

**W.A. FRANKE COLLEGE OF
FORESTRY & CONSERVATION**
UNIVERSITY OF MONTANA

Research Summit, Feb. 21, 2018

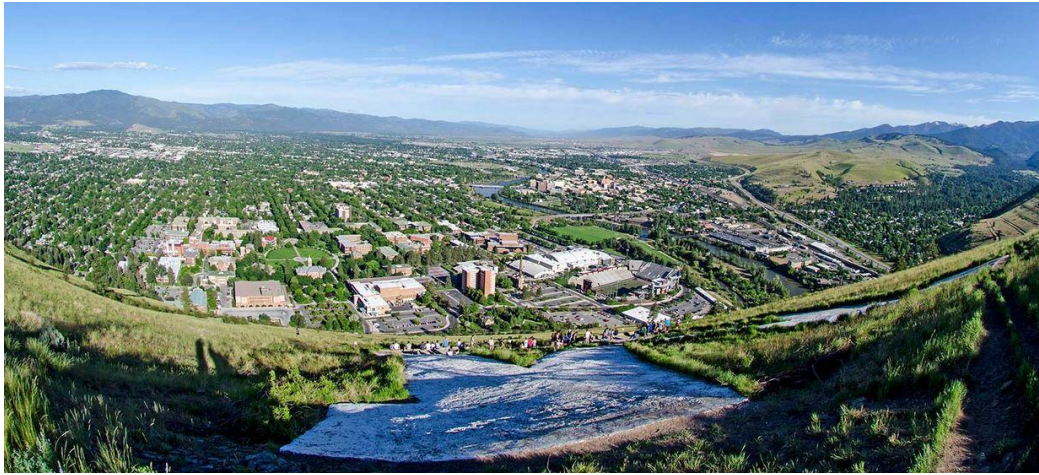
Dr. Tom DeLuca

Dr. Norma Nickerson

Dr. Jeremy Sage



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TOURISM & RECREATION RESEARCH
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- ITRR was established 31 years ago (1987) to conduct objective research in tourism and recreation. ITRR is housed in the W.A. Franke College of Forestry and Conservation at The University of Montana-Missoula.



- Majority of ITRR funding comes from 2.5% of the statewide bed tax.

ITRR provides citizens, leaders and policy makers with objective tourism and recreation research essential to making informed decisions for advancing Montana's economy while sustaining its natural resources.



Areas of Research

Economic Impact of Nonresident Travel

Visitor Characteristics and Expenditures

Social and Environmental Impacts of Tourism

Regional and Community Tourism Planning and Development

Niche Market Studies

Outdoor Recreation

Travel and Recreation Yearly Outlook

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Why is ITRR housed at the University?

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UNIVERSITY OF MONTANA

University Research

Scientific

Unbiased

Ethical – IRB requirements

Theoretical

Applied

Academic Mind

1. Do I have the right student for the project?
2. What theoretical framework will work?
3. A Ph.D. will need at least 2 years to conduct the study.
4. Best methodological approach to this study is ...

Practitioner Mind

1. Universities have tons of students to choose from.
2. This is applied research...not theory.
3. I need the report in about 2 months.
4. What is the best (or easiest) method to get it done fast?

Academic Mind

5. Write the proposal with budget.
6. IRB (Institutional Review Board) will take about 'X' weeks to approve.
7. Send proposal to campus research office and set up as a new project (couple weeks).

Practitioner Mind

5. I know what I want and how much money.
6. Let's have the board of directors go through the survey instrument.
7. We're ready. What's taking you so long?.....

.....
.....
.....

Academic Mind

8. Train student(s)
9. Collect data
10. Clean data
11. Analyze data
12. Write report and send to client
13. Rewrite report to make it less academic.
14. Write it for an academic journal article.

Practitioner Mind

8. Waiting
9. Waiting
10. Waiting
11. Waiting
12. Report is too hard to read and understand...
13. Board reviews report and Ok's it. Yes!
14. What? You can send our information out to others?



Defendable

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ITRR – Research Lens

- Research Retreat – identify issues
- Annual research requests
- Review and approval by TAC Research Committee and the full TAC



Measurement

Economic

Jobs

Seasonal,
part/full time

Businesses

% of
community
businesses in
tourism

Public land
&
contribution

USFS,
NPS,
BLM

Economic
contribution

Hotels,
Restaurants,
Retail, etc.

Spending

How much
on "Made
in MT"
products?

What
mementos
are
purchased?

Conservation

Sustainability

Resource protection

Sights, sounds, smells of nature

Wildlife & public support

Resident vs visitor perception

Geotourism

Businesses' geotourism behavior

Willingness to pay (e.g. non-game wildlife)

Recycling access

Visitor connection to community

Community authenticity (supply side)

Importance of authenticity to visitors

Public Lands

Use

Solitude

Perception

Development & Education

Partnerships

Public agencies & industry

ID, WY, British Columbia, Alberta

NP & Gateway communities planning trip info

New alliances

Restaurants, gas stations, & retail

Economic Development

Resource extraction to tourism-land manager views

Native Americans

Education

Elected Officials

Residents

Perceptions & support of tourism: economic & others

Travel Behavior

How to extend stay

Residents

Activities

Destination choice criteria

Expectations/perceptions of MT

Nature/beauty perception

Travel routes

Planning time frame & sources

Information sources enroute

Type of fun

History enthusiasts vs. non

Why Montana?

Cultural experience choices

Positive & negative

Route selection

Travel distances

- Positive & negative
- Nature/beauty perception
- Experiences

Promotion

Technology

Use by
visitors

Expectations
of access
during trip

Connecting to
communities
while
traveling

Information Sources

Arts &
Culture

Spontaneous
awareness of
what to do

ITRR – Research Lens

- Research Retreat – identify issues
- Annual research requests
- Review and approval by TAC Research Committee and the full TAC



Data Collection: Visitor Surveyor

- Intercepting Nonresidents & MT Residents
 - Intercepted at
 - Gas Stations
 - Airports
 - Rest Areas
 - Nonresidents
 - Demographics, travel behavior, spending, travel routes
 - Residents
 - Questions rotate quarterly



Location of 8 Regional Survey Territories



iPad used to ask up-front questions

Nonresidents:

- 3-5 minutes
- Includes spending
- Ask for participation in follow-up survey
 - Mailback survey
 - Incentive
 - Panel recruitment



Residents:

- 1-2 minutes tops

INTRODUCTION for Gas Stations or Rest Areas: I'm _____ from the University of Montana doing a study of nonresident travelers in Montana. I noticed your license plate was from _____. Could I ask you a few questions about your travel in Montana?

INTRODUCTION
study of nonres
(If No,) Could I a

INSTRUCTION
(residence)

In what US State
reside?

Test

Have you ever v

Purpose of Trip
Script: "I am go
trip and just say yes 'or no to each." (Select ALL that apply)

Purpose of Trip (ALL Purposes)
Script: "I am going to list all of the possible purposes for being in Montana on THIS trip and just say yes or no to each." (Select ALL that apply)

- Vacation, recreation, or pleasure
- Visit friends, relatives, family event
- Just passing through
- Shopping

Select

Of these purposes you just mentioned (replied 'yes' to), what is the MAIN purpose for you being IN MONTANA?

- Proportion Counts
 - Highway Entry Points
 - Airports
 - Year-round data collection



Challenges

- **Changing surveyors**
 - Drop everything and find replacement
 - Time intensive to recruit, interview, hire, train
- **Schedule Adjustments**
 - Weather/road conditions; sick employees
 - Stations out of gas, pump issues

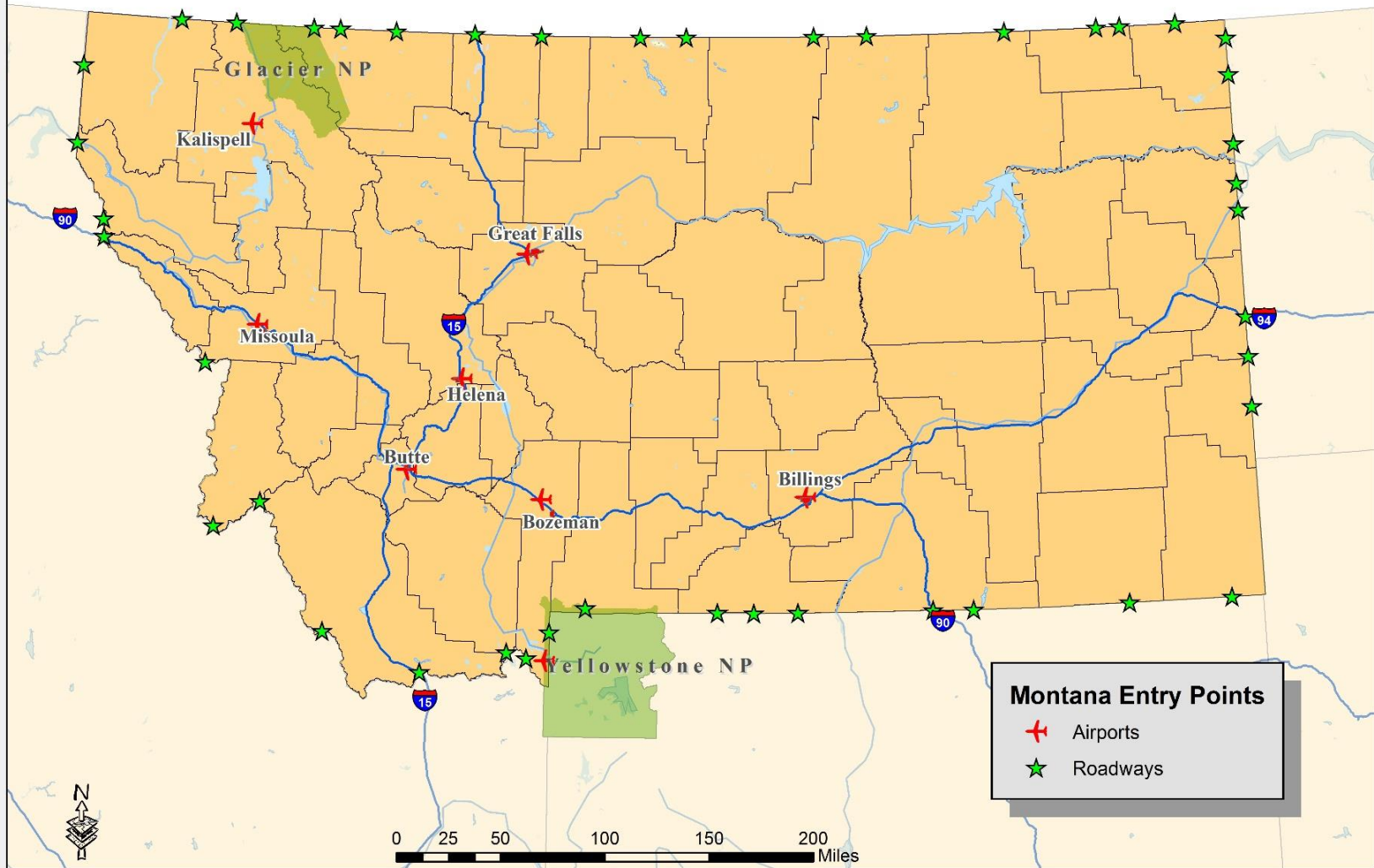
TOOLS

Quarterly data sets

- Data is weighted by entry point and trip purpose.
- Expenditure data is first delimited to 3 standard deviations plus the mean to account for outliers.
- The mean of the delimited expenditure categories gives us the “average daily group expenditure.”
- All data is cleaned and uploaded to the ITRR “Interactive Data set”

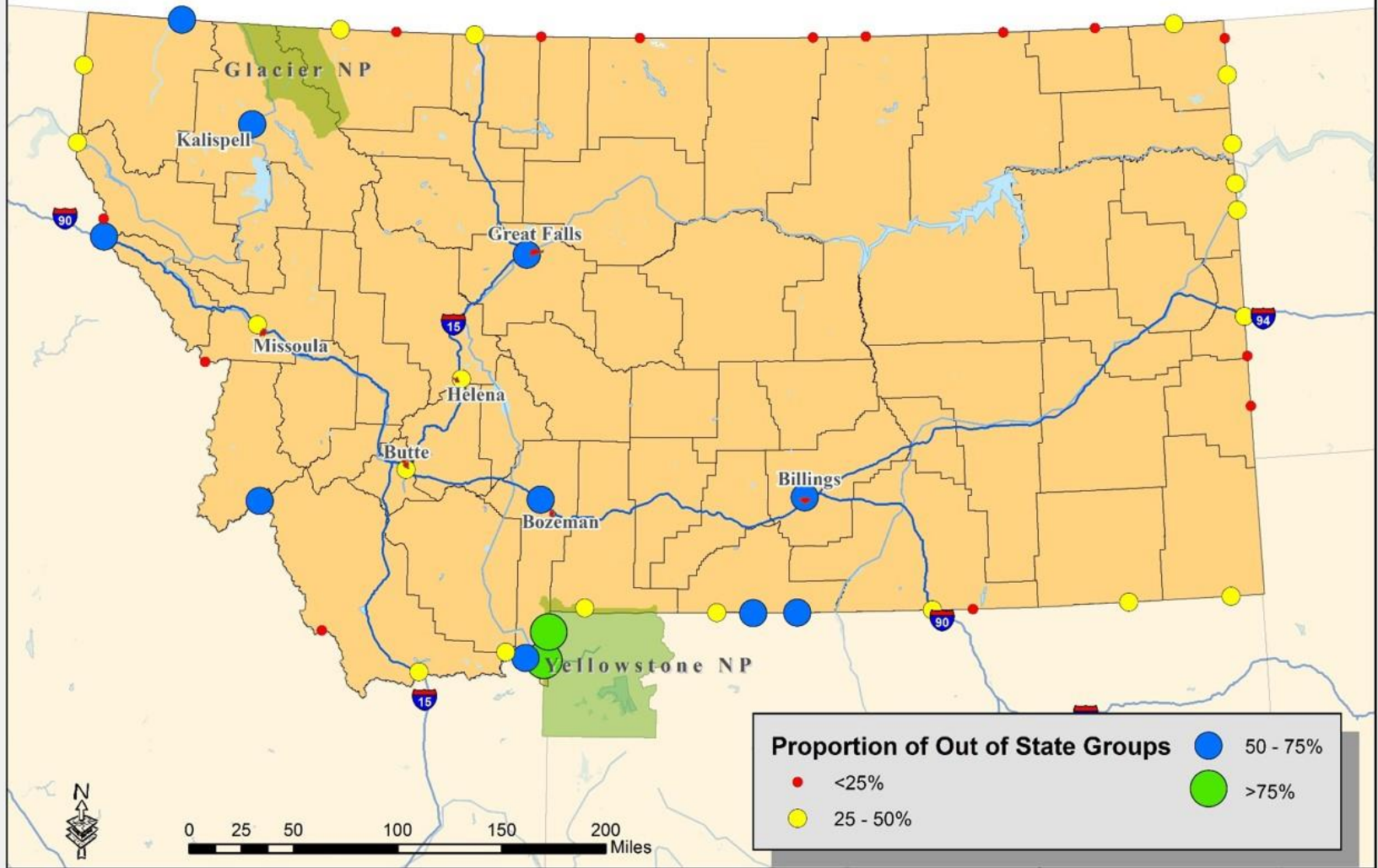


Montana Entry Points



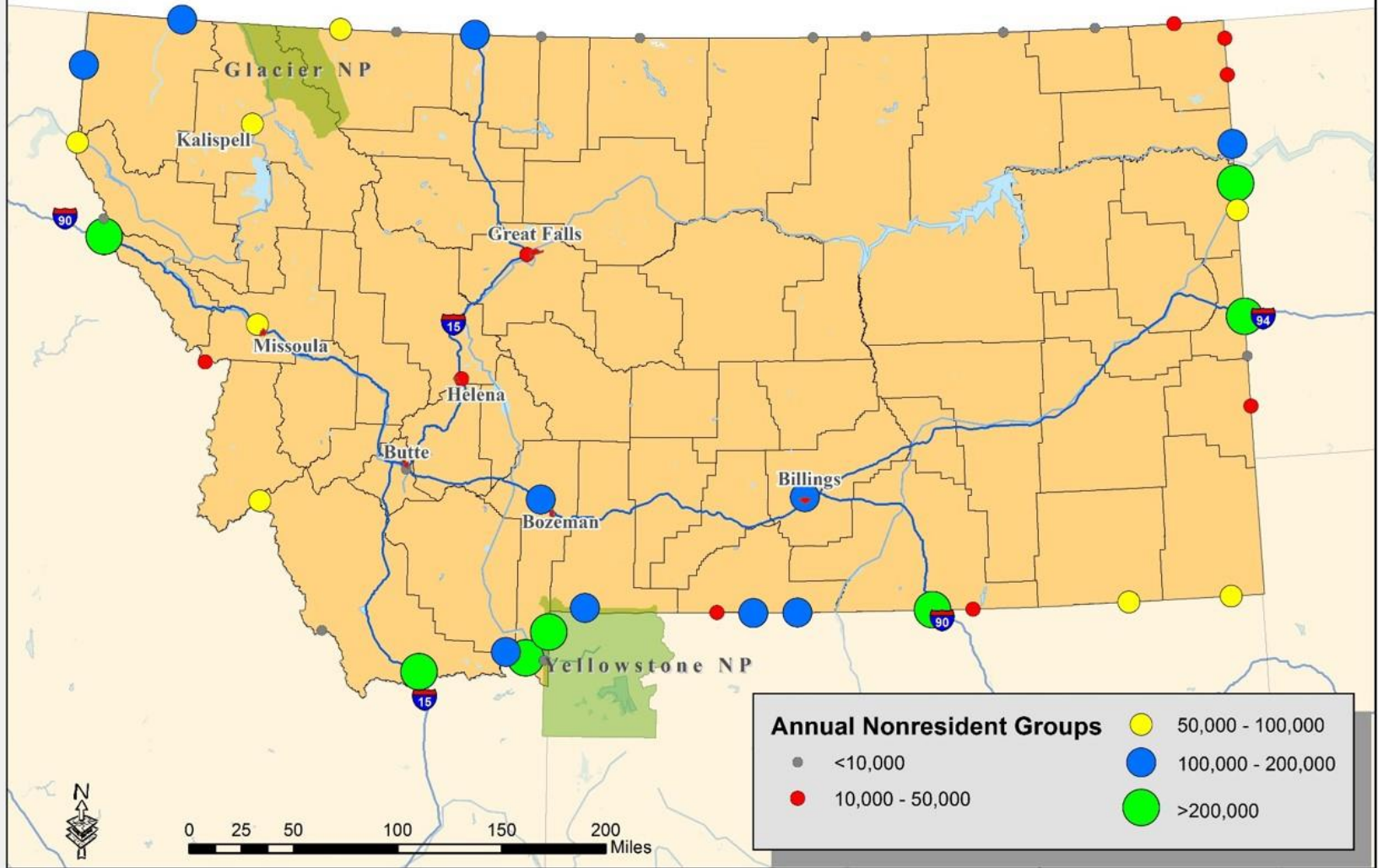
Montana Entry Points

2015



Montana Entry Points

Total 2015 Groups = 5.3 Million



Getting the Big \$

avg. daily group
expenditure
(from survey data)

X

avg. length of stay
(from survey data)

X

total # of groups
(from the visitation model)

=

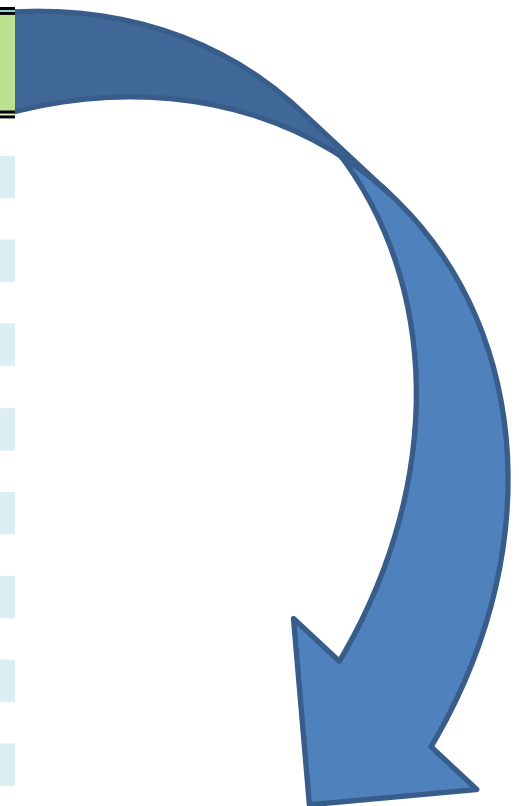
estimate of total
nonresident travel
spending in the state

Table 1 - 2016 Nonresident Traveler Expenditures¹

Expenditure Category	Average Daily Per Group ^{2,3}	Allocation by Category	Total Expenditures ^{2,4}
Gasoline, Diesel	\$27.07	21%	\$636,200,000
Restaurant, Bar	\$25.95	20%	\$606,430,000
Hotel, Motel	\$17.66	14%	\$411,750,000
Retail sales	\$13.48	10%	\$315,620,000
Outfitter, Guide	\$11.61	9%	\$262,390,000
Groceries, Snacks	\$10.13	8%	\$238,150,000
Licenses, Entrance Fees	\$9.37	7%	\$203,980,000
Auto Rental	\$4.03	3%	\$92,690,000
Rental cabin, Condo	\$3.88	3%	\$88,560,000
Made in MT	\$3.01	2%	\$70,300,000
Campground, RV Park	\$1.58	1%	\$37,740,000
Vehicle Repairs	\$1.44	1%	\$34,380,000
Misc. Services	\$0.82	1%	\$19,130,000
Gambling	\$0.55	<1%	\$13,060,000
Farmers Market	\$0.13	<1%	\$3,090,000
Transportation Fares	\$0.11	<1%	\$2,390,000
<u>Estimated Total</u>	<u>\$130.83</u>		<u>\$3,035,850,000</u>

Spending is not the end of the story. These dollars spent flow through the State's economy.

Expenditure Category	Average Daily Per Group ^{2,3}	Allocation by Category	Total Expenditures ^{2,4}
Gasoline, Diesel	\$27.07	21%	\$636,200,000
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Estimated Total	\$130.83		\$3,035,850,000



2016 Economic Impact	Direct	Indirect	Induced	Combined
Industry Output	\$2,508,160,000	\$802,020,000	\$877,420,000	\$4,187,600,000
Employment (# of jobs)	34,670	5,670	7,320	47,660
Employee Compensation	\$797,480,000	\$178,560,000	\$233,820,000	\$1,209,860,000
Proprietor Income	\$106,470,000	\$46,790,000	\$38,040,000	\$191,300,000
Other Property Type Income	\$294,390,000	\$148,410,000	\$160,080,000	\$602,880,000
State & Local Taxes				\$180,700,000

Tools:

The logo for IMPLAN, consisting of the word "IMPLAN" in white, uppercase, sans-serif font, centered within a light blue rectangular box with rounded corners and a subtle gradient.

What is Economic Impact Modeling?

- ❖ A technique that allows us to trace spending through an economy and measure the cumulative effects of that spending.

Why Conduct Economic Impact Modeling?

- ❖ Need is typically triggered by:
 - ❖ Large economic events,
 - ❖ Catastrophes
 - ❖ Changes in government policy
 - ❖ Desire to justify funding or demonstrate importance

Tools:

IMPLAN

The Model behind the analysis is Input-Output (I-O)

- ❖ Permits the examination of inter-industry relationships within an economy.
- ❖ Captures all monetary market transactions between industries in a given time period.

Expenditure Category	Average Daily Per Group ^{2,3}	Allocation by Category	Total Expenditures ^{2,4}
Gasoline, Diesel	\$27.07	21%	\$636,200,000
Restaurant, Bar	\$25.95	20%	\$606,430,000
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Tools:

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Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Tools:



Key Concepts:

- Impacts: **Direct**, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Direct Impact (effect)

The set of expenditures applied to the predictive model for impact analysis.

Expenditure Category	Average Daily Per Group ^{1,2}	Allocation by Category	Total Expenditures ^{2,4}
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Tools:

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Key Concepts:

- Impacts: Direct, **Indirect**, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Indirect Impact (effect)

The impact of local industries buying goods and services from other local industries. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy.

Tools:

The logo for IMPLAN, consisting of the word "IMPLAN" in white, bold, uppercase letters inside a blue rounded rectangle with a slight gradient and shadow.

Key Concepts:

- Impacts: Direct, Indirect, **Induced**
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Induced Impact (effect)

The response by an economy to an initial change that occurs through re-spending of income received. This money is recirculated through the household spending patterns causing further local economic activity.

Tools:

The logo for IMPLAN, consisting of the word "IMPLAN" in white, uppercase, sans-serif font, centered within a teal-colored rounded rectangle with a slight gradient and shadow.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- **Industry Output**
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Industry Output

Output represents the value of industry production in producer prices. For manufacturers this would be sales plus/minus change in inventory. For service sectors production = sales. For Retail and wholesale trade, output = gross margin and not gross sales.

Tools:

A blue rectangular button with rounded corners and a slight 3D effect, containing the word "IMPLAN" in white, bold, uppercase letters.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- **Employment (# of jobs)**
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Employment (# of jobs)

A job is the annual average of monthly jobs in that industry (this is the same definition used by BLS, and BEA nationally). Thus, 1 job lasting 12 months = 2 jobs lasting 6 months each. A job can be either full-time or part-time.

Tools:

The logo for IMPLAN, consisting of the word "IMPLAN" in white, uppercase, sans-serif font centered within a teal-colored rounded rectangle with a slight gradient and shadow.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- **Employee Compensation**
- Proprietor Income
- Other Property Type Income
- State and Local Taxes

Employee Compensation

The total payroll cost of the employee paid by the employer. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.)

Tools:

The logo for IMPLAN, consisting of the word "IMPLAN" in white, uppercase, sans-serif font, centered within a teal-colored rounded rectangle with a slight gradient and shadow effect.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- **Proprietor Income**
- Other Property Type Income
- State and Local Taxes

Proprietor Income

Consists of payments received by self-employed individuals and unincorporated business owners.

Tools:

The logo for IMPLAN is a teal-colored rounded rectangle with a slight gradient and a drop shadow. The word "IMPLAN" is written in white, bold, uppercase letters in the center of the rectangle.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- **Other Property Type Income**
- State and Local Taxes

Other Property Type Income

Represents Gross Operating Surplus minus Proprietor Income. OPTI includes consumption of fixed capital, corporate profits, and business current transfer payments (net).

Tools:

The logo for IMPLAN is a teal-colored rounded rectangle with a slight gradient and a drop shadow. The word "IMPLAN" is written in white, bold, uppercase letters in the center of the rectangle.

Key Concepts:

- Impacts: Direct, Indirect, Induced
- Industry Output
- Employment (# of jobs)
- Employee Compensation
- Proprietor Income
- Other Property Type Income
- **State and Local Taxes**

State and Local Taxes

Estimates taxes paid to all state and local units of government in the study area.

DATA



IMPLAN



IMPACTS

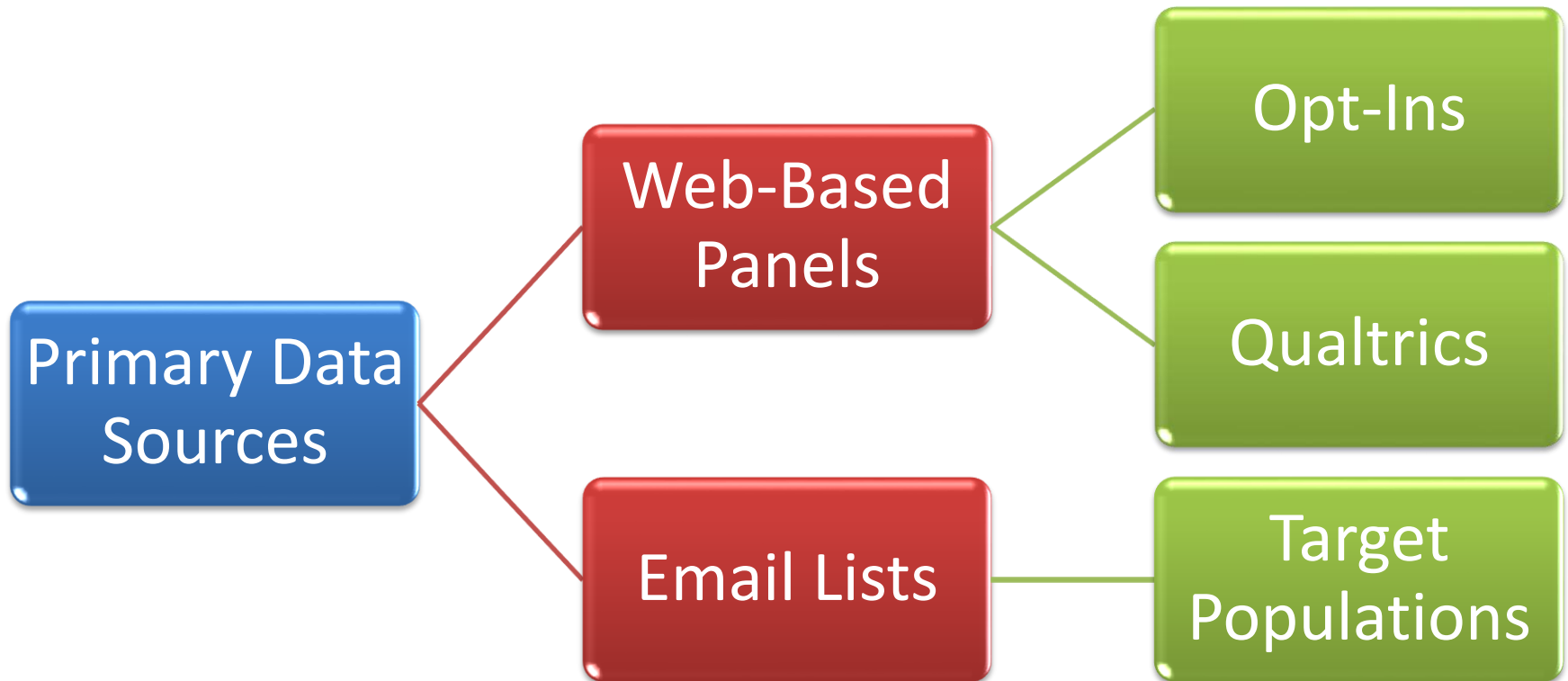


**Models only work
as well as the data
you put into them.**

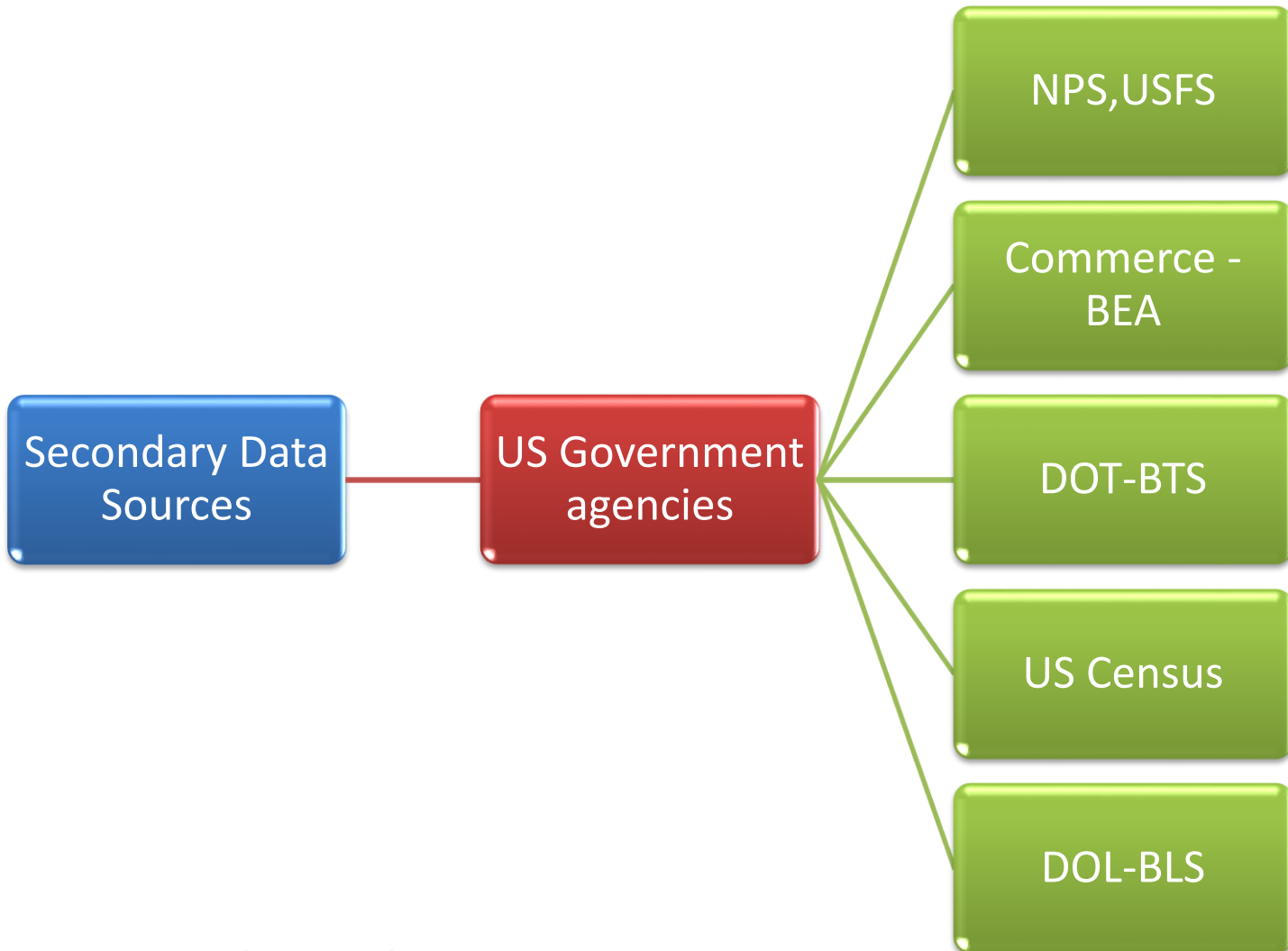


Data Sources?

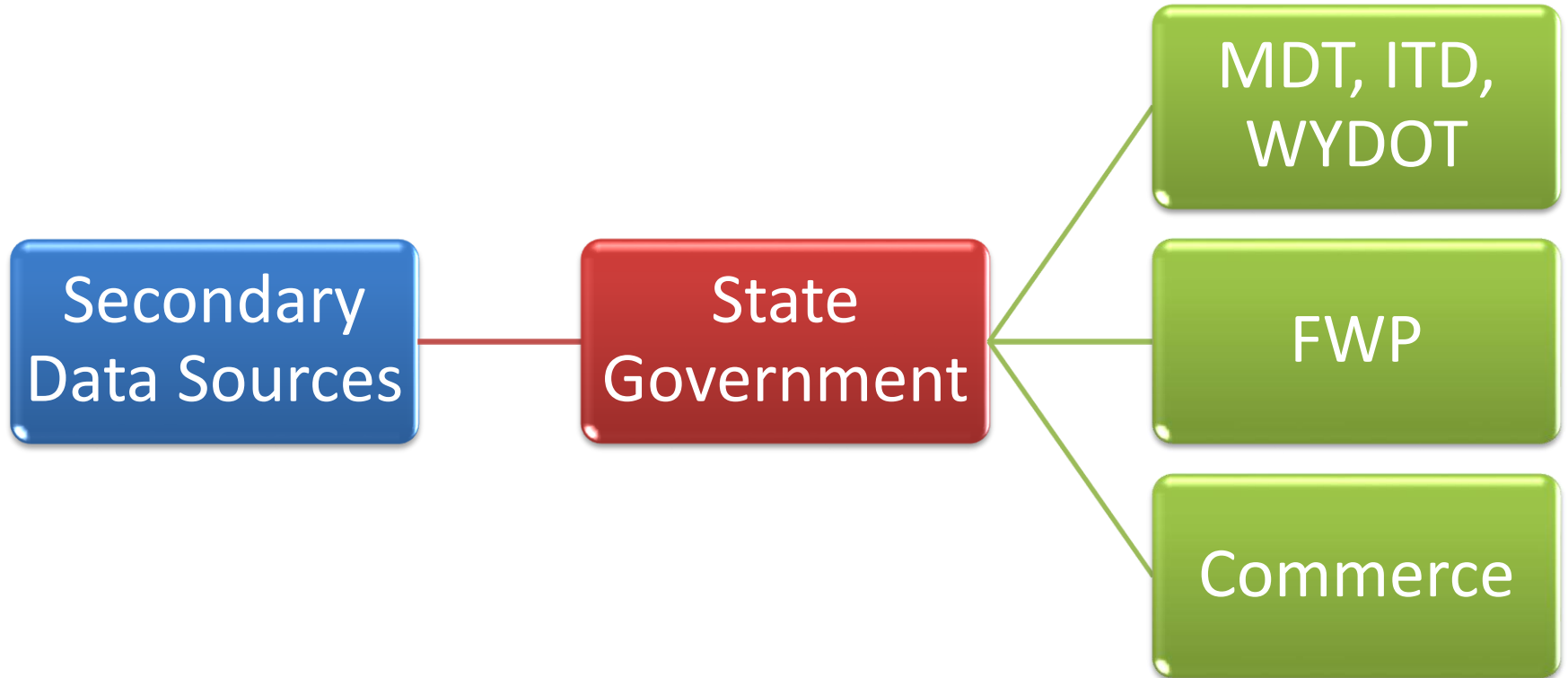
Tools: Data Sources



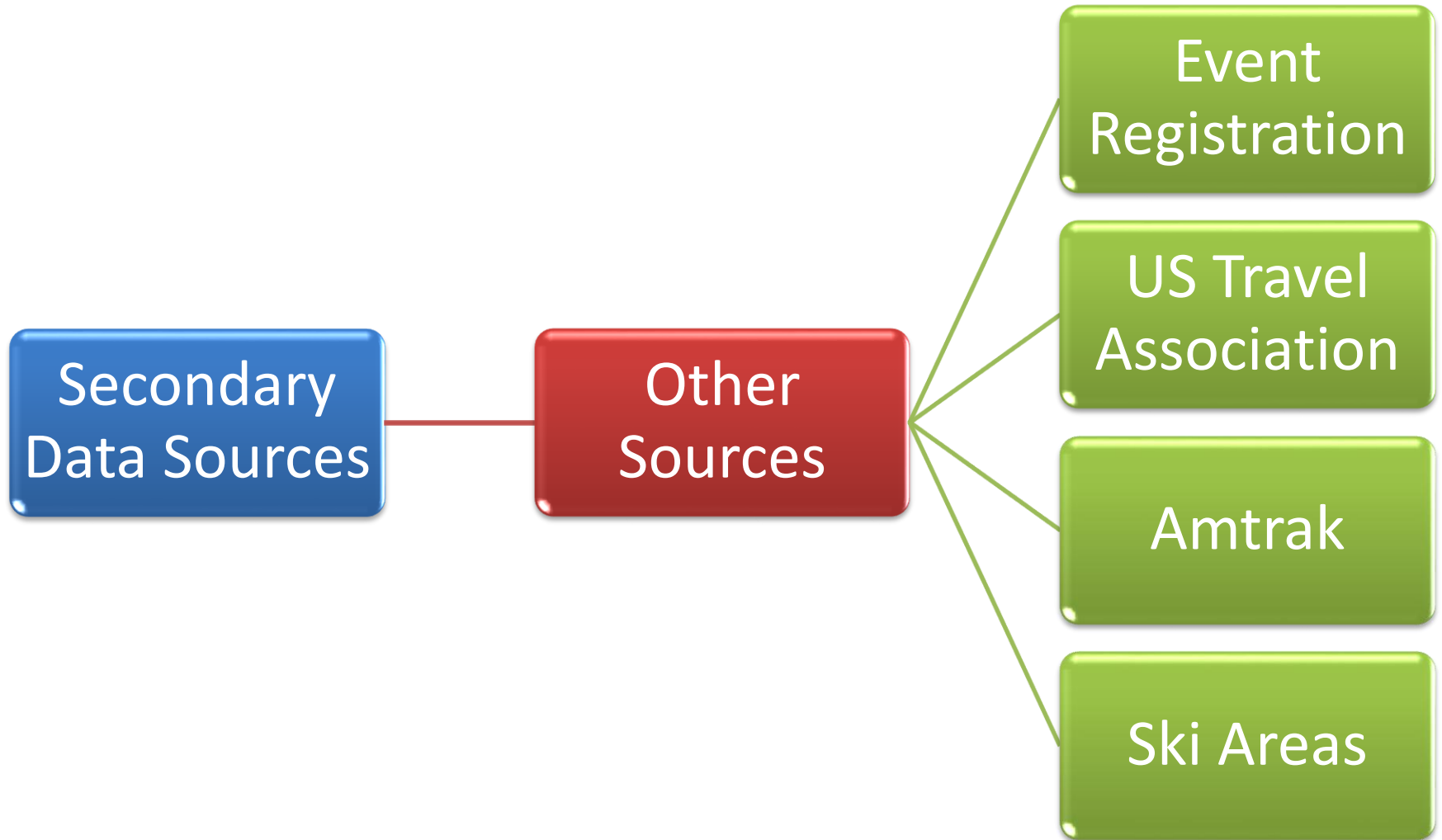
Tools: Data Sources



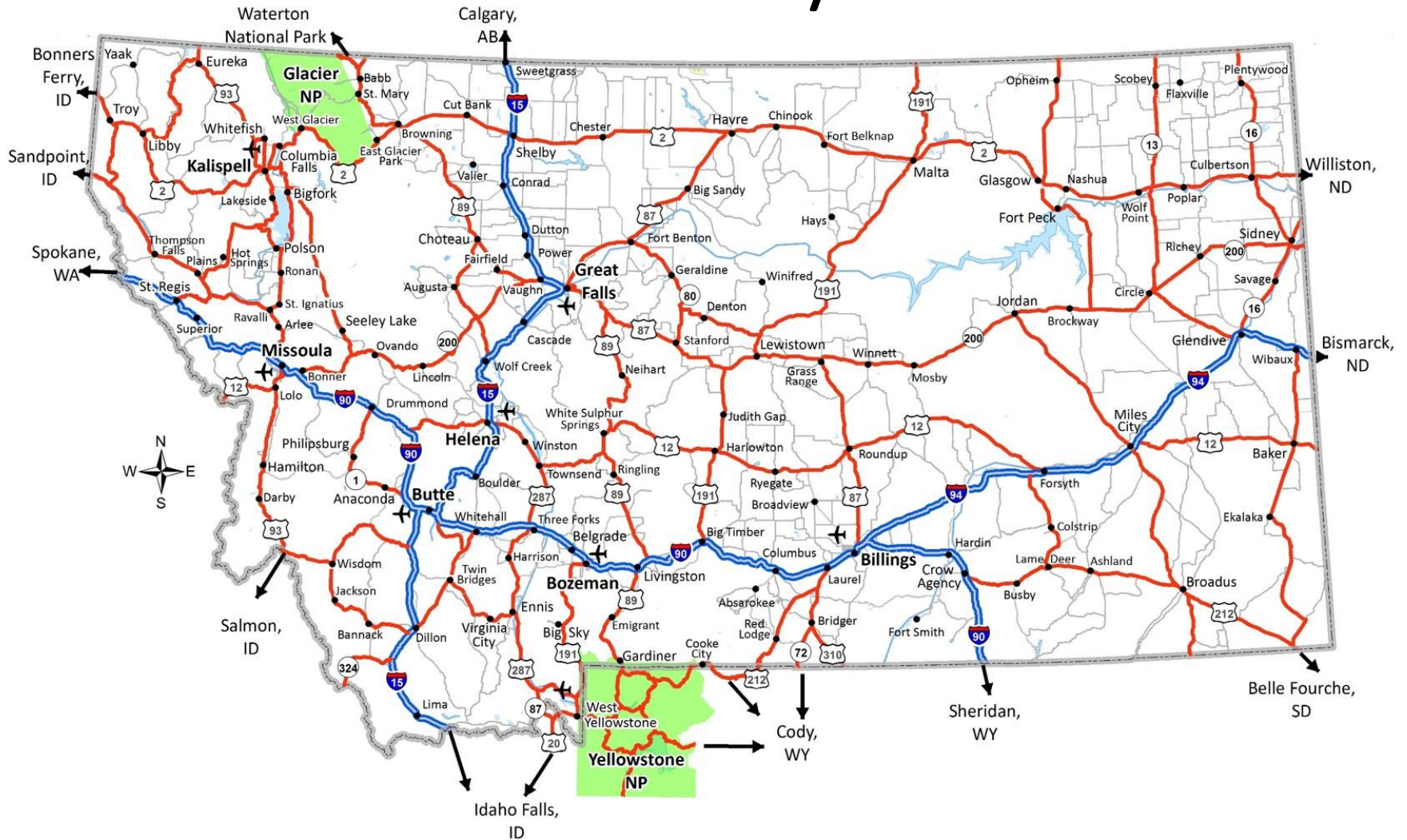
Tools: Data Sources



Tools: Data Sources



Tools: GPS/GIS

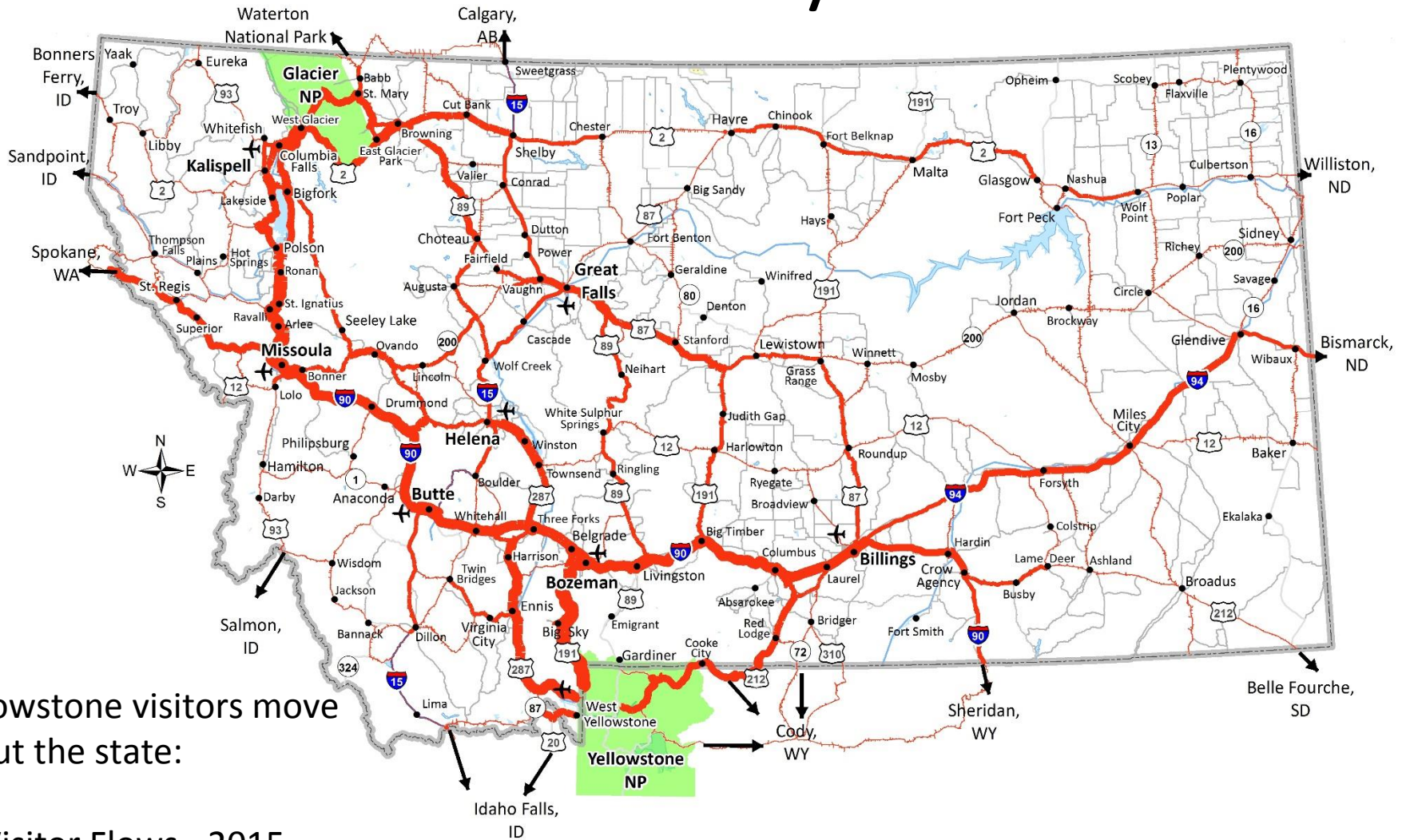


Tools: GPS/GIS

1's and 0's are not readily useful, but....

Name	X	Y	S_86162	S_87642	S_79018	S_84529	S_86406	S_86353	S_86154	S_82089	S_86420	S_85716	S_90227
Belgrade	-111.177	45.77626	0	0	0	0	0	0	0	0	0	0	0
Bigfork	-114.08	48.0643	0	1	0	0	0	0	0	0	0	0	0
BigSky	-111.312	45.2609	0	0	1	1	0	1	0	0	0	0	1
BigTimber	-109.954	45.8341	0	0	0	0	0	1	0	0	0	0	0
Billings	-108.502	45.784	0	0	0	0	0	1	0	0	0	0	0
Bonner	-113.893	46.87782	0	0	0	0	0	0	0	0	0	0	0
Boulder	-112.12	46.2371	0	0	0	0	0	0	0	0	0	0	0
Bozeman	-111.039	45.6804	0	0	1	1	1	1	1	1	0	1	1
Broadus	-105.41	45.4447	0	0	0	0	0	0	0	0	0	0	0
Browning	-113.013	48.5561	0	0	0	0	0	0	0	0	0	0	0
Butte	-112.534	46.0044	1	1	1	1	1	1	1	1	1	1	1

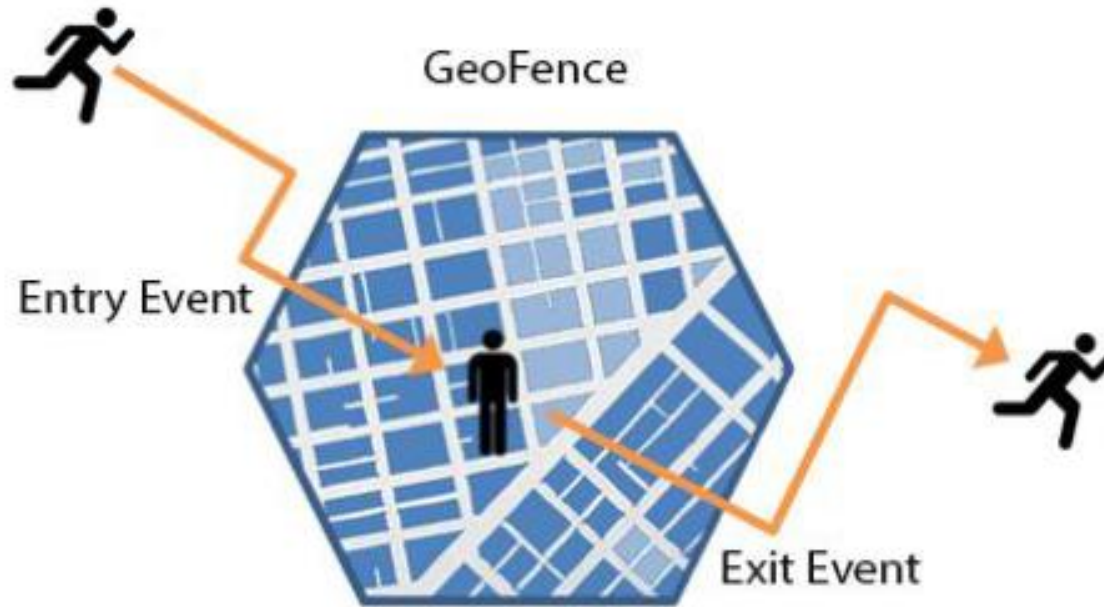
Tools: GPS/GIS



Yellowstone visitors move about the state:

-Visitor Flows - 2015

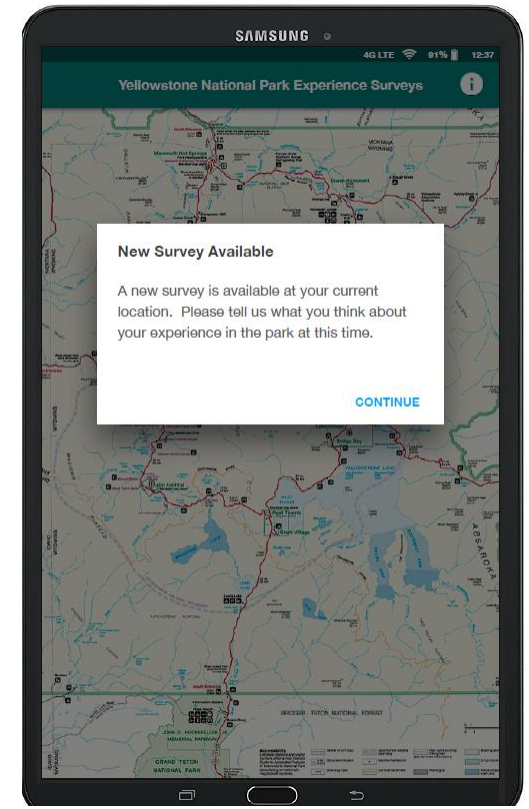
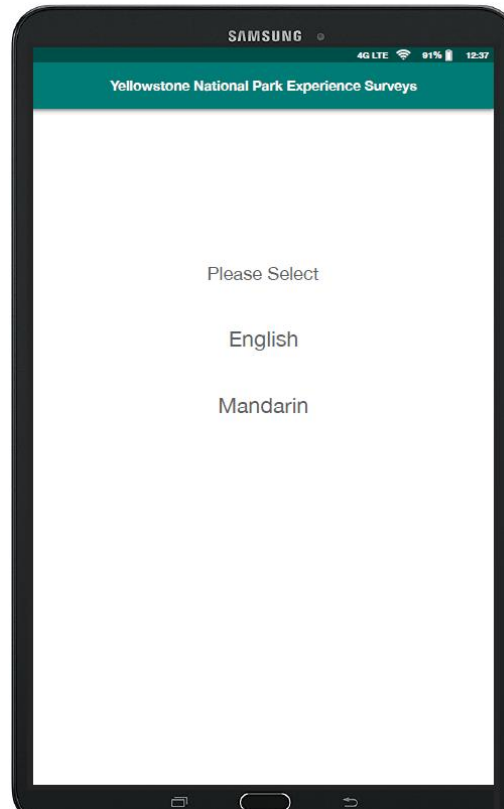
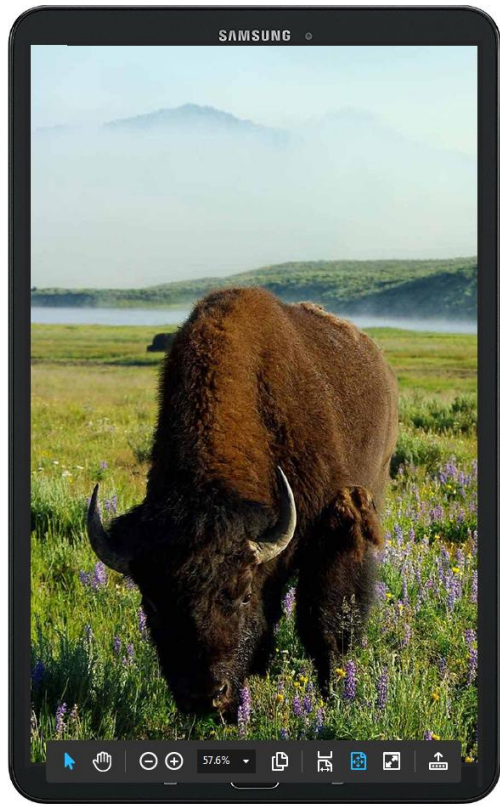
Tools: GPS/GIS



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Tools: GPS/GIS



NeoTreks
geospatial apps

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UNIVERSITY OF MONTANA

Tools: GPS/GIS





Survey Kits for communities



Survey Kit Results: Example Comparisons

Project	Year	Type	Community	Sample Size	Average Group Size	% of out of county respondents	Average Number of Nights in Community	Average Reported Total Group Expenditure
Missoula Marathon	2007	Web	Missoula	417	2.75	48%	3.06	\$211,021.35
Missoula Marathon	2010	Web	Missoula	1,521	3.82	70%	2.51	\$1,036,323.72
Montana Folk Festival	2016	Paper	Butte	488	2.64	60%	3.24	\$52,682.00
The Event at Rebecca Farm	2016	Paper	Kalispell	479	2.37	63%	5.29	\$330,806.00
Dragon Boat Festival	2016	Mixed	Kalispell	479	2.47	60%	2.42	\$131,773.00
Pond Hockey Classic	2017	Paper	Kalispell	351	3.66	61%	3.13	\$135,936.00
Spartan Race	2017	Paper	Kalispell	359	2.77	89%	1.99	\$157,174
Montana Folk Festival	2017	Paper	Butte	459	2.17	66%	2.89	\$63,361

What it all means

- The survey kit can give valuable information about who is coming to events, festivals, races, and communities and the details of their trip.
- The survey kit provides spending information and comparisons.



Niche Market Studies

Examples:

- Gardiner image
- Geotourism
- Agritourism
- Alpine skiing
- Touring cyclists
- Outfitting & Guiding

SUMMARY - Social Research for Tourism

- Spending & Economic impacts
- Routes and overnights
- Activities
- Social-psychological data
- Visitor Niche markets
- Resident perception of tourism
- Resident travel & recreation





www.tourismresearchmt.org

Interactive Data

Nonresident Report Data

- [Nonresident Report Data](#)

Travel Trends

Most of the data for these travel trends are made available through secondary sources which are referenced on the individual report pages. All efforts have been made to accurately update data as it becomes available. Some data are distributed more frequently (monthly) than others (yearly). The recent month or year of data may not be available if the publishing organization has yet to distribute it. This is a work in progress. If you suspect a glitch in our program, contact us immediately at itrr@cfc.umt.edu so the problem can be addressed. Also, please send all of your questions and feedback to the same email address. Thank you for your help.

Choose a Report:

- [Airport Deboardings](#)
- [Amtrak Ridership](#)
- [National Park System Visitations](#)
- [Nonresident Expenditures](#)
- [Nonresident Expenditures by Location](#)
- [Nonresident Visitation](#)
- [Resident Attitudes Towards Tourism](#)
- [Skier Visits](#)
- [4% Bed Tax Revenue](#)

Someone who wanted to expand their central Montana B&B marketing reach:

Request:

I am looking for all research data you have on Tourism to Montana. Specifically, data on people visiting Montana:

- Regarding percentage of Montana Tourism by State (who comes here and why) each year.
- Regarding which World Countries have the most visitors to Montana each year.
- Any other information that might help a Montana business decide where to target their marketing.

Response to our answer:

Thank You for Taking the Time to Help Us!

From Pondera County

Request:

I am looking for information on recent tourism for Conrad, MT which is in Pondera County. I am helping write the NEPA/MEPA checklist for a Recreational trails grant program and one thing they request is a tourism report. I was recommended to you by our local Economic development specialist. Any help you could provide is very welcome. To be honest, since I am not sure what exactly I am looking for I am having a hard time searching for it. Thank you for your time.

Response to our answer:

Thank you ever so much! I really appreciate it. This is exactly what I need. I am thankful for your quick response as well. It is people like you that make my job so much simpler. Have a great day and stay warm! 😊

County Commissioner

Request:

Increasing numbers of visitors put a lot of dollars into our local economy but add significantly to the need for services from law enforcement, fire and ambulance, search and rescue, and dispatch in our county. This is putting a significant strain on our personnel, our volunteers, and our finances, which falls squarely on the shoulders of local taxpayers, not the visitors creating the additional demand. We lack a county-wide account that is funded by visitors to meet their critical needs. What about the 3% from bed tax that now goes to the general fund?

Response to our answer:

Thank you!

You knew EXACTLY how to respond. These are valuable insights.



INSTITUTE FOR
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A group of approximately ten people are white-water rafting on a river. They are wearing yellow life jackets and using blue and yellow paddles. The water is turbulent with white rapids, and the rafters are leaning forward, actively paddling. The background shows a rocky riverbank under a clear sky.

Thank you!
Questions?

Please visit: www.itrr.umt.edu

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