



Recommended Measures to Evaluate Park Use and Quality

NATIONAL RECREATION
AND PARK ASSOCIATION

Table of Contents

Introduction	1
General Park Use	2
Activity and Recreation	6
User Satisfaction	8
Community and Social Capital	10
Built Environment	11
Perceived Safety	12
Economic Impact	13
Conclusion	14
Acknowledgements	14
About the National Recreation and Park Association	15
APPENDIX: SOPARC Supplement – Case Study	16



Local parks provide a wide range of benefits to communities.
Cover photo credit: freepik.com

Determining park use is helpful to inform management decisions and future investments.
Photo credit: freepik.com

Introduction

Local parks provide a wide range of benefits to communities, including opportunities for physical activity, social interaction, positive youth development, connection to nature, and mental and emotional rejuvenation. While residents in communities across the country widely use and highly value their local parks, it is important that park and recreation professionals continually monitor their inventory of park areas to ensure they meet the needs of the public.

A primary method for analyzing the health and vitality of parks is through evaluations. These evaluations allow an organization to:

- Better understand the park-use patterns, preferences and priorities of a community
- Inform and improve park operations, maintenance and design
- Identify opportunities for the park to support new or diversified programming based on community input
- Justify public investment in a park and gather success stories to gain support and partnerships

This resource presents an overview of measures commonly used in park evaluations. Any measures selected should be based on the purpose of the evaluation and via input from community members and key stakeholders. This resource is not exhaustive — there are many other metrics that can be used in any evaluation.



Some common measures of physical activity include type of park activity and where in the park activity occurs.
Photo credit: freepik.com

General Park Use

Why Measure

Measuring the use of parks helps park and recreation agency planners and managers optimize their limited resources and provide the best experience for visitors. Measuring park use highlights barriers and helps identify and manage overcrowding. It also demonstrates the value of investment by showing the public and elected officials key metrics regarding community park use.

What to Measure

Measurement includes determining the number of individuals using park areas at specific locations and points in time. Specific measures may include information on how many people are using which park facilities, their length of stay, and how individuals move throughout the space.

How to Measure

Park use can be determined through a variety of methods — some more complex than others. Some require investment in technology and others rely exclusively on in-person efforts.

Surveys

General use can be measured by conducting a series of intercept (within the park) surveys and community surveys, which typically are administered door to door, online, via U.S. mail or by phone. While response rates for community surveys can be very low, these surveys often reveal views of non-park users and reasons why they do not use a park.

Common survey questions include:

- Frequency of use (see #1 in sample below)
- Who is visiting (see #2 in sample below)
- Duration of use (e.g., ≤15 minutes; 16-30 minutes; 31-60 minutes; >1 hour)
- Timing of use (specific days or times of the week)

1. During 2018, how often did you visit ABC Park?

- Daily A few times per year Once per week/A few times per month
 Monthly Less than monthly Not at all

2. On a usual ABC Park visit, who are you with? (Check all that apply.)

- Nobody Young kids (under 5 yrs.) Older kids (5 to 10 yrs.)
 Tweens (11 to 14 yrs.) Teens (15 to 19 yrs.) Spouse/Partner
 Other family members Friends Pets

Park staff members or volunteers can conduct intercept surveys of park users in real time. In this type of data collection, surveyors position themselves within a park, approach park visitors and ask them to complete a survey (e.g., a hard-copy survey on a clipboard or digital survey on an electronic device, such as a tablet or smartphone). If a sufficient number of staff members are available, it is a best practice to have staff ask the survey questions out loud to the respondent and record answers. When staffing is limited, utilizing multiple clipboards, tablets or smartphones, or posting quick response (QR) codes in high-traffic areas around the park are viable alternatives.

Staff members can conduct community surveys in a variety of ways. The first step is to identify your potential respondents based on the questions you are trying to answer. Two sources for participants are email addresses and physical addresses from existing administrative data, such as program registrations or park facility reservations, which enable you to email an electronic survey or post a hard-copy version in the U.S. mail. If your agency has a strong social media following, you can post an electronic survey link to your social media sites or ask any partners to repost the survey on their websites. Unfortunately, both of these approaches are biased toward community members who already have a connection to your park, agency and/or partners. This bias toward already-engaged members of the community limits perspectives and may negate or constrain the views of some community groups.

If possible, the best way to conduct a community survey is to purchase a random sample of addresses, phone numbers and/or emails from a market research firm that administers your survey to a sample of your community that mirrors its broader demographic characteristics. This approach is the “gold standard,” but it is expensive and often requires collaboration with consultants/statisticians.

For more information on conducting community surveys and identifying ways to reach your community, see [NRPA's Community Needs Assessment Toolkit](#).

Observations

This method of determining park use involves the actual counting of users and is the most objective approach to measuring use. A best practice is for an observer to be physically present in a park and count users two to four times per day for a minimum of four days, including weekdays and weekend days. Observations also work best when repeated at different times of the year to account for seasonal variation in park use. In addition, comparing observation counts year over year (or quarter over quarter, etc.) can reveal changes in park use. There are limitations to the observational approach of measuring park use, including availability of staff and volunteers to observe and count users and the possibility that inclement weather could skew results.

Observational approaches can be adapted for many settings and should include the following:

- A **written protocol** with agreed-upon steps guiding observers on the following:
 - Where to stand during the observation (e.g., to the left of the playground entrance sign)
 - What area(s) should be observed (e.g., from the sidewalk to the right, including the set of six swings)
 - Timing of observations (e.g., scan each area for a short period and count everyone present; repeat every 15 minutes for one hour)
 - What should be counted (number of users; number of users by age group, number of visitors running) *Note: Counting individuals in subjective categories — like age groups, race/ethnicity and categories that involve estimation — can be tricky; the observation team should discuss and practice a consistent approach.*

- Adequate time for **practicing, observing** and then comparing answers with other observers; this ensures all observers are using the same criteria for recording use and will improve repeatability across observers and time
- A **schedule of dates and times** for observation and staff/volunteers to cover all times; ideally, observations should be completed in pairs for safety and reliability
- A **prepared document** for recording observations. This may include:
 - Pen and paper with table for times and spaces to be observed
 - A smartphone or tablet application, software or spreadsheet for collecting counts
- A **dataset** for compiling observational data if paper log sheets are used

The System for Observing Play and Active Recreation in Communities (**SOPARC**) is one of the best tools for recording user counts and activities in park settings. This tool is discussed in the next section, titled “Activity and Recreation,” and additional information on SOPARC is included in the Appendix.



Parks act as social hubs, offering spaces for people to enjoy activities that build bonds.
Photo credit: freepik.com

Trail and Parking Counters

Pneumatic or traffic counters record and tally passing objects. They detect moving objects through tubes or pads placed on a road or trail surface or via magnetic loops. These devices can count vehicles, hikers, horseback riders, bicyclists and boaters. In addition to pneumatic tubes, common commercial counters include those with magnets embedded in trails and roadways (for vehicles and bikes) and passive mounted infrared counters that detect those breaking the infrared beam while passing. This method is limited because it does not account for length of stay, group size or individuals passing counters multiple times in one visit. Counters also are not ideal for open areas where there is more than one confined entrance.

Finally, to gauge visitation using car counters more accurately, you must determine a multiplier corresponding to the average number of people in a car. This multiplier can be ascertained by observing how many people, on average, exit a vehicle. These observations to calculate the multiplier should be conducted on specific days to account for variation in park visitation across days of the week and seasons of the year. For more information about multipliers, see below.

Cameras

Video, infrared, trail or still cameras also can be used to measure park usage. Cameras work best when placed in sites where a visitor passes a specific location, such as an entrance or trailhead. Cameras installed farther off the ground may be able to capture a broader field of vision, such as a playground. It is important to have signage letting visitors know about the presence of cameras. Depending on the camera used, the processing of images, video and data may be resource intensive.

Cellphone (Mobile) Data

There are multiple for-profit companies that purchase and aggregate cellphone location data. While this data is anonymous, it can be quite detailed. For park-usage purposes, the data may include the number of times per day, week or month a cellphone has been in a park space or where in larger parks the cellphone moved. The cost to purchase such data from these companies varies depending on the number of dates, parks or specific details requested. In general, cellphone data can reveal patterns in park visitation over time (daily to annual), but is limited to those visitors who bring their cellphones into the parks and if they have location services turned on for at least one mobile app.

Voluntary Registration

Common in larger, nature-based parks, this method requires individuals or groups to sign a registration form during their visit. Registration sites usually are unstaffed and located near trailheads, visitor centers or parking lots. Registration numbers can be linked to actual park and trail use through other methods, such as observations and trail/parking counters. By cross-referencing these data sources, park- and trail-specific multipliers can then be calculated to achieve more accurate park-use data. For example, if a staff member observes 20 individuals using a trail between 10 a.m. and noon and then counts 10 people registered at the trailhead, a “2x multiplier” can be calculated. The multiplier is more likely to be accurate with multiple comparisons across days of the week, times of day and throughout the different seasons.

Activity and Recreation

Why Measure

A prime directive for park and recreation professionals is to provide space for recreation and play. Measuring exactly what people are doing in your parks and how often they visit will be valuable information to help inform management decisions and future investments (such as sport courts and fields, outdoor exercise equipment and playgrounds). It also provides stakeholders with information about how parks support the general physical health of communities.

What to Measure

Some common measures of physical activity include type of park activity, intensity (e.g., sitting vs. running), duration and/or frequency of physical activity, and where in the park activity occurs.

How to Measure

Self-reported surveys and systematic observations are the two most common ways of measuring recreation and activity. But before conducting surveys or observing visitors, be sure to ask onsite staff (maintenance, law enforcement, visitor services, etc.) for their perceptions about what activities visitors pursue most frequently when they visit a specific park. These personnel are valuable observers of park activity; make sure you involve them.

Surveys

Surveys provide a self-reported record of park activity. Staff can administer surveys either in person through intercept surveys or through community surveys, as described previously. Using more than one of these survey methods may help maximize community reach. Be sure to consider the language, cultural and technology barriers that may exist in the community, and then accommodate them appropriately.

Common survey questions include:

- Type of activities
- Duration
- Frequency

3. Why do you usually visit ABC Park? (Check up to THREE reasons.)

- | | | |
|---|---|---|
| <input type="checkbox"/> To supervise a child | <input type="checkbox"/> To attend a class (yoga, dance, etc.) | <input type="checkbox"/> To socialize |
| <input type="checkbox"/> To walk | <input type="checkbox"/> To play a sport (basketball, baseball, etc.) | <input type="checkbox"/> To exercise or train |
| <input type="checkbox"/> To have a picnic | <input type="checkbox"/> To go to a market, festival, party, etc. | <input type="checkbox"/> To be outdoors |
| <input type="checkbox"/> To relax or read | <input type="checkbox"/> To walk through on the way to somewhere else | |

FREQUENCY OF PARK USE

Please answer the following questions having your usual park in mind.

1

On a usual park visit with your child, how long do you stay in the park?
(Note to surveyor: record answers in hours and/or minutes)

Answer:

2

During the past 30 days, on how many days did you visit this park?

Answer:

3

On a usual park visit with your child, do you go...
(Note to surveyor: only choose one below)

1. With your child alone
2. With your child and other children
3. With your child and other family members
4. With your child and your pet

Answer:

4

When deciding which park to go to, who usually makes the decision?
(Note to surveyor: only choose one below)

1. You
2. Other parent/caregiver
3. Child
4. Other

Answer:

Systematic Observation

The SOPARC method, described in the previous section, divides a park into play spaces or target areas. Each target area is observed every 15 minutes. Recorded observations of visitors include age group, gender, activity intensity (sedentary, walking - moderate or vigorous), and perceived race/ethnicity (if desired for diversity, equity and inclusion data). Well-trained observers following a strict protocol are critical for the reliability of systematic observation data.

The SOPARC method produces a large amount of numeric data that can be challenging to analyze. Some analysis methods are available using the [RAND Corporation SOPARC App](#) or other data-organization tools, such as template Excel spreadsheets available for [download](#). In addition, you may benefit from partnering with a statistician to analyze the data more effectively.

The SOPARC Supplement included in the Appendix of this report provides a case study on the design and implementation of a SOPARC analysis.

More Information About SOPARC
[NRPA SOPARC Report](#)
[SOPARC: Reliability and Feasibility Measures](#)

User Satisfaction

Why Measure

Understanding satisfaction with park areas is an effective way to gauge how positively people view your parks and how well those parks are being managed. When users are satisfied with their park experience, they likely will visit the park again in the future and recommend it to others. User satisfaction also is an important indicator of the success of management practices. Positive satisfaction data can be a powerful advocacy tool to share with local decision-makers (such as elected and appointed officials); at the other end of the spectrum, lower levels of satisfaction are essential in determining where efforts for improvement should be focused.

What to Measure

User satisfaction measures the positive experiences of visitors related to their park visit.

How to Measure

Surveys

Satisfaction typically is measured via surveys. It can be quantified holistically via a single question (e.g., “How satisfied were you with your visit today?”) or via a series of questions focused on various parts of a visitor’s experience at a park (e.g., parking, bathrooms, park amenities, etc.). Using one question about overall satisfaction often reduces the length of the survey and allows for easy comparisons of responses over time.

If desired, evaluators can ask about users’ satisfaction regarding different aspects of a park. Some of these elements relate to the built environment, or areas designed and managed for human use. (See the Built Environment section for more information.) Be sure to include a “Not applicable” response option in case the user did not engage with an aspect of the park.

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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of supervision/staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of other kids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of open spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fountains, restrooms and other services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General cleanliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall visit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Net Promoter Score

The Net Promoter Score (NPS) is a common survey question used to gauge the satisfaction, enthusiasm and loyalty a person has toward a specific service. Using a 0 to 10 scale, respondents are asked, “How likely is it that you would recommend [X] to a friend or colleague?” In our case, [X] can be replaced with a specific park or the entire park system. Responses are classified as either “promoters” (score of 9 or 10), “passives” (score of 7 or 8) or “detractors” (score of 0 to 6). The NPS is calculated by subtracting the percentage of detractors from the percentage of promoters. The resulting NPS will give you a sense of your customers’ (or users’) perceptions of your park/park system. The NPS can be collected progressively to evaluate changes in user perceptions over time.

For more information about the Net Promoter Score, visit the resource [netpromoter.com](https://www.netpromoter.com).

Feedback Kiosks

Ideal for high-traffic and staffed parks, these kiosks or terminals can provide instant feedback from visitors at busy sites and provide instantaneous input on user satisfaction. Often displaying a range of smiley faces/emojis from happy to sad, feedback kiosks allow users to provide quick input by selecting the face that best matches their experience at your park. The kiosks should be secured and sheltered from weather when your park closes.



Parks have a unique ability to develop and grow social capital in communities.
Photo credit: freepik.com

Community and Social Capital

Why Measure

Social capital is the shared knowledge, norms and trust that develop within a neighborhood. Given their place as pillars of public spaces and their ability to foster community experiences, parks have a unique ability to develop and grow social capital in communities. Parks act as social hubs, offering spaces for people to enjoy activities that build bonds (e.g., socializing, birthday parties, farmers markets, community meetings, sporting events). How a community views a park and its surrounding community can influence how the space is used or not used. Park cleanliness, programming and shared community values can all influence a park's use and associated benefits.

What to Measure

Community and social capital are measured by assessing who is visiting the park together, trust, shared values, diversity and opportunities to learn in the park.

How to Measure

Surveys

Social capital commonly is assessed through survey questions. Some sample questions include:

5. How much do you agree with the following statements regarding the neighborhood around ABC Park?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Not Sure
People get along with each other.	<input type="radio"/>				
People share the same values.	<input type="radio"/>				
You can count on adults to ensure children are safe and do not get into trouble.	<input type="radio"/>				

6. Does ABC Park give adults and/or youth a chance to learn or experience something new?

Adults Only
 Youth Only
 Both
 Neither
 Not Sure

7. Have you or your children met, played and/or interacted with anyone new at ABC Park?

Adults Only
 Youth Only
 Both
 Neither
 Not Sure

Qualitative Interviews and Focus Groups

Social capital also can be evaluated through interviews and focus groups.

Interviews can be conducted onsite with park users, in scheduled discussions held in person or via phone/virtually, or via written conversation through texts or emails. Interviews can result in recommendations of other potential participants.

Focus groups are scheduled gatherings of up to 10 participants who have agreed to share their thoughts and feedback on specific topics. These meetings are moderated by a skilled facilitator who asks key questions to gather information from all participants. Providing a small incentive for participation (compensation for their time or providing a meal) and making efforts to reduce barriers (providing childcare) can encourage participation.

For both individual interviews and focus groups, facilitators and stakeholders should collaborate to create a guide that details the key questions. Asking probing questions in response to what participants share and asking others how they feel about what has been said can result in richer insights into the topic. Careful notes or an audio recording (with permission) that is later transcribed will greatly assist in the analysis process.

These qualitative approaches often provide rich context on key topics and can be combined with quantitative data to craft an informative and memorable story with the evaluation results. **Some sample qualitative questions to measure social capital are:**

- Tell me about who visited the park with you during your most recent visit. Why did you decide to go to the park together?
- How do community members interact with each other while in the park?
- Provide examples of shared values between park users.
- How have community members contributed to your feelings of safety at the park?
- Describe what your child has learned or newly experienced at the park recently.
- Tell me about a time you or your child met somebody new at the park.

Built Environment

Why Measure

Most local park areas are designed and managed for human use. The built environment — spaces designed by people for human use — can play a significant role in how people interact with a park and the surrounding community. The built environment may include sidewalk connectivity, lighting, public restrooms, cleanliness, maintenance, and other aspects or infrastructure. Understanding the perceptions of these human-centric design features is helpful to assessing overall park quality.

What to Measure

To evaluate the built environment, questions should address the accessibility, safety and quality of the park. Elements to measure may include sidewalk connectivity and accessibility, marked crosswalks, public transportation proximity and speed limit. Some other non-functional elements in the built environment that may impact park use or experience include litter and broken or boarded windows.

How to Measure

Surveys

Community and park visitor perceptions of the built environment are most easily collected through surveys. Sample question 4 on [page 9](#) illustrates one way that satisfaction questions about the built environment may be incorporated into your satisfaction survey.

Sample question 8 illustrates an alternative way to ask visitors about a park’s built environment.

8. Is there anything that makes it difficult to visit ABC Park? (Check all that apply.)

<input type="checkbox"/> Sidewalk conditions	<input type="checkbox"/> Safety concerns related to crime/violence	<input type="checkbox"/> Traffic
<input type="checkbox"/> Lack of parking	<input type="checkbox"/> Nothing	<input type="checkbox"/> Other

Perceived Safety

Why Measure

A person’s perception of park safety is directly related to when, how often and what people do when they visit park areas. It is important to evaluate perceived safety to ensure residents feel safe accessing their parks; lack of safety is a common barrier to park use, and evaluation results can help identify specific perceptions of safety that can be addressed. Though objective crime (i.e., actual reports of crime to the police) is associated with park use, [perceptions of crime continually show a higher association with park-use behavior than actual crime statistics.](#)

What to Measure

Perceptions of safety can be useful for understanding attitudes toward parks and changes in park use. Importantly, perceived safety includes perceptions of safety while in a park, barriers to using a park and its amenities, and a sense of safety accessing a park from the surrounding neighborhood.

How to Measure

Surveys

Surveys can measure perceived safety by asking community members and park users directly about their perceptions of safety.

9. How much do you agree with the following statements regarding the neighborhood around ABC Park?

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	Not Sure
Walkers and bikers can be easily seen by people in their homes.	<input type="radio"/>				
I see and speak to other people when I am walking.	<input type="radio"/>				
The crime rate makes it unsafe to go on walks during the day.	<input type="radio"/>				
The crime rate makes it unsafe to go on walks at night.	<input type="radio"/>				

Interviews/Focus Groups

Similar questions can be used for interviews and focus groups to gather more in-depth information. Often, combining survey results with more in-depth, open-ended questions in a one-to-one discussion or in a group can pinpoint exactly what action may be necessary. Examples include:

- Please describe your feelings of safety walking from home to the park.
- Tell me about a time you felt unsafe while accessing or being in the park.
- Tell me about a time you felt safe, and supported by the community, while accessing or being in the park.

Economic Impact

Why Measure

While property values are influenced by a range of factors, [research has shown that close proximity to park and recreation areas contributes to increases in property values](#), especially in areas where green space is limited. For local and state governments, higher property values equate to higher revenue generation via property taxes and/or real estate transfer tax revenues. Quantifying and communicating this economic impact to government officials could be powerful and persuasive in encouraging further investment in parks as economic drivers.

While rising property values is generally perceived as a positive development, gentrification (the displacement of lower-income individuals from their communities because of wealthier people moving in) is a concern. Monitoring tax value assessment fluctuations also can clarify longer-term community impacts.

What to Measure

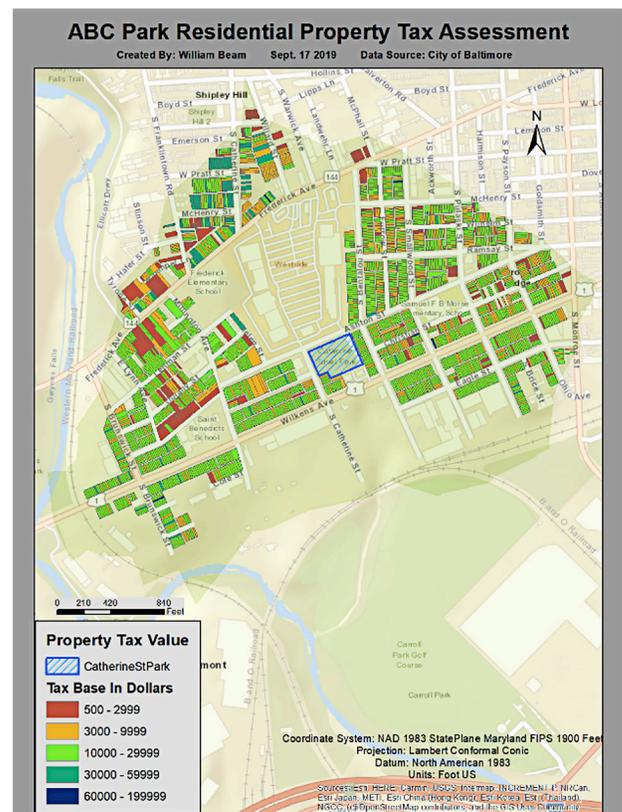
Property values based on tax assessment value.

How to Measure

Mapping/Databases

Tax assessments are publicly available information usually accessible via a local government's tax assessor (or related office). Many counties and municipalities provide access to this public data online via a mapping platform or database. Data in these systems may be exportable directly from the mapping platform/database or can be requested from the local government.

Once the tax assessment information is acquired, property values (residential and commercial) in proximity to park areas can be analyzed using Geographic Information Systems (GIS) software. Changes in property values for park-adjacent properties can provide an indicator of how parks have an impact on the economy. This type of analysis requires beginner to intermediate knowledge and a basic understanding of GIS data management tools.



This is a sample residential property tax assessment of ABC Park. Photo credit: William Beam

Conclusion

Evaluation can help you monitor and manage some of your community's most precious resources — your local park areas. Understanding park use and quality will help to inform and improve your operations and potentially justify further investment in these essential public spaces. This resource is a helpful starting point for identifying what kinds of questions you might want to include in your own park evaluation. As you continue on this journey, NRPA encourages you to engage with your local community from the beginning and partner with local colleges and universities to help hone your plan for evaluation. Additional resources are available on NRPA's Evaluation homepage: nrpa.org/Evaluation.



User satisfaction measures the positive experiences of visitors related to their park visit.
Photo credit: freepik.com

Acknowledgements

Thank you to the following individuals for their contributions to this report:

North Carolina State University

Kat Deutsch
J. Aaron Hipp
Will Beam

NC STATE UNIVERSITY

National Recreation and Park Association

Austin Barrett
Dianne Palladino
Kevin Roth
Kevin Brady
Lauren Redmore
Danielle Doll
Lindsay Collins
Vitsia Paynich
Meagan Yee
Ivy McCormick



**NATIONAL RECREATION
AND PARK ASSOCIATION**

About the National Recreation and Park Association

The National Recreation and Park Association (NRPA) is the leading not-for-profit organization dedicated to building strong, vibrant and resilient communities through the power of parks and recreation. With more than 60,000 members, NRPA advances this vision by investing in and championing the work of park and recreation professionals and advocates — the catalysts for positive change in service of equity, climate-readiness, and overall health and well-being.

NRPA brings strength to our message by partnering with like-minded organizations, including those in the federal government, nonprofits and commercial enterprises. Funded through dues, grants, registrations and charitable contributions, NRPA produces research, education and policy initiatives for our members that ultimately enrich the communities they serve.

NRPA places immense importance on evidence-based decision making to raise the status of Parks and Recreation. We use robust research and evaluation methods to help park and recreation programs measure progress toward stated goals, strive for continuous improvement and to advocate for parks and recreation as an essential community service. We also work with subject matter experts, consultants, and the academic community to develop tools, training and other resources that help park and recreation professionals to perform cost-effective, efficient and sustainable evaluation in the field. Learn more at nrpa.org/evaluation.



Measuring park use determines the value of investment by showing the public and elected officials key metrics regarding community park use.
Photo credit: freepik.com

APPENDIX: SOPARC

Supplement — Case Study

Researchers from North Carolina State University (NCSU) conducted an evaluation of the 2019 NRPA Parks Build Community project at ABC Park in Baltimore. As part of their evaluation, NCSU researchers used the System for Observing Play and Active Recreation in Communities (SOPARC) method to measure park use and activity engagement. Below is an overview of their use of SOPARC:

Steps Taken

1. Divided the park space into visible target areas (see example below)
2. Established observation times over the study period; These represented each day of the week and all time periods of interest; Controlled for seasonal events, such as school holidays and hot/cold weather by keeping observation dates relatively consistent
3. Trained observers and practiced observations to ensure consistency and reduce observation subjectivity; ABC Park observation training involved observers confirming answers with each other to establish agreement
4. Completed one SOPARC form for each scan — one for each target area each time it was scanned; For the ABC Park evaluation, the team scanned four times per hour over eight target areas, resulting in 32 completed forms per hour
5. After the dataset was complete, researchers conducted appropriate descriptive analyses, such as frequencies and percentages (e.g., 40 percent of baseball field users were vigorously active) and averages (e.g., 40 percent of baseball field users were vigorously active) and averages (e.g., in the spring, an average of 6.7 players were active on the basketball court)



This is a sample park layout.
Photo credit: Baltimore County Department of Recreation and Parks

Scanning Process

The systematic observation, or momentary scan, is a left-to-right visual scan of the target areas. Observers use a countdown and then scan. For example, an observer will stand at the corner of a basketball court, countdown “three, two, one,” then scan the court area left to right, noting the activity intensity of each person playing at the end of the countdown. Activity intensity is what the person(s) are doing at that moment. That is, if someone was playing basketball and sprinting down the court, but they were standing still under the basket for a rebound at that exact moment of the countdown and scan, that person would be recorded as sedentary. Therefore, momentary scans should be captured two to four times per hour to provide a broader understanding of total use of space.

Schedule

Researchers included four scans per hour of each space and incorporated a scan for each hour of the day, 9 a.m. to dusk, seven days of the week. For example, this schedule may have involved scanning at 9 a.m. and 10 a.m. on a Tuesday, then 4 p.m. and 5 p.m. on a Thursday. The schedule was repeated on the weekend because of different use patterns for school/work days versus on the weekend. Together, the collected data included systematic observations from each daylight hour across a week and weekend during at least one season of the year.

Supplies Needed

- Pens/Pencils
- Clipboards
- Watch/Phone for time
- Printed SOPARC forms (see below)
- Computer, spreadsheet, database for SOPARC analysis

Example SOPARC Form

Park ID: _____ **Date:** ___/___/___ **Day of week:** _____ **Round:** _____

Target area ID: _____ **Period:** 10am 3pm 4:30pm 6pm **Observer ID:** _____ **Start time:** _____

Conditions of target area: Accessible Supervised Equipped Usable Organized - F / I Dark Empty

Shade cover: Predominantly shade Shade/sun mix Predominately sun **Adult role:** Not present Staff Parent/caregiver

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																
Participants		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																

Comments: _____

Conditions of target area
 Accessible: e.g., not locked or rented to others
 Supervised: e.g., park staff or coach present
 Equipped: e.g., balls available
 Usable: e.g., not excessively wet, broken; for its intended purpose
 Organized Formal: e.g., team sporting event
 Organized Informal: e.g., groups playing a sport/game
 Dark: e.g., sufficient lighting
 Empty: e.g., scan area is empty

Age group
 0-4 years old = dependent child, from infancy to 4 years of age, likely assisted by a caregiver
 5-10 years old = independent child, from 5 to 10 years of age, unlikely to need assistance
 Teen = people from 11 to 19 years of age
 Adult = people from 20 to 64 years of age
 Senior = people from 65 years of age or older

Sedentary
 Sitting
 Standing
 Lying down
 Child being carried

Moderate/Walking
 Standing, holding a child
 Pushing a child on a swing
 Child on a swing, assisted
 Child on seesaw, assisted
 Pushing a child on a seesaw

Vigorous
 Running
 Jumping
 Cartwheels
 Child on a swing, no assistance
 Child on seesaw, no assistance

Activity codes

Sedentary	Sports	Fitness	Active game
Artwork	Baseball	Horseshoes	Climbing/sliding
Chess/checkers	Basketball	Soccer	Jumping (rope, hoops, hop scotch)
Lying	Cheerleading	Tennis/racquet	Manipulatives
Picnick	Dance	Tetherball	Monkey bars/hanging
Reading	Football	Volleyball	Swinging
Standing/Sitting	Gymnastics		Tag/chasing games
Using mobile devices	Handball		Using playground set
			Water feature/splash pad

v.4 (04/20/2017)