

# Economic Contribution of Public Park and Recreation Activities in North Dakota: Localized Effects



Agribusiness and Applied Economics Report 720



November 2013

Nancy M. Hodur ♦ Dean A. Bangsund



**NDSU** AGRIBUSINESS AND  
APPLIED ECONOMICS

North Dakota State University ♦ Fargo, ND 58108

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## Acknowledgments

The research team wishes to recognize the substantial contributions made by Dana Schaar Jahner, Executive Director, North Dakota Recreation and Park Association. A project of this magnitude would not have been successful without her dedication of time and persistence in securing data, organizing intercept events, and providing leadership in many critical aspects of the multi-year project.

This study benefitted from the insight and assistance of the following task force members:

Randy Bina, Bismarck Parks and Recreation District  
Dave Leker, Fargo Park District  
Ron Merritt, Minot Park District  
Tyler Jacobson, Valley City Parks and Recreation

Thanks to the numerous individuals who assisted with organizing, collecting, and reporting survey data to the research team.

Paula Redmann, Bismarck Parks and Recreation District  
Terry Wallace, Devils Lake Parks and Recreation  
James Kramer, Dickinson Parks and Recreation  
Craig Bjur, Fargo Park District  
Bill Palmiscno and Brandy Chaffee, Grand Forks Park District  
Doug Hogan, Jamestown Parks and Recreation  
Cole Higlin, Mandan Parks and Recreation  
Chuck Emery, Minot Park District  
Karen Assel, Arik Spencer, and Gordon Weixel, North Dakota Parks and Recreation Department  
Diane Sommerfeld, Valley City Parks and Recreation  
Wayne Beyer, Wahpeton Parks and Recreation  
Barb Erbstoesser, West Fargo Parks and Recreation  
Darin Krueger, Williston Parks and Recreation

Thank you to Kelly Kaylen for data entry. We extend our appreciation to Dr. Linda Burbidge for her assistance in constructing the survey data set.

Funding for the study was provided by the North Dakota Recreation and Park Association. We express our appreciation for their support.

The authors assume responsibility for any errors of omission, logic, or otherwise. Any opinions, findings, and conclusions expressed in this publication are those of the authors and do not necessarily reflect the view of the Department of Agribusiness and Applied Economics, North Dakota State University, or the study sponsors.

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## Executive Summary

Recreation and leisure activities provide important quality of life attributes in communities and cities across the United States. Most cities and communities in North Dakota have a variety of facilities and programs that are targeted to providing general recreation, sports events, and other leisure activities. Those facilities and organizations are often largely funded with public resources and are generally referred to as park and recreation districts. In addition to community-level park and recreation districts, North Dakota provides recreation services through the state park system. The primary reason for using public resources to support those activities is to provide affordable and accessible recreation services to the local community. However, in addition to providing recreation services, the facilities, programs, and recreational opportunities associated with park and recreation agencies also generate economic benefits.

This study examined the economic effects of public park and recreation operations in Bismarck, Devils Lake, Dickinson, Grand Forks, Fargo, Jamestown, Mandan, Minot, Valley City, Wahpeton, West Fargo, Williston, and the North Dakota Parks and Recreation Department (NDPRD). Participating park districts and NDPRD provided information on the number and type of leagues, programs, sport events, facilities, and community activities that were affiliated with, sponsored by, or used park and recreation district or state park facilities.

Data were collected by park and recreation districts and state park personnel at a sample of events, activities, programs, and facilities over the course of one year. Intercept surveys and on-line survey instruments were used to solicit information on local and in-state spending by state parks and park and recreation district programs, events, and facility participants, spectators, and visitors. Park and recreation districts provided data on the number of individuals that participated in various events, activities, programs, and facilities by sponsorship category.

Average per-person local spending or average participant local spending was calculated using survey data for the various categories of events, activities, and facilities. Expenditures ranged from \$83 per-person for community events to \$547 per-participant for youth sports events. Average expenditures were applied to participation numbers for the various events, activities, and categories by sponsorship category to estimate the local economic contributions of participating park and recreation districts and North Dakota state parks.

Participation numbers were substantial. Over 500,000 individuals participated in adult leagues, adult sports events, community events and activities, youth leagues, and youth sports events in 2012. Over 400,000 rounds of golf were played at park and recreation district golf courses, and annual visitation at North Dakota state parks was over 1,000,000. Total local expenditures in 2012 varied from about \$2.4 million dollars in Valley City and Wahpeton to over \$33 million in Bismarck and \$27 million in Fargo. Total local expenditures for all cities were \$123.6 million, while local expenditures for state parks were over \$52 million.

In addition to an estimate of total local expenditures that can help describe park and recreation programs, events, and activities, the findings provide individual park and recreation agencies the tools with which to measure the effects of potential activities, events, and programs. Findings illustrate that not only do public park and recreation agencies provide recreation services to North Dakotans and others, but the expenditures related to those activities have substantial economic effects.

# **Economic Contribution of Public Park and Recreation Activities in North Dakota: Localized Effects**

Nancy M. Hodur and Dean A. Bangsund\*

## **Introduction**

Recreation and leisure activities provide important quality of life attributes in communities and cities across the United States. Most cities in North Dakota have a variety of facilities and programs that offer general recreation and activities to community residents in the form of parks, recreational facilities, programs, and activities that serve adults, seniors, and children. These entities are generally funded with public resources with elected boards. The primary mission of state parks and local public park and recreation districts is to provide accessible and affordable recreation services to enhance the quality of life (NDRPA 2013). While the facilities, programs, events, and recreational opportunities provided by park and recreation districts and the state park system effectively achieve their primary mission, they also generate economic benefits.

The economic effects of expenditures related to recreation and leisure activities can be a valuable co-benefit of recreational facilities and programs in a local community. While economic effects are not the primary consideration of local or state public park and recreation agencies, the events, programs, and activities sponsored by or offered in partnership with other local organizations can provide positive economic effects. Spending associated with park and recreation activities supports local businesses that provide associated goods and services, such as equipment, supplies, and food and beverage. In addition, some events, activities, and facilities can and do attract participants from outside the local area and, in some cases, from out-of-state. State parks and other park district facilities, like golf courses, water parks, and zoos, are destination attractions that draw non-local patrons, in addition to providing local recreation options. These types of participants would support businesses that provide goods and services related to travel, such as lodging, food and beverage, as well as related equipment and supplies. While the activities and programs of state and local park and recreation agencies provide park and recreation services that enhance the quality of life, they also have economic effects.

## **Objectives**

The purpose of this study was to estimate the economic effects of park and recreation agency programs, leagues, community activities, and facilities both locally and on the state's economy. The activities of 12 city park and recreation agencies (commonly called park districts) and the North Dakota state park system were examined and economic effects estimated. Statewide economic effects were detailed in Bangsund and Hodur (2013). This report will focus on localized effects of the events, activities, and facilities associated with park and recreation agencies and North Dakota state parks.

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\*Research assistant professor and Research scientist, respectively, Department of Agribusiness and Applied Economics, North Dakota State University, Fargo.



## Methods

Discussion of the procedures used in the study was divided into the following sections: (1) identification of the type and range of agency activities and programs, (2) data collection, (3) data analysis, and (4) number of observations and statistical validity of data collection.

### Park District and State Parks Sample Matrix

Park and recreation districts from 12 cities and the North Dakota Parks and Recreation Department (NDPRD) participated in the study. Bismarck, Devils Lake, Dickinson, Grand Forks, Fargo, Jamestown, Mandan, Minot, Valley City, Wahpeton, West Fargo, and Williston park and recreation districts participated in the study. Information on the number and type of events, activities, facilities, and programs was provided by each of the participating park districts and NDPRD. Park district activities were divided into six type categories: adult leagues and programs, adult sports events, community events and activities, facilities, youth leagues and programs, and youth sports events. (These six type categories will frequently be referenced throughout the report and referred to as “activity type”.) A representative sample of park district offerings was drawn from the inventory of activities, events, and programs provided by the participating park districts by activity type. The sample of events was designed to be representative of the type, size, composition, and location of activities associated with each activity type and the 12 park districts. At least one event from each participating city was included in the sample matrix. In some instances, circumstances such as flooding in Minot during the data collection period, prevented additional data collection in some participating park district communities.

In addition to the six activity type categories, five facilities categories were identified. In some cases, data for a facility category was collected from a single facility, such as the water park in Mandan. Data collected from the water park in Mandan were applied to other similar facilities, like the amusement park in Bismarck. For other categories, facilities in multiple cities were surveyed. For example, golf courses and campgrounds in several communities were surveyed to approximate expenditures of users. Data collected from the participants and users of the facilities were applied to use statistics from those facilities and other similar facilities.

A representative sample of state parks was identified, as was a representative sample of organized special events held at various state parks throughout the year. The two samples were developed to account for two distinct state park visitor populations: 1) regular park visitors, including campers and general use, and 2) special event participants. The special event sample was drawn to capture local and trip-related spending associated with an organized event at a state park. Campers and daytime park users would not be representative of the characteristics and expenditures of special event participants, such as the Haunted Fort held at Fort Abraham Lincoln State Park. It was hypothesized, correctly so, that expenditure patterns for the two groups would be different and accordingly should be sampled separately. Expenditure patterns for special event participants were substantially less than other state park users.

Sample events and activities are detailed in the Results section. Most adult leagues and youth leagues were associated with sports leagues; however, there were other offerings such as art classes, after school programs, theater, and hunter safety. Adult and youth sports events

included tournaments and other sporting events not part of regular local league activities. Community events and activities included arts and crafts activities and programs, festivals, entertainment events, and kids and family activities. Several facilities were identified as destination or unique facilities. Facilities examined were golf courses, water park/amusement park, zoos, and campgrounds.

### Data Collection

A base survey instrument was developed with modifications to customize the questionnaire for each event type classification. Sample survey instruments are in Appendix 1. Modifications were made to tailor the survey instrument to the specific event or activity to insure the questionnaire was relevant to the activity. Respondents were asked to report their expenditures for various categories of spending, such as food and beverage, lodging, travel, etc., both locally and elsewhere in the state. Respondents were asked if the spending they reported was for them only or for their family or group. Often spending for multiple people is reported by one household member. If spending was for their family or group, they were asked to indicate how many people were in their family or group. In order to appropriately calculate per-person expenditures, it is necessary to know if the reported expenditures were for one person or multiple individuals. Respondents were also asked to provide information about other aspects of their trip, such as how many days or nights they were staying in a community for the event or activity. Questions related to the number of days or nights participants were staying were not included on all survey instruments. Respondents were also asked to describe their participation in the event, their motivation for visiting, and other activities in which they may have participated in conjunction with the event or activity. Not all data from the surveys was ultimately needed or relevant to local economic effects and accordingly not all data collected was reported in this document. Questionnaires for the various sample events, activities, and facilities were similar but not identical and not all questions were included on all questionnaires.

The questionnaire was administered at most of the sample events and activities via intercept surveys. Data collection efforts began in the fall of 2011 and continued until fall 2012. Park and recreation district staff and volunteers approached event participants and spectators at random and asked them to complete the questionnaire. Where online contact information was available, participants were contacted by park and recreation districts by email and asked to follow a link to an online questionnaire. Online surveys were used for youth leagues and some adult leagues and a few other events. Online surveys were very effective for youth and adult leagues. There was limited success for the other activities where an online survey was used to collect data.

Survey data was provided to the research team by the participating park districts and state parks for analysis. In some instances, data collection efforts failed to collect a sufficient number of completed questionnaires. If an insufficient number of observations were obtained to provide a representative sample, data from those events were not included in the analysis.

### Participation Estimates

Participating park districts and NDPRD provided estimates of the number of participants for their inventory of events, activities, and facilities. Park district events were categorized into

three sponsorship classes to delineate the various organizational and administrative structures of park district events and activities. Participating park districts had different systems for administering programs and accounting for participation. For example, some communities exclusively sponsor and administer youth sport leagues. In other communities, a youth league may be administered by another organization, e.g., the local Babe Ruth Baseball Association; however, the park district works closely with the sponsor organization to provide facilities and staff. The three categories and the characteristics of each are listed below.

1. Park district sponsorship.
  - a. Park districts were the sole sponsor and administrator of the event or activity and were offered exclusively by the park district.
  - b. No shared program administration or cooperation with a third party.
  - c. There may be financial partners that contribute resources.
2. Partnership sponsorship.
  - a. Park districts were the lead or major partner but worked in close association with other non-park district organizations.
  - b. Park districts were publically acknowledged as an event sponsor.
  - c. Park district involvement was necessary to hold the event in the community.
  - d. Park districts could be expected to provide facilities, staff, and/or financial support.
3. Private sponsorship.
  - a. Park districts have minimal involvement in event administration.
  - b. Most commonly the park district involvement would be limited to providing access to existing facilities.
  - c. Events would likely be held elsewhere in the community without a park district's involvement.

#### Data Analysis and Extrapolation

Data were analyzed to estimate average expenditures for the various sample events. Some expenditures were estimated on a per-person basis and some on a per-participant category. Youth leagues, youth sports events, and adult leagues expenditures were estimated on a per-participant basis. The rationale was that participation estimates would be limited to an estimate of the number of participants rather than the number of people attending the event or activity. For example, park districts would have limited ability to estimate the number of spectators and others at adult league activities. It was also known that there generally are few spectators or others at adult league activities. Accordingly, average expenditures for adult leagues were calculated made on a per-participant basis.

Similar problems arose when attempting to estimate the number of spectators and others at youth league activities. Further, it was hypothesized that expenditures for youth sports events could be for multiple family members. By calculating expenditures on a per-participant or “per-little Johnny or per-little Suzie” basis, variation spending as a result of family size would be

captured in the calculation of average expenditures per-participant. Further, participation data provided by park and recreation districts for youth leagues was on a per-participant basis. Accordingly, expenditure estimates match the participation metric provided by park and recreation districts. Average expenditures for the remaining activity types (adult sports events, community events and activities, and facilities) were based on per-person spending. Participating park districts provided data on the number of participants and others associated with the various activities, including spectators. Three different metrics were used to estimate expenditures for state park visitors. Expenditures for campers were made on a per-trip basis. Special event participants were based on a per-person basis. All others were considered general park use visitors and expenditures were calculated on a per-day basis.

Participation and visitation data were grouped into the appropriate type classification (adult leagues and activities, adult sports events, community events and activities, facilities, state parks, youth leagues and activities, and youth sports events). Average expenditures calculated using survey data were applied to participation data for the various events within each activity event type category to estimate total local expenditures for park district activities in each participating community and for NDPRD. For example, survey data from a youth basketball tournament in Valley City was used to estimate spending for youth basketball tournaments in other cities. Likewise, survey data for various types of community events were applied to participation data for other similar types of community events in other cities.

Survey data underwent several statistical processes to account for missing values and to delete extreme observations. Outlying observations with spending estimates exceeding three standard deviations above the mean were excluded from analysis (Chabra et al. 2003). All expenditure variables, as well as variables for the size of the group, the number of nights, and the number of days, were trimmed to delete observations greater than three standard deviations over the mean. Missing observations were assigned average values to reduce the number of non-useable questionnaires. The process resulted in 8,775 useable observations.

### Number of Observations

The data collection effort was largely successful and, in most cases, resulted in the collection of a sufficient number of completed questionnaires to represent a valid sample. The number of observations collected by event type ranged from just over 500 observations for adult leagues to over 3,000 observations for youth leagues. The remaining categories had 900 to 1,400 observations (Table 1). Enough survey instruments were collected for each activity type for a valid sample.

**Table 1. Number of Completed Questionnaires by Activity Type, NDRPA Survey 2011-12**

Event Type	Number	Valid Sample
Adult Leagues and Activities	538	yes
Adult Sports Events	1,222	yes
Community Activities	957	yes
Facilities	1,132	yes
Youth Leagues and Activities	3,096	yes
Youth Sports Events	933	yes
State Parks	897	yes
<b>Total</b>	<b>8,775</b>	

For some events within the various activity types, an insufficient number of observations were collected for a representative sample. The various events surveyed within each event type are detailed in Table 2. The number of observations (questionnaires collected) for each event is reported and whether sufficient observations were obtained for inclusion in data analysis. In most cases, data from a similar event or an average of several similar events were substituted when insufficient data were collected. In some cases, no substitute was appropriate and no estimate of local spending made.

**Table 2. Activities Sampled, Number of Observations and Statistical Validity, NDRPA Survey 2011-12**

Event	City	Date	Observations	Valid Sample
<b>Adult Leagues and Activities</b>				
Basketball	Fargo, Bismarck	winter 2012	168	yes
Softball	Fargo, Bismarck	summer 2012	180	yes
Volleyball	Fargo, Bismarck	winter & summer 2012	183	yes
<b>Adult Sports Events</b>				
Indoor 3-D Archery Shoot	Jamestown	March 2012	46	yes
Grand Am Basketball Tournament	Grand Forks	March 2012	321	yes
Summer Bonspiel (Curling)	Bismarck	July 2012	13	no
Baron's Old Timers Hockey Tournament	Grand Forks	March 2012	8	no
McQuade Softball Tournament	Bismarck	June 2012	142	yes
Men's Master's 35-Over National Softball Championship	Mandan	September 2012	44	yes
National Softball Tournament	Bismarck	September 2011	4	no
State Rec IV Softball Tournament	Grand Forks	August 2011	481	yes
Adult Racquetball Tournament	Bismarck	March 2012	6	no
Magic City International Skating Competition	Minot	January 2012	51	yes
Winterfest Volleyball Tournament	Fargo	February 2012	106	yes
<b>Community Events and Activities</b>				
Devils Run Car Show	Devils Lake	June 2012	259	yes
Hawaiian Beach Blast	West Fargo	August 2012	34	no
Island Park Art Show	Fargo	August 2011	279	yes
Kite Fest	Jamestown	June 2012	112	yes
Ruckus at the Rec	Valley City	October 2011	111	yes
Summerthing Kids	Grand Forks	June 2012	43	no
Honkin' Haulin' Hands on Trucks	West Fargo	September 2011	88	yes
Cabin Fever Days	Jamestown	February 2012	31	no

**Table 2 (cont). Activities Sampled, Number of Observations and Statistical Validity, NDRPA Survey 2011-12**

Event	City	Date	Observations	Valid Sample
<b>Facilities</b>				
Campgrounds	Wahpeton, Valley City, Fargo	August 2011 May -September 2012 Aug. - September 2011	102	yes
Chahinkapa Zoo	Wahpeton	May -September 2012	337	yes
Elks and Riverside Pools	Grand Forks	May - September 2012	23	no
Golf Courses	Fargo, Jamestown, Bismarck, Dickinson	Aug. - September 2011 May -September 2012	404	yes
Raging Rivers Water Park	Mandan	August 2011 May - September 2012	266	yes
<b>State Parks</b>				
Haunted Fort	Ft. Lincoln	October 2011	397	yes
∞ Campgrounds	Sakakawea, Icelandic, Fort Lincoln, Lewis and Clark, Metigoshe, Sully Creek	August - Dec. 2011 May - September 2012	471	yes
Special Events	Ft. Stevens, Ft, Ransom, Little Missouri	June-July 2012	29	no
<b>Youth Leagues and Activities</b>				
Art	Bismarck, Fargo, Mandan, West Fargo, Williston	Summer 2012	93	yes
Baseball	Bismarck, Fargo, Mandan, Valley City, West Fargo, Williston	Summer 2012	876	yes
Basketball	Fargo, Jamestown, Mandan, Valley City	Winter 2012	87	yes

**Table 2 (cont.). Activities Sampled, Number of Observations and Statistical Validity, NDRPA Survey 2011-12**

Event	City	Date	Observations	Valid Sample
<b>Youth Leagues and Activities (Cont.)</b>				
Golf	Bismarck, Fargo, Jamestown, Mandan, West Fargo, Williston	Summer 2012	147	yes
Hockey	Bismarck, Fargo, Jamestown, West Fargo	Winter 2012	320	yes
Other	Bismarck, Fargo, Jamestown, West Fargo	Summer/Winter 2012	124	yes
Skating	Bismarck, Fargo, Jamestown	Winter 2012	85	yes
Soccer	Bismarck, Dickinson, Fargo, Grand Forks, Jamestown, Mandan, Minot, Other, Valley City, West Fargo, Williston	Summer 2012	639	yes
Softball	Bismarck, Fargo, Grand Forks, Mandan, Valley City, West Fargo	Summer 2012	130	yes
Swimming	Bismarck, Dickinson, Fargo, Jamestown, Mandan	Summer 2012	309	yes
Tennis	Bismarck, Devils Lake, Dickinson, Fargo, Grand Forks, Jamestown, Mandan, Valley City, West Fargo	Summer 2012	166	yes
Volleyball	Bismarck, Dickinson, Fargo, Mandan, Minot, Valley City, West Fargo	Summer 2012	118	yes



**Table 2 (cont.). Activities Sampled, Number of Observations and Statistical Validity, NDRPA Survey 2011-12**

Event	City	Date	Observations	Valid Sample
<b>Youth Leagues and Activities (Cont.)</b>				
American Legion Baseball Tournament	Dickinson	August 2011	167	yes
Babe Ruth Baseball Tournament	Jamestown	July 2011	60	yes
Youth Basketball Tournament	Valley City	March 2012	144	yes
Jr. Olympics Girls Slow Pitch Softball Tournament	Jamestown	July 2012	107	yes
PeeWee Hockey Tournament	Minot	January 2012		
Squirt Hockey Tournament	Wahpeton	March 2012	109	yes
Squirt International Hockey Tournament	Fargo	February 2012	346	yes

## Results

Mean, median, and mode per participant expenditures are presented in Tables 3-10 for each activity type and each specific event surveyed. Three measures of central tendency were reported to aid in interpreting the data. Mean expenditures are representative of the average expenditures of all participants. The median represents the middle value, where half of the reported values were greater and half less than the median value. The mode value is the most frequently reported value. The median and mode are helpful in understanding the composition and distribution of the survey data. Often, personal expenditure data has a long-tailed distribution that is skewed to the right (Taylor et al. 2013). Total local spending per participant for adult sports illustrates a right skewed distribution (Figure 1). Distributions that are skewed to the right are generally characterized by median values that are less than the mean and the mode less than the mean. That is, the most frequently reported observations are low values, with a few observations with high values. Mean values are generally larger and, in some cases, much larger than the median and mode values because the high values “pull up” the mean value. The mean represents an average of all expenditures, and the mode and median would be more representative of a typical participant. This study and its companion study (Bangsund and Hodur 2013) use the mean (average) statistic for estimating local participant spending associated with the events, activities, programs, and facilities related to park and recreation districts. Depending on the application, in some cases the mode or median value may be more representative of a typical participant.

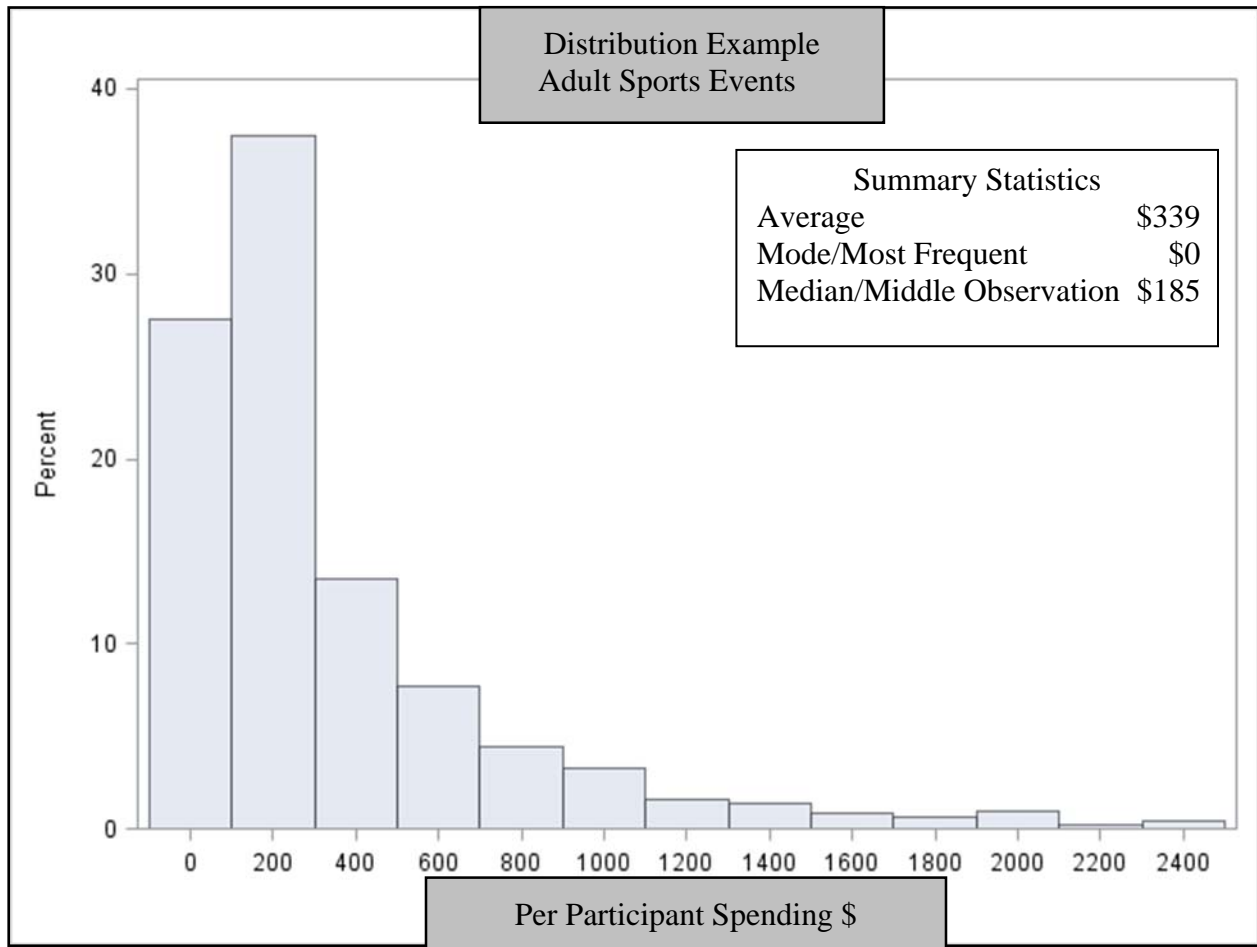


Figure 1. Example Distribution of Total Local Spending Per Participant

Adult Leagues

Average spending per adult league participant ranged from just over \$200 per participant for volleyball leagues to nearly \$500 per participant for softball leagues (Table 3). The median observations were less, ranging from \$150 per league participant for volleyball to nearly \$300 per league participant for softball. The most frequently reported expenditure levels were substantially less, ranging from zero for basketball to \$75 for volleyball. Per-person spending for all adult leagues is detailed in Table 3.

It is unlikely that someone participated in an adult league without making any expenditures. At a minimum a participant likely had some expenditures related to transportation or equipment. The salient point is that for many adult league participants, expenditure related to participation were viewed as so minimal as to not warrant reporting.

<b>Table 3. Local Spending Per League Participant, by Event, Adult Leagues, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Volleyball	\$206.79	\$150.00	\$75.00	167
Basketball	\$332.76	\$188.75	\$0.00	162
Softball	\$481.97	\$289.97	\$60.00	164
<b>All Adult Leagues</b>	<b>\$339.31</b>	<b>\$185.00</b>	<b>\$0.00</b>	<b>494</b>

Adult Sports Events

Average expenditures for adult sport events ranged from \$55 per person for the Indoor 3-D Archery Shoot to over \$200 per person for State Rec IV Softball Tournament (Table 4). Consistent with what is typically observed when gathering expenditure data, median values were less than mean values and mode values less than median values. Expenditure data was only reported for those events with a sufficient number of observations for a representative sample. Some events had relatively few observations compared to other events, but the number of observations collected was sufficient considering the size of the event. For example, while there were only 46 completed questionnaires for the Indoor 3-D Archery Shoot, total participation was approximately 80. Per-person spending for all adult sports events is detailed in Table 4.

<b>Table 4. Local Per-person Spending, by Event, Adult Sports Events, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Indoor 3-D Archery Shoot	\$55.21	\$40.00	\$40.00	46
Grand Am Basketball Tournament	\$97.90	\$41.25	\$0.00	303
Winterfest Volleyball Tournament	\$103.46	\$61.00	\$0.00	104
McQuade Softball Tournament	\$116.86	\$75.00	\$10.00	123
Men's Master's 35-Over National Softball Championship	\$155.06	\$108.33	\$30.00	41
Magic City International Skating Competition	\$196.63	\$196.04	\$0.00	48
State Rec IV Softball Tournament	\$207.33	\$168.00	\$255.50	479
Summer Bonspiel (Curling) <sup>1</sup>	--	--	--	8
Adult Racquetball Tournament <sup>1</sup>	--	--	--	4
Baron's Old Timers Hockey Tournament <sup>1</sup>	--	--	--	8
National Softball Tournament <sup>1</sup>	--	--	--	4
<b>All Adult Sports Events</b>	<b>\$154.17</b>	<b>\$100.00</b>	<b>\$0.00</b>	<b>1,168</b>

<sup>1</sup>Too few observations were collected to estimate spending.

### Community Events and Activities

Local per-person spending for community events and activities was grouped into four categories: arts and crafts, entertainment, festivals, and kids and family activities. Average per-person local expenditures for community activities and events ranged from approximately \$30 per person for kids and family events to approximately \$180 per person for entertainment events (Table 5). As was consistent with other activity types, median and mode values were less than mean values, indicating a similar right-tailed distribution characterized by many observations with low values and a few observations with high values. The various events that were surveyed as representative of each of the four community events and activities categories and associated average expenditures are detailed in Table 5.

<b>Table 5. Local Per-person Spending, by Event, Community Activities, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
<b>Kids and Family</b>	\$29.71	\$5.19	\$0.00	252
Ruckus at the Rec				
Summerthing Kids				
Honkin' Haulin' Hands on Trucks				
Cabin Fever Days				
<b>Arts and Crafts</b>	\$57.55	\$22.50	\$0.00	253
Island Park Art Show				
<b>Festival</b>	\$70.32	\$20.00	\$10.00	130
Hawaiian Beach Blast				
Kite Fest				
<b>Entertainment</b>	\$182.38	\$147.50	\$50.00	219
Devils Run Car Show				
<b>All Community Events</b>	<b>\$83.29</b>	<b>\$26.00</b>	<b>\$0.00</b>	<b>854</b>

### Facilities

Local per-person spending for park and recreation district facilities was similar for three of the four facilities. Average per-person expenditures for Raging Rivers Water Park, campgrounds, and golf courses were similar at \$110, \$150, and \$160 respectively, while per-person expenditures for the Chahinkapa Zoo were considerably less at \$34 per-person (Table 6). Insufficient data was collected to estimate per-person spending at park and recreation district swimming pools. Because the facilities examined are unique with different characteristics and clientele, calculating an overall mean, median, or mode for facilities was not appropriate. As with other expenditure data, median and mode values were less than average values. Per-person spending for facilities is detailed in Table 6.

<b>Table 6. Local Spending, by Event, Facilities, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Chahinkapa Zoo (per-person)	\$34.14	\$19.75	\$0.00	303
Raging Rivers Water Park (per-person)	\$110.70	\$45.50	\$0.00	240
Campgrounds (per night)	\$150.48	\$105.83	\$0.00	96
Golf Courses (per round)	\$160.12	\$57.50	\$0.00	357
Elks and Riverside Pools <sup>1</sup>	--	--	--	22
<b>All Facilities</b>	<b>\$na</b>	<b>\$na</b>	<b>\$na</b>	<b>1,018</b>

<sup>1</sup>Too few observation were collected to estimate expenditures.

### Youth Leagues

Local spending per youth league participant varied considerably, depending on the type of activity. Spending was calculated on a per-participant basis rather than a per-person basis to make expenditure data compatible with participation data provided by park and recreation districts. Average local spending per youth league participant ranged from a low of \$69 for art to over \$1,300 for hockey (Table 7). Per-participant spending for the remaining leagues ranged from \$100 to just over \$300. Average expenditures for all youth leagues was \$339 per youth league participant. Consistent with other activity types, median and mode values were less than mean values. Per-person spending for youth sporting events is detailed in Table 7.

The data collection effort for youth leagues was very successful with the collection of over 2,000 completed survey instruments. Several of the participating park districts had email contacts for parents of league participants. An online survey instrument was used with excellent results.

<b>Table 7. Local Spending Per Youth League Participant, by Event, Youth Leagues, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Art	\$69.05	\$41.25	\$40.00	74
Tennis	\$101.88	\$60.00	\$0.00	137
Volleyball	\$110.73	\$87.50	\$0.00	78
Golf	\$119.51	\$82.50	\$0.00	118
Swimming	\$136.37	\$75.00	\$0.00	244
Other	\$145.54	\$90.00	\$0.00	83
Skating	\$173.14	\$110.00	\$100.00	71
Baseball	\$254.35	\$155.50	\$0.00	758
Basketball	\$257.66	\$135.00	\$40.00	69
Soccer	\$282.86	\$120.00	\$0.00	422
Softball	\$339.40	\$177.50	\$0.00	104
Hockey	\$1,310.33	\$1,050.00	\$550.00	275
<b>All Youth Leagues</b>	<b>\$339.06</b>	<b>\$125.00</b>	<b>\$0.00</b>	<b>2,434</b>

### Youth Sporting Events

Youth sporting events expenditures were also calculated on a per youth sporting event participant basis rather than per-person basis. The youth sports events category included non-league youth activities and these types of events were characterized by non-local participation. It was assumed that often a family or group would travel in conjunction with a youth sporting event. Estimating expenditures on a per participant basis would control for spending for various-sized families or groups and ensure that expenditure data was compatible with participation data provided by park and recreation districts.

Local spending varied considerably between the sampled events. Youth basketball tournament, Jr. Olympics Girls Softball, and Babe Ruth Baseball had slightly lower expenditures, \$83, \$119, and \$285, respectively than other youth sporting events (Table 8). Local per-participant expenditures ranged from \$465 for a PeeWee Hockey tournament to approximately \$800 for an American Legion Baseball tournament and the Squirt International Hockey Tournament. Per-person spending for youth sports events is detailed in Table 8.



<b>Table 8. Local Spending Per Youth Sporting Event Participant, by Event, Youth Sports Events, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Youth Basketball Tournament	\$83.03	\$55.00	\$0.00	143
Jr. Olympics Girls Slow Pitch Softball Tournament	\$118.65	\$92.50	\$35.00	96
Babe Ruth Baseball	\$284.75	\$150.00	\$50.00	57
PeeWee Hockey Tournament	\$465.18	\$410.00	\$0.00	107
American Legion Baseball	\$796.65	\$850.00	\$50.00	167
Squirt International Hockey Tournament	\$811.75	\$775.00	\$0.00	339
<b>All Youth Sports Events</b>	<b>\$547.30</b>	<b>\$310.00</b>	<b>\$0.00</b>	<b>909</b>

Table 9 details per-person and per-participant expenditures for each of the various activity types. Expenditures vary considerably between activity types. Adult leagues, youth leagues, and youth sports events are all based on a per-participant basis, while adult sports events and community events and activities are on a per-person basis.

<b>Table 9. Local Per-person and Per Participant Expenditures by Activity Type, NDRPA Survey 2011-12</b>				
	Mean	Median	Mode	(N)
Adult Leagues <sup>1</sup>	\$339.31	\$185.00	\$0.00	494
Adult Sports Events <sup>2</sup>	\$154.17	\$100.00	\$0.00	1,168
Community <sup>2</sup>	\$83.29	\$26.00	\$0.00	854
Facilities <sup>3</sup>	--	--	--	1,018
Youth Leagues <sup>1</sup>	\$339.06	\$125.00	\$0.00	2,434
Youth Sports Events <sup>1</sup>	\$547.30	\$310.00	\$0.00	909

<sup>1</sup>Spending per participant. <sup>2</sup>Spending per-person. <sup>3</sup>Not able to report overall values for facilities as different spending metrics were used for different types of facilities.

## Participation

Participation and visitation numbers provided by park and recreation districts for various events, activities, and facilities of the participating park and recreation districts were sorted into each of the activity type categories. Participation was summed according to sponsorship category for adult and youth leagues, community activities, and adult and youth sports events for each of the participating park districts.

Participation numbers for the various activity types were impressive. Park and recreation participation across all activity types was reported at just over 500,000. While that figure does not take into consideration that many individuals likely participate in multiple activities, considering the state's population is roughly 700,000, the level of participation is impressive. The largest level of participation was in community events and activities with an estimate of nearly 282,000 participants. Participation in other activity types ranged from 39,000 for youth sports events to 88,000 for youth leagues. Adult sports events and adult league participation was 45,000 and 51,500, respectively (Table 10). Participation rates for each activity type by sponsorship category are detailed in Table 10.

<b>Table 10. Participation in Activity Types, by Sponsorship, 2012</b>				
	Sponsorship Category			
Activity Type	Park District	Partnership	Private	Total
Adult Leagues	33,417	13,887	4,230	51,534
Adult Sports Events	6,637	25,744	12,574	44,955
Community	99,815	105,340	76,510	281,665
Youth Leagues	46,990	34,087	7,238	88,315
Youth Sports Events	5,939	16,641	16,143	38,723
<b>Total</b>	<b>192,798</b>	<b>195,699</b>	<b>116,695</b>	<b>505,192</b>

Participation in adult leagues, adult sports events, community events and activities, facilities, youth leagues, and youth sports events is detailed by sponsorship category and city in Tables 11-15. Participation numbers across all activity types were aligned with size of community. Larger communities had greater participation numbers than smaller communities.

<b>Table 11. Participation in Adult Leagues, by Sponsorship, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total Adult Leagues
Bismarck	10,089	4,402	0	14,491
Devils Lake	1,290	0	0	1,290
Dickinson	2,398	0	0	2,398
Fargo	11,305	1,380	4,160	16,845
Grand Forks	2,510	2,050	0	4,560
Jamestown	425	1,170	0	1,595
Mandan	2,184	80	0	2,264
Minot	0	4,015	0	4,015
Valley City	433	60	20	513
Wahpeton	855	50	50	955
West Fargo	22	680	0	702
Williston	1,906	0	0	1,906
<b>Total</b>	<b>33,417</b>	<b>13,887</b>	<b>4,230</b>	<b>51,534</b>

<b>Table 12. Participation in Adult Sports Events, by Sponsorship, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total Adult Sports Events
Bismarck	310	9,154	1,857	11,321
Devils Lake	850	1,650	4,000	6,500
Dickinson	1,343	1,050	0	2,393
Fargo	2,160	2,545	2,800	7,505
Grand Forks	1,350	3,750	1,800	6,900
Jamestown	220	925	0	1,145
Mandan	0	4,645	1,092	5,737
Minot	0	300	0	300
Valley City	0	1,200	725	1,925
Wahpeton	300	0	0	300
West Fargo	84	525	0	609
Williston	20	0	300	320
<b>Total</b>	<b>6,637</b>	<b>25,744</b>	<b>12,574</b>	<b>44,955</b>

<b>Table 13. Participation in Community Events and Activities, by Sponsorship, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total Community Events and Activities
Bismarck	1,052	24,326	5,250	30,628
Devils Lake	0	9,850	1,500	11,350
Dickinson	0	1,500	12,500	14,000
Fargo	51,973	18,653	0	70,626
Grand Forks	19,600	5,100	15,000	39,700
Jamestown	4,550	0	0	4,550
Mandan	800	8,217	9,690	18,707
Minot	1,000	22,100	7,000	30,100
Valley City	1,100	3,800	6,320	11,220
Wahpeton	0	1,500	0	1,500
West Fargo	17,540	6,074	1,200	24,814
Williston	2,200	4,220	18,050	24,470
<b>Total</b>	<b>99,815</b>	<b>105,340</b>	<b>76,510</b>	<b>281,665</b>

<b>Table 14. Participation in Youth Leagues, by Sponsorship, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total Youth Leagues
Bismarck	17,337	16,189	963	34,489
Devils Lake	1,840	220	60	2,120
Dickinson	1,735	90	835	2,660
Fargo	9,045	165	4,560	13,770
Grand Forks	3,037	2,190	0	5,227
Jamestown	3,545	0	0	3,545
Mandan	2,810	850	0	3,660
Minot	240	12,448	0	12,688
Valley City	1,187	447	160	1,794
Wahpeton	1,180	375	0	1,555
West Fargo	3,254	1,113	100	4,467
Williston	1,780	0	560	2,340
<b>Total</b>	<b>46,990</b>	<b>34,087</b>	<b>7,238</b>	<b>88,315</b>

<b>Table 15. Participation in Youth Sports Events, by Sponsorship, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total Youth Sports Events
Bismarck	95	3,968	3,153	7,216
Devils Lake	1,400	0	0	1,400
Dickinson	2,398	2,080	0	2,080
Fargo	1,060	750	11,035	12,845
Grand Forks	60	5,995	0	6,055
Jamestown	425	700	0	700
Mandan	360	0	0	360
Minot	0	2,153	160	2,313
Valley City	1,565	945	40	2,550
Wahpeton	810	50	450	1,310
West Fargo	0	0	1,305	1,305
Williston	589	0	0	589
<b>Total</b>	<b>5,939</b>	<b>16,641</b>	<b>16,143</b>	<b>38,723</b>

Visitation and participation at selected facilities also reflected a high degree of utilization. Over 400,000 rounds of golf were played at participating park and recreation district golf courses, over 300,000 individuals used park and recreation swimming pools, 155,000 visited water parks/amusement parks and another 287,000 visited zoos (Table 16). Total visitation for selected park and recreation district facilities was over 1 million visitors and participants. Participation rates for facilities are detailed in Table 16.

<b>Table 16. Visitors and Participation at Selected Facilities, City Park Districts, 2012</b>					
City	Campgrounds	Golf Courses	Swimming Pools	Water Parks/ Amusement Parks	Zoos
	- camp nights -	- rounds -	- swimmers -	- visitors -	- visitors -
Bismarck	6,976	86,628	31,604	86,000	147,529
Devils Lake <sup>1</sup>	na	na	12,000	na	na
Dickinson	2,036	24,750	na	na	na
Fargo	5,063	130,000	118,000	na	na
Grand Forks <sup>1</sup>	na	45,000	39,000	na	na
Jamestown <sup>1</sup>	na	21,000	6,512	na	na
Mandan <sup>1</sup>	na	60,000	5,400	69,000	na
Minot <sup>1</sup>	na	18,900	26,148	na	84,597
Valley City	400	10,000	8,700	na	na
Wahpeton	475	na	15,560	na	54,550
West Fargo	na	na	34,000	na	na
Williston	na	4,500	5,000	na	na
<b>Total</b>	<b>14,950</b>	<b>400,778</b>	<b>301,924</b>	<b>155,000</b>	<b>286,676</b>
<sup>1</sup> Community that does not have type of facility is referenced "na."					

Total Local Spending Adult and Youth Leagues, Community Events and Activities, and Adult and Youth Sports Events

Total local spending by activity type and sponsorship category is detailed for each participating park and recreation district in the following sections.

*Bismarck*

Total local spending associated with park and recreation district activities were over \$10 million in Bismarck (Table 17). Activities that were either sponsored by or in partnership with the Bismarck Parks and Recreation District totaled over \$9 million, 85 percent of total local spending. There was some variation in total local spending by activity type. Youth sports events



and adult sports events across all sponsorship categories each contributed just over \$1 million, while community activities and youth leagues contributed \$2 million and \$2.6 million, respectively. Adult leagues represented the single largest contribution with total local expenditures of over \$3 million. Total local spending associated with the activities of the Bismarck Parks and Recreation District is detailed in Table 17.

<b>Table 17. Local Spending, by Type of Activity, by Sponsorship, Bismarck, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$1,731,500	\$1,405,800	\$0	\$3,137,300
Adult Sports Events	\$40,700	\$1,142,700	\$257,200	\$1,440,600
Community Activities	\$57,700	\$1,241,500	\$763,000	\$2,062,200
Youth Leagues	\$1,135,600	\$1,293,100	\$178,700	\$2,607,400
Youth Sports Events	\$15,000	\$834,900	\$394,600	\$1,244,500
<b>Total</b>	<b>\$2,980,500</b>	<b>\$5,918,000</b>	<b>\$1,593,500</b>	<b>\$10,420,000</b>

*Devils Lake*

Total local spending associated with activities and events of Devils Lake Parks and Recreation was \$3.6 million (Table 18). Local spending was greatest for community activities, followed by adult sports events at \$1.6 million and \$900,000, respectively. Spending associated with adult leagues, youth sports events, and youth leagues was considerably less with \$300,000, \$364,000, and \$411,000, respectively. Total expenditures across all activity types were largely attributable to events and activities sponsored by or in partnership with Devils Lake Parks and Recreation, \$2.8 million, approximately 77 percent. Total local spending associated with the activities of Devils Lake Parks and Recreation is detailed in Table 18.

<b>Table 18. Local Spending, by Type of Activity, by Sponsorship, Devils Lake, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$304,800	\$0	\$0	\$304,800
Adult Sports Events	\$133,600	\$238,100	\$552,700	\$924,400
Community Activities	\$0	\$1,361,400	\$259,100	\$1,620,500
Youth Leagues	\$241,200	\$163,600	\$6,700	\$411,500
Youth Sports Events	\$363,800	\$0	\$0	\$363,800
<b>Total</b>	<b>\$1,043,400</b>	<b>\$1,763,100</b>	<b>\$818,500</b>	<b>\$3,625,000</b>

*Dickinson*

Like Devils Lake, expenditures associated with community activities provided the largest local economic contribution in Dickinson, nearly \$2.3 million (Table 19). Most of those expenditures were related to privately sponsored events and activities. Local spending for the other categories was less than for community activities; however, most of the expenditures were related to events and activities sponsored by and in partnership with Dickinson Parks and Recreation. Local spending associated with youth and adult leagues was roughly equal, \$585,000 and \$645,000, respectively. Expenditures related to youth sports events and adult sports events were approximately \$200,000 and \$300,000, respectively. Total local spending associated with the activities of Dickinson Parks and Recreation is detailed in Table 19.

<b>Table 19. Local Spending, by Type of Activity, by Sponsorship, Dickinson, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$645,200	\$0	\$0	\$645,200
Adult Sports Events	\$192,900	\$145,800	\$0	\$338,700
Community Activities	\$0	\$123,100	\$2,158,900	\$2,282,000
Youth Leagues	\$175,200	\$6,200	\$403,500	\$584,900
Youth Sports Events	\$0	\$237,600	\$0	\$237,600
<b>Total</b>	<b>\$1,013,300</b>	<b>\$512,700</b>	<b>\$2,562,400</b>	<b>\$4,088,400</b>

*Fargo*

Total local expenditures related to park district events, activities, and programs were over \$15 million in Fargo (Table 20). Expenditures were nearly evenly split between events and activities sponsored by and in partnership with Fargo Park District with 53 percent of total local expenditures related to park district and partnership activities. Expenditures associated with adult leagues, community events, and youth sports events made the largest contribution to the local economy at \$4.0 million, \$3.7 million and \$3.5 million, respectively. Expenditures related to youth leagues contributed \$2.7 million and adult sports events contributed \$1.1 million. Total local spending associated with the activities of the Fargo Park District is detailed in Table 20.

<b>Table 20. Local Spending, by Type of Activity, by Sponsorship, Fargo, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$2,138,400	\$224,300	\$1,636,500	\$3,999,200
Adult Sports Events	\$223,500	\$453,600	\$439,900	\$1,117,000
Community Activities	\$2,617,100	\$1,106,300	\$0	\$3,723,400
Youth Leagues	\$923,800	\$14,000	\$1,820,500	\$2,758,300
Youth Sports Events	\$162,200	\$189,800	\$3,186,600	\$3,538,600
<b>Total</b>	<b>\$6,065,000</b>	<b>\$1,988,000</b>	<b>\$7,083,500</b>	<b>\$15,136,500</b>

*Grand Forks*

Total local expenditures related to park and recreation activities in Grand Forks were \$5.8 million (Table 21). Most of the expenditures were related to park district sponsored activities or partnership arrangements. Only a small percentage of total local expenditures were related to privately sponsored activities, less than \$500,000 or 7 percent of total expenditures. Total local expenditures were fairly evenly distributed between the activity types, ranging from \$800,000 for adult sports events to \$1.4 million for community activities. Youth sports events, adult leagues, and youth leagues contributed \$1 million, \$1.3 million, and \$1.3 million, respectively. Total local spending associated with the activities of the Grand Forks Park District is detailed in Table 21.

<b>Table 21. Local Spending, by Type of Activity, by Sponsorship, Grand Forks, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$514,800	\$783,700	\$0	\$1,298,500
Adult Sports Events	\$129,600	\$706,200	\$8,400	\$844,200
Community Activities	\$606,000	\$338,200	\$435,500	\$1,379,700
Youth Leagues	\$859,600	\$416,900	\$0	\$1,276,500
Youth Sports Events	\$8,900	\$1,031,500	\$0	\$1,040,400
<b>Total</b>	<b>\$2,118,900</b>	<b>\$3,276,500</b>	<b>\$443,900</b>	<b>\$5,839,300</b>

*Jamestown*

Total local expenditures related to park and recreation district activities in Jamestown were \$1.6 million (Table 22). All local expenditures were related to park district or partnership sponsored events and activities. No private sponsored activities were reported. Youth leagues and adult leagues had the largest local economic contribution with just under \$500,000 each. Local expenditures related to community activities were nearly \$300,000, adult sports events and youth sports events were \$164,000 and \$185,000, respectively. Total local spending associated with the activities of Jamestown Parks and Recreation is detailed in Table 22.

<b>Table 22. Local Spending, by Type of Activity, by Sponsorship, Jamestown, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$75,400	\$404,800	\$0	\$480,200
Adult Sports Events	\$30,400	\$133,500	\$0	\$163,900
Community Activities	\$295,600	\$0	\$0	\$295,600
Youth Leagues	\$530,300	\$0	\$0	\$530,300
Youth Sports Events	\$0	\$184,900	\$0	\$184,900
<b>Total</b>	<b>\$931,700</b>	<b>\$723,200</b>	<b>\$0</b>	<b>\$1,654,900</b>

*Mandan*

Total local expenditures related to park and recreation district activities in Mandan were nearly \$5.5 million (Table 23). Expenditures related to community activities, \$3.1 million, represented over half of the total local expenditures. Of those expenditures related to community activities, over half were from privately sponsored events. Expenditures related to adult sports events, adult leagues, and youth leagues were relatively similar, \$940,000, \$691,000, and \$660,000, respectively. Local expenditures for activity types other than community activities were largely associated with park district and partnership sponsored activities. Total local spending associated with the activities of Mandan Parks and Recreation is detailed in Table 23.

<b>Table 23. Local Spending, by Type of Activity, by Sponsorship, Mandan, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$659,900	\$31,500	\$0	\$691,400
Adult Sports Events	\$0	\$783,000	\$160,100	\$943,100
Community Activities	\$23,200	\$1,419,200	\$1,673,600	\$3,116,000
Youth Leagues	\$342,100	\$318,000	\$0	\$660,100
Youth Sports Events	\$80,700	\$0	\$0	\$80,700
<b>Total</b>	<b>\$1,105,900</b>	<b>\$2,551,700</b>	<b>\$1,833,700</b>	<b>\$5,491,300</b>

*Minot*

Total local expenditures related to park and recreation events and activities in Minot were \$7.6 million (Table 24). Most of the expenditures were related to park district and partnership sponsored events and activities, \$6.5 million or 85 percent of the total. Only community activities and youth sports events had any expenditures attributed to privately sponsored events and activities. Approximately half of expenditures related to community activities and a very small fraction (less than 5 percent) of expenditures related to youth sports events were attributable to privately sponsored events. Expenditures related to community activities made the largest contribution to the local economy, \$3.5 million, followed by youth leagues at \$2.0 million and adult leagues with \$1.2 million. Total local spending associated with the activities of the Minot Park District is detailed in Table 24.

<b>Table 24. Local Spending, by Type of Activity, by Sponsorship, Minot, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$0	\$1,202,000	\$0	\$1,202,000
Adult Sports Events	\$0	\$55,900	\$0	\$55,900
Community Activities	\$69,900	\$2,429,800	1,082,000	\$3,581,700
Youth Leagues	\$7,000	\$2,051,400	\$0	\$2,058,400
Youth Sports Events	\$0	\$703,500	\$35,900	\$739,400
<b>Total</b>	<b>\$76,900</b>	<b>\$6,442,600</b>	<b>\$1,117,900</b>	<b>\$7,637,400</b>

*Valley City*

Total local expenditures related to park and recreation events and activities in Valley City were estimated at \$1.4 million (Table 25). Total local expenditures were relatively evenly distributed between the activity types, with the exception of community activities. Community activities were responsible for nearly 40 percent, or \$550,000, of total local expenditures. The other activity type contributions to the total were relatively evenly distributed. Local contribution of youth sports events, youth leagues, and adult sports events was \$284,000, \$262,000, and \$220,000, respectively. Expenditures related to adult leagues was \$127,000. Most of the expenditures were attributable to activities sponsored by and in partnership with the park district, \$1 million of the \$1.4 million. Total local spending associated with the activities of Valley City Parks and Recreation is detailed in Table 25.

<b>Table 25. Local Spending, by Type of Activity, by Sponsorship, Valley City, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$110,500	\$12,800	\$3,300	\$126,600
Adult Sports Events	\$0	\$149,500	\$70,900	\$220,400
Community Activities	\$31,900	\$223,900	\$291,300	\$547,100
Youth Leagues	\$175,500	\$58,200	\$28,400	\$262,100
Youth Sports Events	\$113,600	\$164,400	\$5,900	\$283,900
<b>Total</b>	<b>\$431,500</b>	<b>\$608,800</b>	<b>\$399,800</b>	<b>\$1,440,100</b>

*Wahpeton*

Total local expenditures related to park and recreation activities in Wahpeton were estimated at \$864,000 (Table 26). Youth leagues, youth sports events, and adult leagues contributed \$290,000, \$244,000, and \$240,000, respectively, for 90 percent of total local expenditures. Expenditures related to adults sports events and community activities contributed less than \$100,000 combined. Most (81 percent) of the local expenditures were for events and activities sponsored by and in partnership with the park district. Only youth sports events and adult leagues had any privately sponsored activities. Total local spending associated with the activities of Wahpeton Parks and Recreation is detailed in Table 26.

<b>Table 26. Local Spending, by Type of Activity, by Sponsorship, Wahpeton, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$228,400	\$2,800	\$8,300	\$239,500
Adult Sports Events	\$47,100	\$0	\$0	\$47,100
Community Activities	\$0	\$43,500	\$0	\$43,500
Youth Leagues	\$170,300	\$120,000	\$0	\$290,300
Youth Sports Events	\$81,800	\$7,400	\$154,500	\$243,700
<b>Total</b>	<b>\$527,600</b>	<b>\$173,700</b>	<b>\$162,800</b>	<b>\$864,100</b>

*West Fargo*

Total local expenditures related to park and recreation district events and activities were estimated at \$2.5 million in West Fargo (Table 27). Like several other participating districts, the largest single contribution came from community activities. Just under 50 percent of the total local contribution or \$1.0 million was attributable to community activities. There was substantial variation in the relative contribution of the other activity types. Youth leagues and youth sports events contributed \$665,000 and \$407,000, respectively, while adult leagues and adult sports events contributed \$264,000 and \$116,000, respectively. Over 80 percent of the total local contribution was related to events and activities sponsored by or in partnership with the park district. Total local spending associated with the activities of West Fargo Parks and Recreation is detailed in Table 27.

<b>Table 27. Local Spending, by Type of Activity, by Sponsorship, West Fargo, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$1,200	\$262,900	\$0	\$264,100
Adult Sports Events	\$8,200	\$107,800	\$0	\$116,000
Community Activities	\$841,900	\$179,900	\$34,800	\$1,055,700
Youth Leagues	\$401,700	\$254,500	\$8,500	\$664,700
Youth Sports Events	\$0	\$0	\$406,900	\$406,900
<b>Total</b>	<b>\$1,253,000</b>	<b>\$804,200</b>	<b>\$450,200</b>	<b>\$2,507,400</b>

*Williston*

Total local expenditures related to park and recreation district activities in Williston were \$3.8 million (Table 28). Community events accounted for \$2.6 million or 68 percent of the total. Adult leagues and youth leagues made approximately equal contributions of \$470,000 and \$493,000, respectively. Youth sports events and adult sports events contributed \$130,000 and \$31,000, respectively. Because two of the three largest activity types were largely sponsored by private entities, most of the total contribution was attributable to events and activities sponsored by private entities, \$2.5 million or 65 percent of the total. Total local spending associated with the activities of the Williston Parks and Recreation District is detailed in Table 28.

<b>Table 28. Local Spending, by Type of Activity, by Sponsorship, Williston, 2012</b>				
	Sponsorship Category			
Type of Activity	Park District	Partnership	Private	Total
Adult Leagues	\$469,700	\$0	\$0	\$469,700
Adult Sports Events	\$2,800	\$0	\$27,900	\$30,700
Community Activities	\$63,800	\$325,100	\$2,305,200	\$2,694,100
Youth Leagues	\$251,400	\$0	\$241,500	\$492,900
Youth Sports Events	\$130,200	\$0	\$0	\$130,200
<b>Total</b>	<b>\$917,900</b>	<b>\$325,100</b>	<b>\$2,574,600</b>	<b>\$4,236,600</b>



*District Comparison*

Local spending varied considerably among participating park and recreation districts for leagues, events, and activities. The two largest participating districts naturally had greater levels of local spending. Differences between study districts were a function of the natural variation in participation levels between larger and smaller communities. Total local expenditures across all sponsorship categories for events and activities in all cities totaled over \$62 million (Table 29). Total local spending, by city, for leagues, events, and activities associated with participating park and recreation districts by sponsorship category is detailed in Table 29.

<b>Table 29. Local Spending, Leagues, Events and Activities by City, by Sponsorship Category, 2012</b>				
	Sponsorship Category			
City	Park District	Partnership	Private	Total
Bismarck	\$2,980,500	\$5,918,000	\$1,593,500	\$10,420,000
Devils Lake	\$1,043,400	\$1,763,100	\$818,500	\$3,625,000
Dickinson	\$1,013,300	\$512,700	\$2,562,400	\$4,088,400
Fargo	\$6,065,000	\$1,988,000	\$7,083,500	\$15,136,500
Grand Forks	\$2,118,900	\$3,276,500	\$443,900	\$5,839,300
Jamestown	\$931,700	\$723,200	\$0	\$1,654,900
Mandan	\$1,105,900	\$2,551,700	\$1,833,700	\$5,491,300
Minot	\$76,900	\$6,442,600	\$1,117,900	\$7,637,400
Valley City	\$431,500	\$608,800	\$399,800	\$1,440,100
Wahpeton	\$527,600	\$173,700	\$162,800	\$864,100
West Fargo	\$1,253,000	\$804,200	\$450,200	\$2,507,400
Williston	\$917,900	\$325,100	\$2,574,600	\$3,817,600
<b>Total</b>	<b>\$18,465,600</b>	<b>\$25,087,600</b>	<b>\$10,040,800</b>	<b>\$62,594,000</b>

The largest single component of total local spending was from expenditures related to community activities and events, \$22 million or 36 percent of the total (Table 30). Expenditures related to adult leagues and youth leagues were approximately equal, \$12.8 million and \$12.6 million, respectively, each 20 percent of the total. Expenditures related to youth sports events and adult sports events contributed \$8.5 million and \$6.2 million or 14 percent and 10 percent respectively. Total local expenditures by event type and percent of total by event type are detailed in Table 30.

**Table 30. Local Spending, Leagues, Events and Activities by Type of Activity, by Sponsorship, All Cities, 2012**

Type of Activity	Sponsorship Category			Total
	Park District	Partnership	Private	
Adult Leagues	\$6,879,800	\$4,330,600	\$1,648,100	\$12,858,500
Percent of Total	11.3 %	39.5 %	49.3 %	20.5 %
Adult Sports Events	\$808,800	\$3,916,100	\$1,517,200	\$6,242,100
Percent of Total	20.6 %	39.2 %	40.2 %	10.0 %
Community Activities	\$4,607,100	\$8,791,000	\$9,003,400	\$22,401,500
Percent of Total	29.5 %	40.1 %	30.4 %	35.8 %
Youth Leagues	\$5,213,700	\$45,695,900	\$2,687,800	\$12,597,400
Percent of Total	53.5 %	33.7 %	12.8 %	20.1 %
Youth Sports Events	\$956,200	\$3,354,000	\$4,184,400	\$8,494,600
Percent of Total	13.0 %	62.7 %	24.3 %	13.6 %
<b>Total</b>	<b>\$18,465,600</b>	<b>\$25,087,600</b>	<b>\$19,040,800</b>	<b>\$62,594,000</b>

*Total Local Spending Facilities*

Total local spending for select facilities was estimated to be \$63.4 million (Table 31), an amount nearly identical to the expenditures related to leagues, events, and activities, \$62.6 million. Expenditures related to golf courses were nearly \$36 million. Spending levels were a function of both high per round expenditures and high participation rates. Total local spending associated with water parks/amusement parks was \$17 million, zoos \$8.3 million, and campgrounds \$2 million. No estimate of local expenditures related to swimming pools was made as insufficient data was collected. Because no reasonable substitute was available, no estimate of total local expenditures related to swimming pools was possible. Expenditures related to swimming pools would increase total expenditures related to facilities. To what degree is unknown. Naturally, variability between study communities for facilities was substantial. Some park districts have multiple facilities and others few facilities. Expenditures ranged from less than a million dollars in Williston and Valley City to over \$12 million in Mandan and Fargo to over \$22 million in Bismarck. Total local spending associated with selected facilities are detailed in Table 31.

<b>Table 31. Total Local Spending, Selected Facilities, City Park Districts, 2012</b>						
<b>City</b>	<b>Campgrounds</b>	<b>Golf Courses</b>	<b>Swimming Pools</b>	<b>Waterparks and Amusement Parks</b>	<b>Zoos</b>	<b>City Total</b>
Bismarck	\$977,000	\$7,916,000	\$0	\$9,433,000	\$4,284,000	\$22,610,000
Devils Lake	na	na	\$0	na	na	\$0
Dickinson	\$285,000	\$2,303,000	\$0	na	na	\$2,588,000
Fargo	\$709,000	\$11,887,000	\$0	na	na	\$12,596,000
Grand Forks	na	\$4,170,000	\$0	na	na	\$4,170,000
Jamestown	na	\$1,954,000	\$0	na	na	\$1,954,000
Mandan	na	\$4,621,000	\$0	\$7,569,000	na	\$12,190,000
Minot	na	\$4,621,000	\$0	na	\$2,457,000	\$2,457,000
Valley City	\$56,000	\$930,000	\$0	na	na	\$986,000
Wahpeton	\$67,000	na	\$0	na	\$1,584,000	\$1,584,000
West Fargo	na	na	\$0	na	na	\$0
Williston	na	\$419,000	\$0	na	na	\$419,000
<b>Total</b>	<b>\$2,095,000</b>	<b>\$35,981,000</b>	<b>\$0</b>	<b>\$17,002,000</b>	<b>\$8,325,000</b>	<b>\$63,402,000</b>

Total local expenditures for leagues, events, activities, and facilities varied considerably by city. Because of the variability in the size and composition of the various park and recreation districts, city by city comparisons should be approached with caution. The size of community, the number of participants, and the number and type of facilities in each community all impacted results. Smaller communities of Devils Lake, Jamestown, Valley City, Wahpeton, West Fargo, and Williston had similar levels of economic activity related to park and recreation district leagues, events, activities, and facilities, ranging from \$2.4 to \$3.6 million. The state's two largest communities, Fargo and Bismarck, had much higher levels of economic activity, \$27.7 and \$33 million respectively. Dickinson, Grand Forks, Minot, and Mandan ranged from \$6.6 to \$17 million. Combined local effects across all participating districts and all activity types and facilities were nearly \$124 million. Total local expenditures for all activity types are detailed in Table 32.

<b>Table 32. Total Local Spending, Leagues, Events and Activities and Selected Facilities, City Park Districts, 2012</b>							
City	Adult Leagues	Adult Sports Events	Community Events and Activities	Youth Leagues	Youth Sports Events	Facilities	City Total
Bismarck	\$3,137,000	\$1,441,000	\$2,062,000	\$2,607,000	\$1,244,000	\$22,610,000	\$33,101,000
Devils Lake	\$304,800	\$924,400	\$1,620,500	\$411,500	\$363,800	\$0	\$3,625,000
Dickinson	\$645,200	\$338,700	\$2,282,000	\$584,900	\$237,600	\$2,588,000	\$6,676,400
Fargo	\$3,999,200	\$1,117,000	\$3,723,400	\$2,758,300	\$3,538,600	\$12,596,000	\$27,732,500
Grand Forks	\$1,298,500	\$844,200	\$1,379,700	\$1,276,500	\$1,040,400	\$4,170,000	\$10,009,300
Jamestown	\$480,200	\$163,900	\$295,600	\$530,300	\$184,900	\$1,954,000	\$3,608,900
Mandan	\$691,400	\$943,100	\$3,116,000	\$660,000	\$80,700	\$12,190,000	\$17,681,200
Minot	\$1,202,000	\$55,900	\$3,581,700	\$2,058,400	\$739,400	\$2,457,000	\$10,094,400
Valley City	\$126,600	\$220,400	\$547,100	\$262,100	\$283,900	\$986,000	\$2,426,100
Wahpeton	\$239,500	\$47,100	\$43,500	\$290,300	\$243,700	\$1,584,000	\$2,448,100
West Fargo	\$264,100	\$116,000	\$1,055,700	\$664,700	\$406,900	\$0	\$2,507,400
Williston	\$469,700	\$30,700	\$2,694,100	\$492,900	\$130,200	\$419,000	\$4,236,600
<b>Total All</b>	<b>\$12,858,200</b>	<b>\$6,242,400</b>	<b>\$22,401,300</b>	<b>\$12,596,900</b>	<b>\$8,494,100</b>	<b>\$61,554,000</b>	<b>\$123,646,500</b>

Findings reported here represent local effects only. Estimates of local effects do not and should not include spending elsewhere in North Dakota; however, most of the economic effects are captured in the estimate of local effects. Only a small percentage of spending related to leagues and events were made elsewhere in North Dakota. Ninety-three percent of statewide effects are captured in local spending for events and leagues and 83 percent for selected facilities' expenditures. Local effects do not include park and recreation district operating expenditures. See Bangsund and Hodur (2013) for a discussion of park and recreation district operating expenditures. Comparisons of statewide and local effects are detailed in Table 33.

<b>Table 33. Comparison of Local and Statewide Direct Economic Effects, City Park Districts, 2012</b>			
Type of Activity	Statewide	Local	Percent of Statewide
		000s	
Events and Leagues	\$67,553	\$62,594	92.7 %
Selected Facilities	\$76,587	\$63,402	82.8 %
<b>Total</b>	<b>\$144,140</b>	<b>\$125,996</b>	<b>87.4 %</b>

### *State Parks*

Per-person local expenditures for state parks were calculated using three different metrics. Camper expenditures were based on spending per trip, general visitation expenditures were based on spending per day, and special events expenditures were based on spending per person. The various metrics were used to be compatible with how NDPRD compiles visitation/participation numbers. Accordingly, comparing expenditures between the three categories of visitors or calculating an average for all state park visitors is not appropriate due to the use of different metrics. Special events participants spent an average of \$26 per person, general use visitors spent an average of \$38 per day, and campers spent an average of \$96 per trip (Table 34). Consistent with the other expenditure data collected, median and mode values were less than average values. Special events expenditures were based on data collected at only one event, the Haunted Fort at Fort Abraham Lincoln State Park. There were insufficient numbers of completed questionnaires collected at other special events for inclusion in the data set. Local per-person spending for state park visitors is detailed in Table 34.

<b>Table 34. Local Spending Per-person by Event, State Parks, General Park Visitors, 2012</b>				
	Mean	Median	Mode	(N)
Campers	\$96.33	\$62.50	\$25.00	454
General Visitation	\$38.44	\$25.00	\$35.00	454
Special Events <sup>1</sup>	\$26.39	\$10.00	\$10.00	344
All State Park Visitors <sup>2</sup>	--	--	--	--
<sup>1</sup> All observations for special events were collected at one event, the Haunted Fort at Fort Abraham Lincoln State Park. There were insufficient numbers of questionnaires collected at other special events to be included in the data set. <sup>2</sup> Average expenditures for all state park visitors are not available as the average values for the various categories are based on different metrics. Campers are based on expenditures per trip, general visitation is based on expenditures per day, and special events are expenditures per-person.				

Visitation at North Dakota state parks was also substantial. Average annual visitation was over 1,000,000. Nearly 200,000 visitors stayed overnight in a state park, and nearly 30,000 participated in special events (Table 39). Visitation to all state parks is detailed in Table 35.

**Table 35. Average Annual Visitation at North Dakota State Parks, 2009 through 2011**

State Park	Average Annual Visitation	Day Visitors/General Visitation	Visitors Staying Overnight	Participation at Special Events
Fort Stevenson	143,825	109,546	26,454	7,825
Fort Abraham Lincoln	119,839	96,687	16,456	6,696
Icelandic	114,906	79,078	29,963	5,865
Lake Metigoshe	113,695	95,484	17,120	1,091
Lake Sakakawea	107,670	79,828	27,717	125
Grahams Island	86,999	58,825	27,974	200
Turtle River	74,583	59,430	11,653	3,500
Lewis and Clark	71,620	52,895	17,505	1,220
Indian Hills	60,391	60,391	-- <sup>1</sup>	-- <sup>1</sup>
Sully Creek	50,343	45,364	4,979	-- <sup>1</sup>
Cross Ranch	49,595	44,582	4,433	580
Fort Ransom	39,999	31,853	6,046	2,100
Beaver Lake	18,497	14,323	4,019	155
Little Missouri	17,160	12,440	4,600	120
<b>Total</b>	<b>1,069,122</b>	<b>840,726</b>	<b>198,919</b>	<b>29,477</b>

<sup>1</sup>Not available at this park.

Total local spending for visitors to state parks was over \$52 million. Local expenditures for day visitor/general visitation were greater than the other visitor categories, even though visitors staying overnight spent more per person, because of the large number of visitors. Local visitor/participant spending for North Dakota state parks by type of visitor is detailed in Table 36.



<b>Table 36. Local Spending, North Dakota State Parks, 2012</b>				
State Park	Day Visitors/General Visitation	Visitors Staying Overnight	Participation at Special Events	Total All Visitors
Fort Stevenson	\$4,210,944	\$2,548,323	\$206,502	\$6,965,769
Fort Abraham Lincoln	\$3,716,662	\$1,585,171	\$176,707	\$5,478,541
Icelandic	\$3,039,760	\$2,886,332	\$154,777	\$6,080,870
Lake Metigoshe	\$3,670,395	\$1,649,195	\$28,791	\$5,348,381
Lake Sakakawea	\$3,068,600	\$2,669,950	\$3,299	\$5,741,848
Grahams Island	\$2,261,224	\$2,694,758	\$5,278	\$4,961,260
Turtle River	\$2,284,496	\$1,122,517	\$92,365	\$3,499,378
Lewis and Clark	\$2,033,270	\$1,686,291	\$32,196	\$3,751,757
Indian Hills	\$2,321,430	na	na	\$2,321,430
Sully Creek	\$1,743,807	\$479,589	na	\$2,223,396
Cross Ranch	\$1,713,726	\$427,043	\$15,306	\$2,156,077
Fort Ransom	\$1,224,444	\$582,373	\$55,419	\$1,862,236
Beaver Lake	\$550,576	\$387,172	\$4,090	\$941,830
Little Missouri	\$478,186	\$443,137	\$3,167	\$924,490
<b>Total</b>	<b>\$32,317,513</b>	<b>\$19,161,854</b>	<b>\$777,898</b>	<b>\$52,257,273</b>

Findings reported here represent local effects only. Estimates of local effects do not and should not include spending elsewhere in North Dakota. A majority of economic effects were captured in the estimate of local effects. Local effects do not include NDPRD operating expenditures. Over half of expenditures related to participant expenditures at state parks were made in the local area near the state park (Table 37). Because people often travel to state parks and they can be destination locations, it is reasonable that there were substantial expenditures made statewide and expenditures are less localized than expenditures related to park and recreation districts. See Bangsund and Hodur (2013) for NDPRD operations expenditures and state wide effects.

<b>Table 37. Comparison of Local and Statewide Direct Economic Effects, State Parks, 2012</b>			
Type of Activity	Statewide	Local	Percent of Statewide
	-----000s-----		
State Parks	\$89,354	\$52,257	58.5 %

**Key Findings/Interpretation of Finding**

An extensive and wide-reaching primary data collection effort was for the most part highly successful. For most sample events, an appropriate number of observations were collected for a representative sample. Accordingly, per-person expenditures represent the best available approximation of park and recreation district participant expenditures. Expenditure data can be used as a tool to describe participants in various types of activities and can also be used by park and recreation agencies to estimate and measure the potential effects of programs, activities, or events under consideration.

Estimating the number of participants for various events and activities offered by participating park and recreation districts was also a substantial undertaking. The effort resulted in an inventory of the number of participants for each event, activity, or selected facility for each of the participating park districts by sponsorship category. Participation numbers in combination with survey data were used to estimate local economic effects of park and recreation district events, activities, and facilities.

Participation numbers were substantial. Over 500,000 people participated in adult leagues, adult sports events, community events and activities, youth leagues, and youth sports events. Over 400,000 rounds of golf were played on participant park and recreation golf courses, 456,000 people used park and recreation district swimming pools and water parks/amusement parks, 300,000 people visited park and recreation district zoos, and there were nearly 15,000 camp nights in park and recreation campgrounds. North Dakota state parks had over 1 million visitors.

The number of participants is relevant for two reasons. While the numbers do not represent unique individuals, the sum of participation and visitation was substantial. In a state with a population of just under 700,000, 12 park and recreation districts and the NDPRD counted over 2.4 million people that participated in leagues, events, or activities or visited park and recreation district facilities or state parks. The large participation numbers illustrate the degree with which park and recreation districts and the North Dakota state parks are providing recreation opportunities and services and the degree with which people are availing themselves of those opportunities. Participation numbers do not included any estimates of utilization of open access facilities such as parks, trail systems, boat launches, etc. The second reason the number of participants is relevant is because participation also drives economic effects.

Per-person and per-participant expenditures varied substantially between the five park district activity types and between the specific events within each type. For example, average local spending per person or per participant ranged from about \$80 per person for community events and activities to over \$500 per participant for youth leagues. Further, there was substantial variation within each event type. For example, per participant spending for youth leagues ranged from around \$69 per participant for art activities to \$1,300 per participant for hockey. The other leagues surveyed ranged from \$100 to \$300 per participant. Because of such great variability within event types, when using study findings to approximate potential economic activity, it is important to use as specific data as possible. That is, it would generally be recommended to try to use data at the event level rather than at the activity type level. If, however, it is not possible to reasonably assume similarity to an event at the event level, using the activity type variable would be acceptable and appropriate.

Average per-person expenditures were not the determining factor in the relative economic contribution of the various activities and events. Overall, and in many districts, the single largest economic contribution came from expenditures related to community events and activities, the category with the lowest average per-person expenditures but with the highest level of participation. While average local per-person expenditures were lower for community events and activities, participation rates were three times higher than the next closest category, youth leagues. Youth leagues and adult leagues also had substantial participation rates and together represented 40 percent of total expenditures across all districts. Higher per-participant expenditures, combined with 139,000 participants, resulted in substantial local economic effects from park and recreation adult and youth leagues. Total local expenditures in the participating cities were \$62.5 million. Three-fourths of the expenditures were related to park district and partnership sponsored events and activities.

Park and recreation district facilities also had a substantial local economic impact. Over 1 million people visited and used park and recreation district facilities. Spending associated with campgrounds, golf courses, swimming pools, water and amusement parks, and zoos was estimated to be \$63.4 million, an amount approximately equal to the level of economic activity related to other park and recreation district activities included in this analysis. Not all of the activities and services provided by park and recreation districts were included in this analysis. Quantifying the economic effects of open access facilities such as parks and playgrounds, trails systems, boat ramps, etc., was beyond the scope of this study.

North Dakota state parks also had substantial economic activity associated with camping, general use, and special events. A million participants used North Dakota state parks with local economic activity related to that use of over \$52 million. The number of people using North Dakota state parks and the associated economic activity was substantial. Study findings not only describe and measure participation and economic activity associated with park and recreation district and state parks operations, but provide park and recreation agencies with a tool with which to describe and measure potential activities, events, and programs.

## References

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## Appendix A









