibited similar travel party sizes, where the average group size was four people (3.7 and 3.9 people, respectively). The majority of both groups intended to return to Northwest Minnesota in the next year, while an even greater percentage stated their intention to return within the next five years.

Table 3. Travel characteristics of visitors who indicated attribute importance to nature-based activities among Red River Valley Visitor Profile survey respondents, 2004.

	Natural Environment		Birding/Wildlife Viewing	
	M	S.D.	M	S.D.
Number of nights away from home	4.8	8.1	5.0	7.7
Number of nights in NW Minnesota	4.3	6.9	4.6	7.2
Group size	3.7	2.5	3.9	2.7

Travel Expenditures

Visitors who indicated the natural environment and birding and/or wildlife viewing was important reported similar personal daily travel expenditures. Among both groups, the top three average reported expenditures were restaurant food and beverages, lodging, and transportation (Table 4). Respondents who indicated the natural environment attribute important reported individually spending an average of \$34.03 on restaurant food and beverages, \$31.60 on lodging, and \$22.66 on transportation, in the previous 24-hours of their stay. Respondents who rated birding and/or wildlife viewing important reported similar spending habits among the three categories, with the exception of lodging where they spent just \$19.19. Both groups spent the least on recreation and ‘other’ expenditure categories.

Table 4. Daily personal travel expenditures of visitors who indicated attribute importance to nature-based activities nature-based activities among Red River Valley Visitor Profile survey respondents, 2004.

	Natural Environment			Birding/Wildlife Viewing		
	n	<u>M</u> (U.S. \$)	S.D. (U.S. \$)	n	<u>M</u> (U.S. \$)	S.D. (U.S. \$)
Restaurant food and beverages	128	\$34.03	\$38.37	113	\$29.19	\$32.82
Lodging	128	\$31.60	\$56.99	113	\$19.19	\$37.86
Transportation	128	\$22.66	\$25.69	113	\$25.81	\$26.33
Shopping	127	\$21.22	\$51.57	113	\$23.58	\$57.75
Groceries	128	\$17.63	\$33.83	113	\$17.88	\$27.35
Recreation	128	\$14.03	\$30.01	112	\$12.22	\$26.45
Other	126	\$1.37	\$6.74	111	\$0.94	\$5.52

Minnesota Wildlife Viewers

In 2002, Minnesotan’s with a range of interest levels in wildlife viewing, particularly with birds, were surveyed in a cooperative effort among Minnesota DNR, Minnesota Audubon (MNAUD), Minnesota Ornithologists Union (MOU), and Minnesota members of the American Birding

Association (MABA). A total of 1997 potential respondents were included in the sample and were sent a mail-back questionnaire. A 57.8% response rate was obtained (See Schneider and Salk (2002) for full description of methods). Twelve non-respondents queried by telephone did not significantly differ on select demographic and wildlife viewing behavior items.

One aim of the wildlife viewing study was to ascertain the travel behavior among wildlife viewers. The questionnaire contained a section in which respondents were asked to specify the region within the state they typically visited to view wildlife and provide information pertaining to their typical travel characteristics. The following results presented are based on respondents who had visited the North Central region one or more times in the preceding year.

Results

Approximately half (46.9%) of the entire sample indicated at least one visit to the North Central region in the previous year. Among the 522 who had visited the region, the greatest percent of respondents were contacted through their membership with MOU (35.2 %; Figure 2), followed by MNAUD and MNABA members.

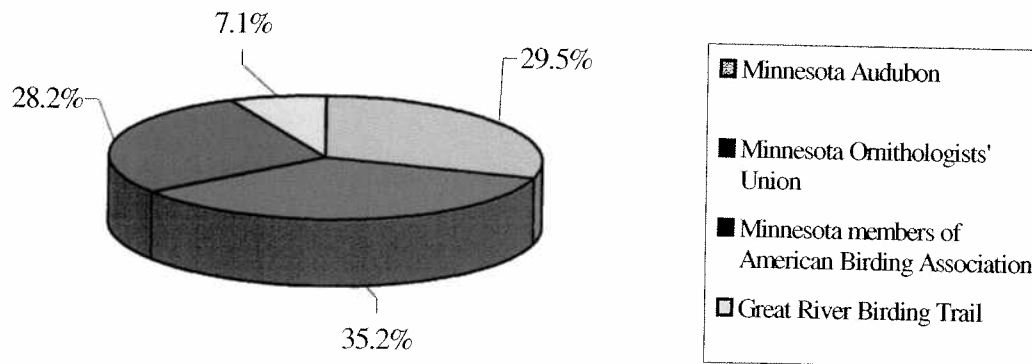


Figure 2. North Central region wildlife viewing travelers sample source among Minnesota wildlife viewing mail survey respondents, 2002 (n=522).

Demographic Characteristics

Wildlife viewers who visited the North Central region were mature, Anglo, and possessed high income status. Respondents ranged in age from eighteen to 95 years, with a mean age of 54.7 years (Table 5). Survey respondents were primarily male (54.5%), Caucasian (97.9%), and reported an income greater than \$75,000 (44.0%). Most frequently respondents indicated either working full time or being retired (52.7% and 29.9%, respectively).

Table 5. North Central region wildlife viewing travelers demographic characteristics among Minnesota wildlife viewing mail survey respondents, 2002 (n=522).

	Frequency	%
Gender		
Male	283	54.5
Female	236	45.5
Total	519	100.0
Age (mean=54.7)		
18-29	12	2.3
30-39	48	9.4
40-49	111	21.6
50-59	157	30.6
60-69	114	22.3
70 or greater	71	13.8
Total	513	100.0
Race		
White	503	97.9
Other	6	1.2
American Indian or Alaska Native	3	0.6
Asian	1	0.2
Native Hawaiian or Pacific Islander	1	0.2
Total	514	100.0
Income		
Less than \$15,000	8	1.7
\$15,000-24,999	37	7.9
\$25,000-34,999	54	11.5
\$35,000-49,999	74	15.7
\$50,000-74,999	109	23.2
\$75,000-\$99,999	76	16.2
\$100,000 or more	112	23.8
Total	470	100.0
Employment Status		
Employed full-time	273	52.7
Employed part-time	69	13.3
Retired	155	29.9
Other	21	4.1
Total	518	100.0

Information Sources

Wildlife viewers who frequent the North Central region most frequently obtain wildlife viewing information from birding books (90.3%), brochures and/or pamphlets (85.1%), and magazines

(83.4%; Table 6). Approximately three quarters obtained information from family and/or friends (79.3%), newspaper (74.1%) and the internet (73.6%). Outdoor and/or sporting goods stores and the Minnesota Office of Tourism website were cited as the least frequently used sources of information.

Table 6. Information sources for wildlife viewing information among North Central region wildlife viewing travelers, Minnesota wildlife viewing mail survey respondents, 2002.

	Frequency	Percent
Birding Books	448	90.3
Brochures/Pamphlets	422	85.1
Magazines	411	83.4
Family/Friends	388	79.3
Newspaper	367	74.1
Internet	363	73.6
Minnesota Ornithologists Union Birding Hotline	304	62.6
General Travel Books	269	55.7
Television	269	54.7
DNR Website	220	44.7
Wild Bird Stores	206	41.8
Radio	190	39.4
Traveler's Guide to Watchable Wildlife in MN	141	28.9
Outdoor/Sporting Goods Stores	130	26.6
Minnesota Office of Tourism Website	120	24.5

Travel Characteristics

Respondents averaged 3.6 wildlife viewing trips in the North Central region during the previous year (Table 7; Figure 3). On a typical trip, respondents wildlife viewing trip lasted an average of 2.7 days and consisted of relatively small travel parties ($M=2.6$ people). On-going travel to the region was shown by respondents stated intention to visit a North Central attraction in the following year. One third (32.1%) of respondents indicated they intended to visit the Pine to Prairie Birding Trail in the next twelve months. Among 25 attributes rated on their importance to wildlife viewing, nature centers ranked eighth.

Table 7. North Central region wildlife viewing travelers trip characteristics among Minnesota wildlife viewing mail survey respondents, 2002 (n=522).

	<u>M</u>	<u>S.D.</u>
Number of trips to North Central region	3.6	3.2
Number of days during a typical trip	2.7	1.1
Group size	2.6	1.2

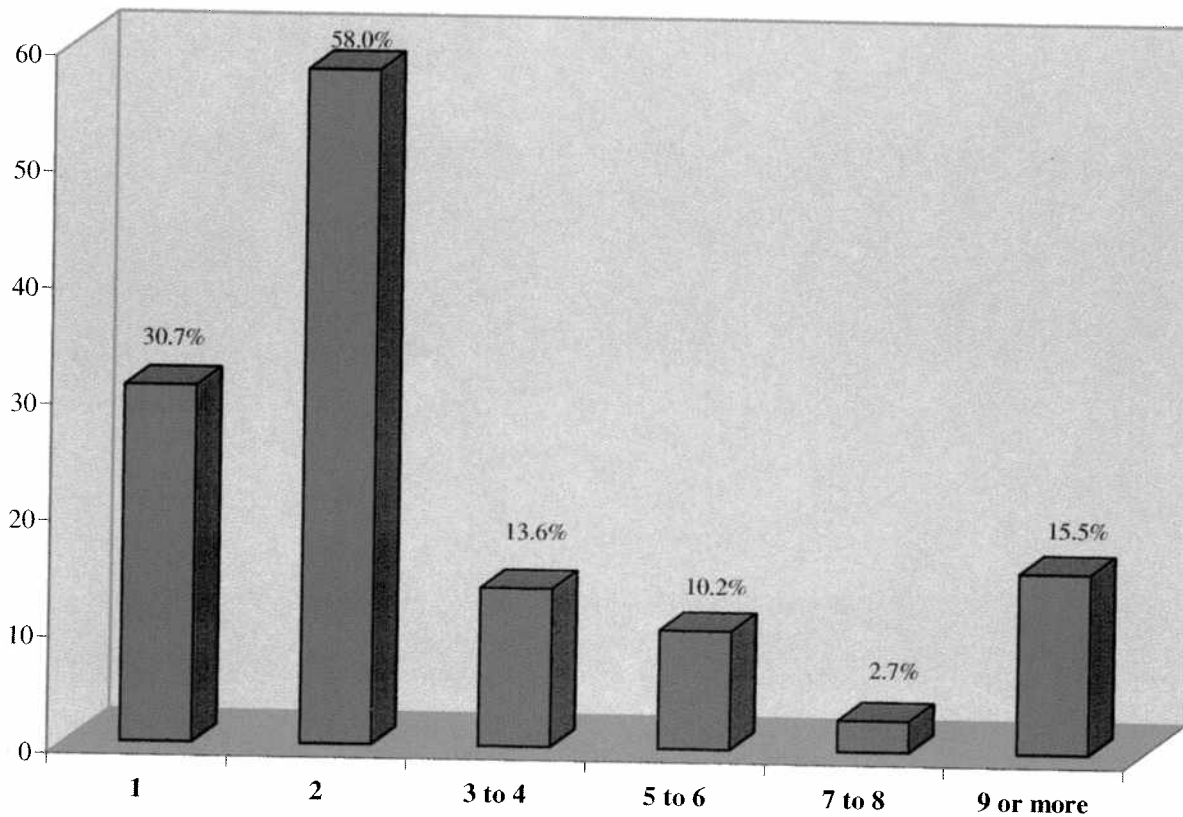


Figure 3. Number of wildlife viewing trips to the North Central region in 2001 among Minnesota wildlife viewing mail survey respondents, 2002 (n=522).

Travel Expenditures

Wildlife viewers exhibited similar spending habits to Red River Valley visitors. During a typical wildlife viewing trip to the North Central region, wildlife viewers spent the most on lodging, food and beverages, and transportation. On average, over the course of a typical trip, wildlife viewers spent \$50.20 on lodging, \$38.17 on food and beverages, and \$32.37 on transportation

(Table 8). Wildlife viewers spent the least on equipment rental and private land use or access fees.

Table 8. Average trip expenditures during a typical wildlife viewing trip among North Central regional travelers, Minnesota wildlife viewing mail survey respondents, 2002 (n=522).

	<u>M</u> (U.S. \$)	S.D. (U.S. \$)
Lodging	50.20	49.75
Food, drink and refreshments	38.15	34.87
Round trip costs for transportation by private vehicle	32.37	32.06
Public land use or access fees	4.71	7.90
Guide fees, pack trip or package fees	4.02	13.63
Equipment rental such as boats, camping equipment	2.88	18.33
Private land use or access fees	0.66	4.95

Beyond the engaged market, the attraction base and regional communities play a role in the Proposed Center's success. Central to the drawing capacity is the area's ability to offer a wide range of activity options. Currently, Northwest Minnesota affords the nature-based and wildlife-related recreationist an opportunity to engage in multiple activities. The Red River Valley, in particular, offers an array of opportunities that draws numerous visitors (Table 9). For instance, the Red River Valley is home to Glacial Ridge, the largest prairie restoration project in history, designated as a USFWS National Wildlife Refuge in October 2004. Further, the Red River State Recreation Area opened in June of 2004 and is located in East Grand Forks. The area also offers scenic driving and possesses two officially designated scenic byway routes: Waters of the Dancing Sky and the King of Trails. The vicinity has additional public and private lands to support nature-based and wildlife recreationists, including Agassiz and Rydell National Wildlife Refuges, Old Mill State Park, and Agassiz Scientific and Natural Area, among others. Such sites are also designated as sites of the Pine to Prairie Birding Trail. A study conducted by University of Minnesota, Crookston and Nature Northwest found that one out of five people that contacted

the Pine to Prairie Birding Association had visited the site in the previous year, and nearly half (46.2 %) had visited the trail's north central reaches, located near Crookston (Arscott and Loegering 2003). Further, over half (54.5%) of these respondents intended to visit in the following year.

Table 9. Visitation among Red River Valley area attractions.

Sites	Visitation
Central Park Campground	16 sites
Scenic Byways: -Waters of the Dancing Sky -King of Trails	N/A
Pine to Prairie Birding Trail	N/A
Rydell National Wildlife Refuge	~7,800 visitors annually
Agassiz National Wildlife Refuge	~20,000 visitors annually
Glacial Ridge National Wildlife Refuge	N/A (just opened October 2004)
Polk County Historical Society Museum	N/A
Lake Bronson State Park	106,685 (2004)
Old Mill State Park	12,473 (2004)
Red River State Recreation Area	32,793 (June 1-Dec. 31, 2004)
Thief Lake State Wildlife Management Area	N/A
Agassiz Dunes Scientific and Natural Area (Nature Conservancy lands)	N/A
Wetlands, Pines, and Prairie (Audubon Society lands)	N/A
Agassiz Environmental Learning Center	~2,500-3,000 (~1,500 school groups)
Red River Valley Natural History Area (University of Minnesota, Crookston)	N/A
Greater Grand Forks Visitor Information Center	22,821 (2004)

N/A=Not available

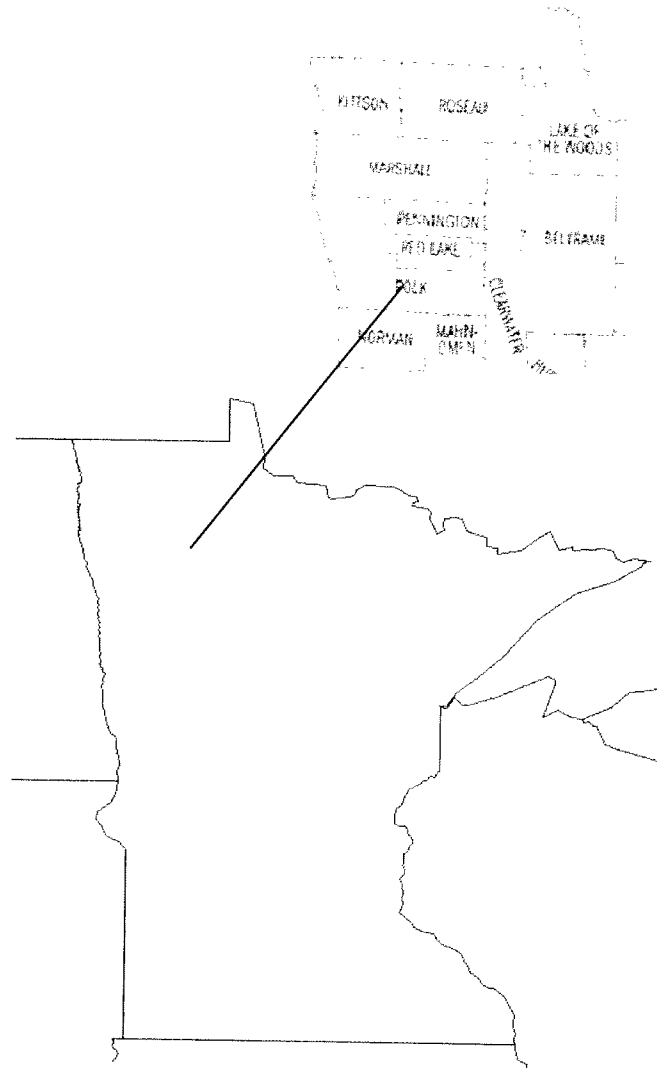


Figure 4. Counties adjacent to proposed Red River Valley Bird Observatory and Gateway Nature Visitor Center site.

The development of a site, such as the Red River Valley Bird Observatory and Gateway Nature Visitor Center, would not only cater to the nature-based or wildlife viewing travelers, but would also be an attraction among local and regional residents. The city of Crookston has a population of approximately 8,000 (U.S. Census Bureau 2000; Table 10) and is located in Polk County, which has a population slightly over 30,000 (U.S. Census Bureau 2000). Further, adjacent Minnesota counties and the North Dakota metro area would draw visitors. According to the 2000 Census, the total population among ten nearby MN counties (Figure 4) had a population of

114,883. Grand Forks, located just 25 miles west, has nearly 50,000 residents and Fargo, located approximately 70 miles away, has slightly over 90,000 residents (U.S. Census Bureau 2000).

Table 10. Population of area by City and County adjacent to proposed Red River Valley Bird Observatory and Gateway Nature Visitor Center site.

Area	Population (2000)¹
Cities	
Crookston	8,192
East Grand Forks (~25 miles away)	7,501
Fargo, ND (~70 miles away)	90,599
Grand Forks, ND (~25 miles away)	49,321
Thief River Falls (~40 miles away)	8,410
Counties	
Beltrami	39,650
Clearwater	8,423
Kittson	5,280
Lake of the Woods	4,522
Mahnomen	5,190
Marshall	10,155
Norman	7,442
Pennington	13,584
Polk	31,369
Red Lake	4,299
Roseau	16,338
Total Population Among the Eleven Counties	146,252

¹ U.S. Census Bureau.

The feasibility of a facility, such as the Red River Valley Bird Observatory and Gateway Nature Visitor Center, is contingent upon the availability of already existent facilities. Currently, there are many facilities in the region that cater to nature-based traveler (Table 11). However, the region currently does not have a facility that specifically caters to the birding and wildlife recreationist. Further, opportunity exists to collaborate with the various public agencies and organizations in the area to develop a comprehensive touristic package or travel route.

Table 11. Competitors or potential feeders for the Red River Valley Bird Observatory and Gateway Nature Visitor Center.

Distance Away	Location	Site name	Focus
0-49 miles	East Grand Forks	Red River State Recreation Area	Development plans for Interpretive Center
	Fertile	Agassiz Environmental Learning Center	Sandhill prairie focus
	Middle River	Agassiz National Wildlife Refuge	Interpretive kiosks at Refuge Headquarters
50-99 miles	Bemidji	Headwaters Science Center	Science exhibits and activities
	Moorhead	Hjemkonst Interpretive Center	Norwegian cultural interpretive center
	Moorhead	Comstock House	Historic site
	Rochert	Tamarac National Wildlife Refuge	Visitor Center with marshland focus
100-149 miles	Hackensack	Deep Portage Environmental Learning Center	Environmental Education Center
	Fergus Falls	Prairie Wetlands Learning Center	Prairie and Wetland focus
150 or more	Grand Rapids	Forest History Center	Historic site: forestry and logging focus
	Morris	Scandia Woods	

MARKET DISCUSSION

Results obtained from secondary analysis indicate the area currently has a portion of visitors that is nature-based and wildlife-related. Both studies illustrate the area draws middle-aged travelers with relatively high-income status who exhibit similar stays in the area, make similar contributions to the local economy, and make frequent visits to the area for their activities (Table 12).

Table 12. Summary of national and local data for the Crookston facility.

Market study/information	Relevant results: visitation	Relevant results: market
USFWS 2001	2.2 million participate in wildlife viewing in MN; 634 000 travel to do so	
MNDNR 2005	40% Minnesotans participate in passive outdoor recreation	
Gartner & Salk, 2004	50.8% indicate birding/wildlife viewing important	Visit length 4-5 days Group size 3-4 persons
Schneider & Salk, 2002	46.9% wildlife viewers go to North Central region	Visit length 2-3 days Group size 2-3 people Nature center moderately important
Regional attractions	203,572 visit regional attractions (see Table 9)	

To estimate possible visitation to the proposed center, both national and state travel data were considered, as well as the adjacent area population¹. Data from the National Survey report that the majority of traveling wildlife viewing participants are MN residents. Data gathered among Minnesota wildlife viewers found that 46% travel to the north central region². Therefore, 46% of current traveling wildlife viewing participants were used as a base from which to make estimates across three scenarios. Adding to this initial base are the potential visitors from current attractions and adjacent areas. To account for duplication in these market assessments, the potential was reduced 60 percent to be conservative. Thus, the possible visitation to the proposed facility varies from 36 600 to 97 600 (15-40% visitation; Table 13). Certainly a variety of factors will influence actual visitation including facility fees, hours, and actual amenities. Further, it should be noted that for visitation to be sustained over time, several factors are important to consider and include whether the facility is designed for repeat or one-time

¹ The visitation estimates do not include school groups or drop-in traffic.

² Based on Explore MN geographic regions.

visitation, as well as the marketing and educational efforts undertaken to promote the facility (Gramann, 2003).

Table 13. Possible scenarios of visitation to Crookston facility.

	Low (15%)	Medium (25%)	High (40%)
Current MN wildlife participants who travel (291 640)	43 746	72 910	116 656
Visitors to current attractions (203 572)	30 536	50 893	81 429
Regional residents (114 883)	17 232	28 721	45 953
Total potential	91 514	152 524	244 038
Adjusted potential (60% duplication)	36 600	61 000	97 600

Recent trends in outdoor and wildlife-related recreation illustrate that the market continues to grow. Whether a community is able to capitalize on the market depends on their ability to meet their desired needs. The Red River Valley has a wealth of settings to meet the needs of nature-based or wildlife travelers and the recent designation of Glacial Ridge National Wildlife Refuge and Red River Valley State Recreation Area shows promise of increased visibility of the region. Given four of 10 cities cite a need to develop a nature/interpretive center in the area (Sushak, 2005), Crookston would work toward an increase in the region’s share of travelers with this facility.

Economic Impact

Quite simply, the economic impact to Polk County from a potential observatory and nature center comes from visitors arriving to the area and spending money on-site and in the vicinity while traveling. The most heavily impacted sectors of the economy for overnight guests to the area, as suggested by the spending patterns shown in Table 4, are businesses catering to food and beverage service, transportation, retail and lodging. Spending and relative impacts from day-trip

visitors from the surrounding area are similar (but smaller), without the obvious overnight lodging stays.

Economic impacts come from the immediate, direct expenditures of guests buying meals, filling gas tanks and paying admission fees for attractions, just to name a few activities. Businesses providing these goods and services require supplies and services as well in order to keep their businesses operational. These needs fuel additional indirect economic impacts in the local economy as business buy from other businesses to get inputs for their sales to tourists. Finally, all of the affected businesses using business earnings to pay employees wages and salaries that pump up the economy as employees spend disposable income on consumer goods and services as working members of communities. These induced impacts complete the economic cycle stemming from visitor impacts. The sum of these direct, indirect and induced economic impacts are typically reported in terms of gross output in (dollar) sales in the economy and the number of jobs, full and part-time, that are associated with given levels of tourist activity across the entire economy.

Review of Assumptions

It is difficult to predict the extent to which visitors to a new facility would be new to the area entirely or would add the new facility to their itinerary among the other activities on an already planned trip to Polk County. In reality it would likely be some combination of new and regular visitors to the area. Thus, the 60% duplication is assumed in the visitation analysis.

As reported in Table 13, three market-draw estimates (low, medium and high) are provided as a basis for estimating economic impacts annually that could be experienced, depending on the level of visitor activity the proposed observatory and nature center ultimately generates. Two types of visitors are expected – overnight and day-trip tourists. Each must be treated differently in estimating economic impacts as their daily expenditure patterns will be different. Those differences are reflected in different impacts to the local economy. Also noted earlier, research suggests that each overnight visitor remains in the area, on average, 2.7 days. For the purpose of economic impact estimation, then, the annual visitor-day estimates for each impact level option is shown in Table 14. The “regional residents” category is assumed to represent the people from the area that will be making one-day trips to visit. They were removed from the total, leaving the overnight visitor component. Both were adjusted for duplication (i.e., double-counting) and only the overnight visitor component was multiplied by the average 2.7 day per person value to yield the estimates for annual visitor days to be included for impact estimation. Day-trip guests were assumed to visit the site only once per year.

Table 14. Annual visitor days for economic impact estimation by visitor type and projected annual visitor (market) level.³

Level	Overnight Visitors	Day-trip Visitors
Low Impact	29,700 X 2.7 = 80,200	6,900
Medium Impact	49,500 X 2.7 = 133,700	11,500
High Impact	79,200 X 2.7 = 213,800	18,400

Table 15 shows the expenditure profiles for overnight and day-trip visitors. As no data was available to base day-trip spending patterns on, approximations had to be made, based on overnight data. After logically removing lodging expenditures, all day-trip spending categories were conservatively assumed to be 50 percent of overnight patterns, with the exception of

³ Levels cited are averaged across a twelve-month period, recognizing that seasonal fluctuations will occur.

transportation. For the most part, area and to/from travel was not expected to vary considerably whether one was staying one day or 2.7 days.

Table 15. Spending profiles for overnight and day-trip visitors by spending category.

Spending Category	Overnight	Day-trip
Eating/drinking	\$29.19	\$14.60
Lodging	19.19	-
Transportation (e.g., gas, etc.)	25.81	25.81
General Retail	23.58	11.79
Groceries	17.88	8.94
Recreation/amusements	12.22	6.11
Other	0.94	0.47

Economic Impacts

Economic impacts were determined using the IMPLAN input-output model for impact estimation.⁴ A model of the Polk County economy was constructed with IMPLAN using the 2001 IMPLAN data set for Minnesota. This model was used to estimate the annual impact of the overnight and day-trip visitors daily on the Polk County economy. The spending profiles shown in Table 15 were the basis of the economic impacts determined. Table 16 displays the impact results.

Table 16. Estimates of annual economic impact from three projected visitor levels on the Polk County Minnesota economy reported in gross output (2004\$) and employment.

Visitor Level	Gross Output (\$ millions)			Employment (full/part-time jobs)		
	Overnight	Day-trip	Total	Overnight	Day-trip	Total
Low	\$12.56	\$0.58	\$13.13	253	11	264
Medium	\$20.93	\$0.97	\$21.50	422	19	441
High	\$33.47	\$2.78	\$36.27	675	57	732

⁴ IMPLAN (IMPact Analysis for PLANning) was originally developed for the USDA Forest Service for land and resource management planning. It is a sophisticated, yet flexible input-output economic modeling tool that uses microcomputer software and database from federal and state data sources to allow for economic impact assessments and analyses. Refined later by the University of Minnesota, it is now managed and supported internationally by the Minnesota IMPLAN Group, Inc., Stillwater, MN.

DISCUSSION

The results shown indicate the expected level of impacts one might experience at the county level if the projected visitors arrive, stay in the area the length of time presumed and spend according to the patterns and levels indicated. Obviously, the largest impacts come from the highest projected level of visitors staying in the area the longest, with impacts at nearly \$33.5 million. Associated with that level of impact are approximately 675 full and part-time jobs tied to the annual spending by overnight visitors in the area. When day-trip visitors are included, total impacts reach over \$36 million in gross output and 732 jobs. These impacts are from the direct, indirect and induced effects mentioned earlier.

The preponderance of impacts are tied to the key areas of the economy in which the spending occurs. For example, over 32 percent of the total impacts occur in the retail sector, followed by 31 percent in the accommodations and food service areas. However, all sectors of the economy generate impacts, from utilities, construction and finance to health care and governmental institutions, either indirectly or induced through employee spending of wages earned by economically linked firms.

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