Data in Parks: Toolkit for Evaluating Park Use

J. Aaron Hipp, PhD jahipp@ncsu.edu
April 11, 2024



https://www.nrpa.org/ publicationsresearch/evaluationresource-hub/







Recommended Measures to Evaluate Park Use and Quality

Local parks are an essential part of healthy and vibrant communities. It is important that park and recreation professionals continually evaluate their park areas to understand levels of use and overall quality. This resource presents an overview of measures commonly used in park evaluations to help you get your own park evaluation off the ground.

Read More

Defining Data

Evaluation in parks and recreation involves data in the form of numbers (quantitative) and narratives (qualitative). This resource provides fundamental knowledge and guidance for using these two data types.

Read More

Determining Your Capacity for Evaluation

Conducting a good evaluation requires an investment of time and money. Before getting started, it is best to do a "reality check" and assess whether your proposed evaluation is feasible. This resource will help you determine your agency's capacity to conduct your intended evaluation.

Read More

Evidence-Based Decision-Making

"Toolkit for Evaluating Park Use"

Decision, Aim, Objective, SMART Goal, Evidence-Based Decision

Evidence-Based Decision-Making

Decision, Aim, Objective, SMART Goal, Evidence-Based Decision

How to best allocate limited resources

Which playground gets renovated

Where to install pickleball courts

What new programming do we add (where, when, who)

Do we add competitive youth sports

Are our programs reaching diverse/intended audiences

Criteria

What – and who – helps make the decision or meet the goal

Data

Evidence, information, and methods used (how, who)

<u>Judgement</u>

The decision, communication of results, and feedback loop

<u>Decision</u> – Should we add programing at Main St. Park?

<u>Decision</u> – Should we add programing at Main St. Park?

Criteria

Number of visitors per week

<u>Decision</u> – Should we add programing at Main St. Park?

Criteria

Number of visitors per week

Data

Mobile phone data (use/ number of visitors)

<u>Decision</u> – Should we add programing at Main St. Park?

Criteria

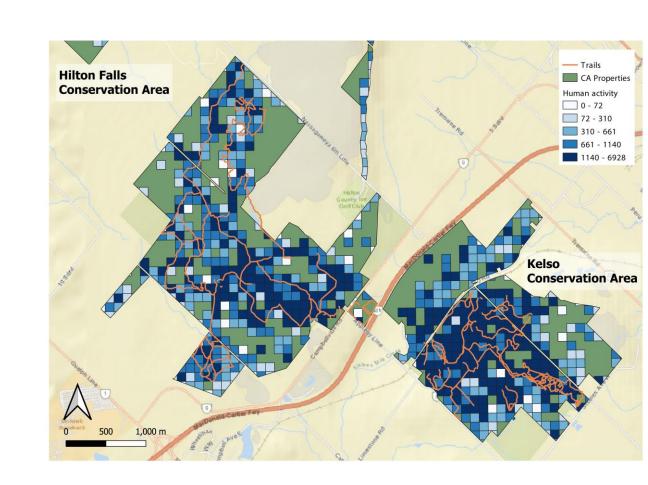
Number of visitors per week

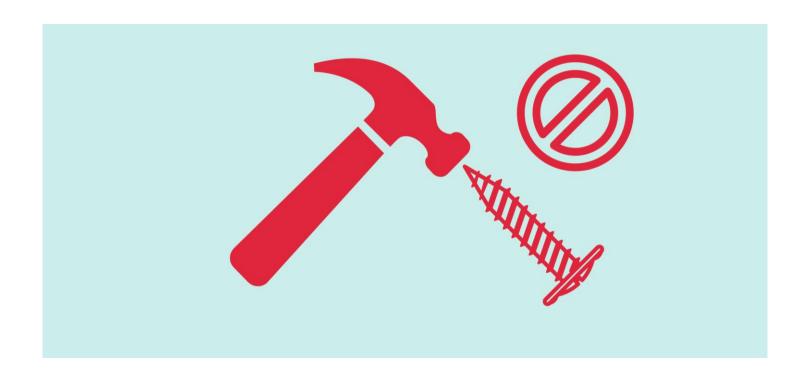
Data

Mobile phone data (use/ number of visitors)

Judgement

Using smartphone-GPS data to quantify human activity in green spaces Alessandro Filazzola et. Al.





Data in Parks: Toolkit for Evaluating Park Use











SAFEGRAPH



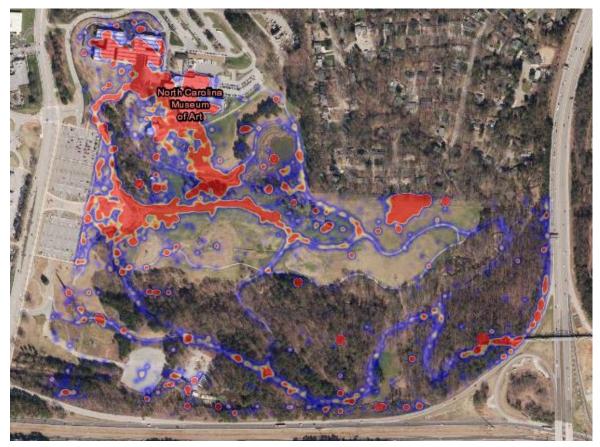


STREETLIGHT





NC STATE UNIVERSITY



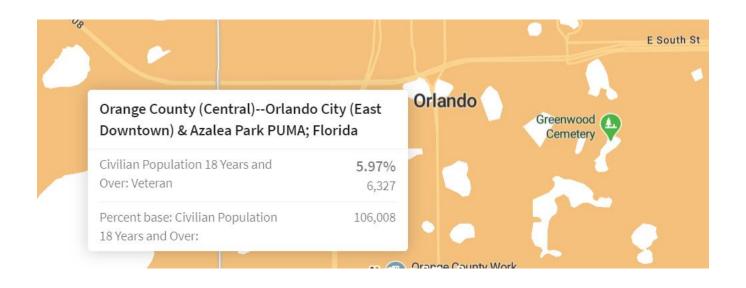
<u>Types of data received</u>: frequency, duration, unique* visitors, distance from park, location within park, general demographics

Best for: Changes across time, comparing pre/post, comparing multiple parks in same system

Types of parks: open spaces, porous, many entrance points

Considerations:

Price, company, proprietary data, limitations/assumptions, no data on why/how/intensity of use, communicating with community, privacy, geospatial error, data expertise, subscription service, youth generally do not carry a phone, certain activities are without phones, apps change, os change, laws & policies change



NC STATE UNIVERSITY





Geospatial Analytics

<u>Types of data</u>: number of users*, location in park, can get duration with video

<u>Best for</u>: Changes across time, comparing pre/post, comparing multiple parks in same system, identifying use of specific areas (playgrounds, pickleball courts)

Types of parks: specific areas of interest and identified entrance points

Considerations:

Price, type of camera, limitations/assumptions, no data on why/how/intensity of use, communicating with community, privacy, data expertise (universities?), many images will be empty, access to images







eco counter

Types of data: number of users*, location in park*, direction, cycling/walking

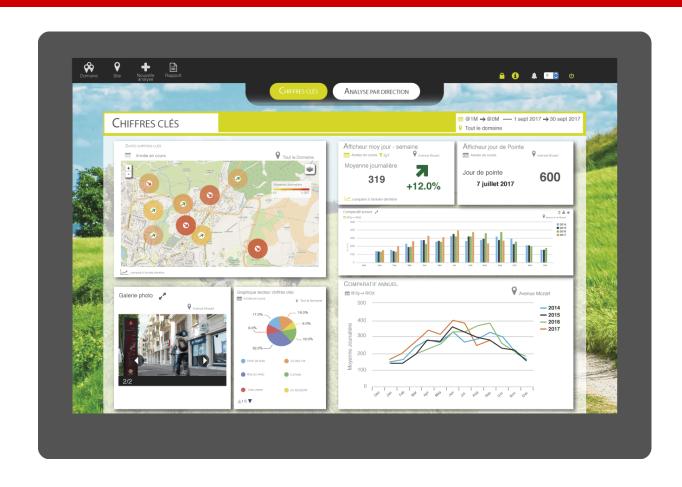
Best for: Changes across time, comparing pre/post, comparing multiple parks in same

system, identifying use of specific areas (trails, greenways)

Types of parks: identified entrance points and trails/ greenways

Considerations:

Price, type of counter, limitations/assumptions, no data on why/how/intensity of use, proprietary, not ideal for many types of park use counts



Evaluation / Evidence-Based Decision:

The vision to build and revitalize parks as thriving gathering places for youth, families, and adults

Promote health and wellness-related activities



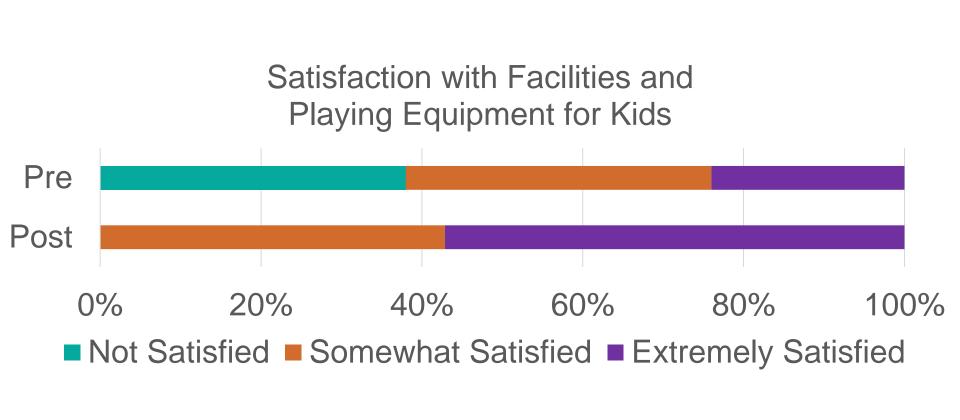
- New field house and restrooms
- Splash pad
- Upgraded and expanded playground
- Fitness equipment
- Basketball court



- Park use
- Activity and recreation
- User satisfaction
- Social capital
- Built environment (including park access)
- Perceived and actual safety
- Economic impact



4. How satisfied were you following your ABC Park visit regarding each of the following?									
	Extremely	Somewhat	Not at All	Didn't Use/ Not Applicable					
Facilities and play equipment for kids		\bigcirc	\bigcirc						
Presence of supervision/staff		\bigcirc		\bigcirc					
Presence of other kids	\bigcirc	\bigcirc	\bigcirc	\bigcirc					
Availability of open spaces		\bigcirc	\bigcirc	\bigcirc					
Fountains, restrooms and other services	\bigcirc	\bigcirc	\bigcirc	\bigcirc					
Programs		\bigcirc	\bigcirc	\bigcirc					
General cleanliness		\bigcirc	\bigcirc	\bigcirc					
Overall visit	\bigcirc	\bigcirc	\bigcirc	\bigcirc					



<u>Types of data</u>: attitudes, beliefs, willingness to pay, satisfaction, preferences, etc.

Best for: Understanding current use patterns and preferences

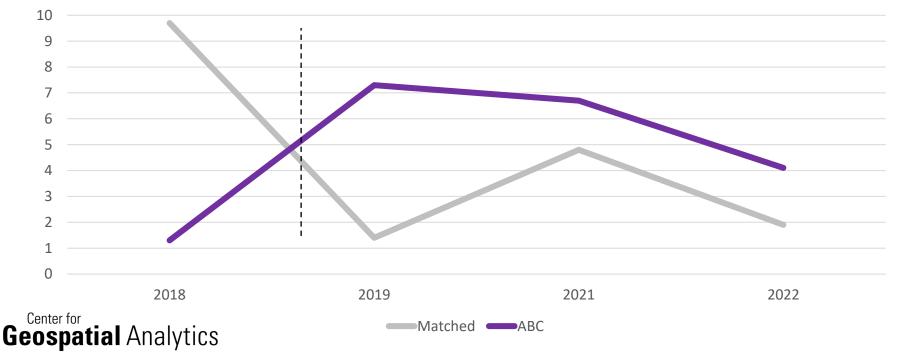
Types of parks: all

Considerations:

Delivery of survey, reaching those not currently engaged with P&R, bias, getting people to respond, making sure only asking questions that you can respond to and find useful

Park ID: Target area ID:			Date: Period:	/_ 10am	/	4:30pm	6pm	•	f week: ver ID:			•	Round: t time:			
Conditions of target area:	Accessible	Superv	ised I	Equippe	d	Usable	Orga	nized -	F / I	Dark		Empty				
Shade cover:	Predominantely shade	lominantely shade Shade/sun mix Predomina			nately sur	y sun Adult role: Not present			ent	Staff Parent/caregiver						
Partic	Participants		White Black		Asian			Latino			Other/Unsure					
Female	Primary Activity	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig
0-4 years																
5-10 years																
Teen																
Adult																
Senior																
Partic	ipants	White		Black		Asian		Latino			Other/Unsure					
Male	Primary Activity	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig	Sed	Mod	Vig
0-4 years																
5-10 years																
Teen																
Adult																
Senior																

18 and Under Use Per Hour, On Playgrounds, Swings, and Basketball Courts (December non-School Hours)



<u>Types of data</u>: number of users*, location in park*, who, intensity

Best for: Changes across time, comparing pre/post, comparing multiple parks in same system, identifying use of specific areas

Types of parks: a;;

Considerations:

Training and reliability, can be very time intensive, no data on why/preferences, many empty hours

Decision – Should we add programing at Main St. Park?

Criteria

Number of visitors per week



Data

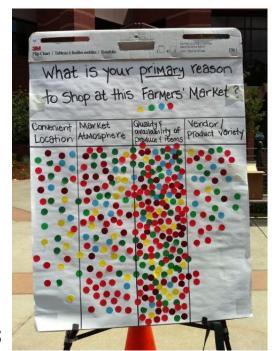
Capacity, budget, resources, partners, community needs, etc.



Judgement

Community and Stakeholders

Who impacts and is impacted by the data





https://www.nrpa.org/ publicationsresearch/evaluationresource-hub/







Recommended Measures to Evaluate Park Use and Quality

Local parks are an essential part of healthy and vibrant communities. It is important that park and recreation professionals continually evaluate their park areas to understand levels of use and overall quality. This resource presents an overview of measures commonly used in park evaluations to help you get your own park evaluation off the ground.

Read More

Defining Data

Evaluation in parks and recreation involves data in the form of numbers (quantitative) and narratives (qualitative). This resource provides fundamental knowledge and guidance for using these two data types.

Read More

Determining Your Capacity for Evaluation

Conducting a good evaluation requires an investment of time and money. Before getting started, it is best to do a "reality check" and assess whether your proposed evaluation is feasible. This resource will help you determine your agency's capacity to conduct your intended evaluation.

Read More

Data in Parks: Toolkit for Evaluating Park Use

J. Aaron Hipp, PhD jahipp@ncsu.edu
April 11, 2024

