

## IMPACT CALCULATOR USER GUIDE

### 2 | Introduction

### 3 | Project History

- What the Calculator Is and Is Not

### 4 | Importance of Reports

### 5 | Before You Begin

- Philosophical decisions

- Information to collect (Spreadsheet)

### 6 | General Guidelines

- Your Profile

- Use of information points

- White areas vs Grey areas

- References/Citations

- Print Reports

- Presenting Your Report

- Clearing Values

- Saving Your Work

### 9 | Logging In

### 11 | Property Values

### 13 | Health Care

### 14 | Environment

### 20 | Tourism

### 22 | Jobs

### 23 | Arts

**KANSAS RECREATION AND PARK ASSOCIATION**

**P.O. Box 1283 Lawrence, Kansas 66044**

**(785)235-6533 | KRPA.ORG**

*Please contact the Kansas Recreation and Park Association offices if you have any questions regarding this User Guide or the Impact Calculator. This is an effort to streamline the way park and recreation professionals calculate and communicate the important value of what you do. Reproduction or use of information contained within this document may not be done without expressed written consent from the Kansas Recreation and Park Association.*

## INTRODUCTION

The KRPA Impact Calculator is a tool reserved for use by KRPA professional members only.

The calculator has been recognized as a significant advancement in enabling KRPA members to utilize evidence-based information in assigning value to the services and programs they offer. Utilizing the resulting reports when communicating with community members, decision makers, advocates, and critics, you will be equipped with information that shows a return on the investment of tax dollars and user fees to your community. That impact can be economic or social.

This initiative aims to establish a network of knowledgeable individuals who will actively advocate for the significance of parks and recreational offerings within a community. Additionally, it will equip agencies with the necessary resources to adopt best practices and sustainable funding models that acknowledge the economic impact generated by parks and recreation.

The User's Guide aids in navigating the online tool. Training sessions that will cover the importance of capturing impact information, guide users on utilizing the tool and gathering data, and most importantly, educate users on effectively communicating the derived information to showcase their impact are forthcoming.

The KRPA Impact Calculator will be periodically reviewed, and calculations updated to assure that users are provided with the most accurate information.

## PROJECT HISTORY

In 2020, KRPA engaged Sports Facilities Companies to develop an impact calculator, specifically for KRPA members.

Workgroups specific to each of the areas of focus of the calculator were recruited, assuring that subject matter experts in the fields of economics, parks and recreation, physical activity and nutrition, environmental analysis, and research were represented. Sports Facilities Companies ([www.sportsfacilities.com](http://www.sportsfacilities.com)) was contracted to assist in reviewing relevant literature and published research, develop calculations, compiling narratives, and reporting. BigPxl ([www.bigpxl.com](http://www.bigpxl.com)) was contracted to develop and program the on-line calculator.

The goals of this project were clear: 1) to empower parks and recreation professionals to demonstrate the value of their parks, 2) to support community and decision makers' engagement around the importance of parks, and 3) to act in the best interest of parks and recreation professionals while, providing a simple and impactful communication tool. It was determined that the calculator would need to be easy to use; include directions, resources, and references; be location-specific allowing users to address one location or asset type; create a comprehensive report for an agency; and allow for individual impacts to be assessed by individual category with a single report.

The workgroups dedicated their efforts to develop a comprehensive tool tailored to meet the specific requirements of parks and recreation agencies in Kansas. However, it is important to acknowledge the limitations of the calculator. The calculator cannot:

- Serve as the sole data source and reporting mechanism for your parks system.
- Be presented as an impartial, peer-reviewed report.
- Substitute for the essential feasibility studies, reports, and master plans that contribute to the growth and prosperity of your system.

The KRPA impact calculator is the result of the work of many committed professionals, the staff at the Sports Facilities Companies, and BigPxl.

## IMPORTANCE OF REPORTS

How do you communicate the value of a single park or of an entire park system? Most commonly, parks and recreation agencies will define quantitative metrics, collect data, and supplement that effort by articulating qualitative benefits. Some common quantitative metrics include the number of people, number of programs, number of facilities, amount of revenue, and amount of expenditures. Qualitative benefits may include some positive general statistics relating to the areas of mental and physical health, quality of life and environment.

Meaningful and accurate reporting is one of the most important methods to communicate value. Standard reporting methodologies focus on data that is easily collected, but has little correlation to the substantial community, bigger impacts that, in reality, a park ignites. If reports are difficult to assimilate, then they have a lower chance of actually being created. If there is no connection to a broader community context, then they are not delivering comprehensive meaning.

Demonstrating how parks add value to your community in larger areas of community impact is one of the primary areas that should be in focus as agencies maintain and develop community assets. If stakeholders and decision-makers fail to see the value in parks, arguably, there is no value. Reporting should ensure that no one is unaware of the impacts that are delivered, not just be an historical accounting.

## BEFORE YOU BEGIN

### *Philosophical Decisions*

We suggest that users review this guide, and as a team decide what methodologies you will apply to each of the areas. There are calculations that allow you to override the conservative figures we have used. The workgroup hopes that should you have more definitive information about your specific agency and community and that you will utilize that – it is why the tool was built to be flexible. However, with that flexibility, we also want to encourage you to understand those decisions and make a commitment to explain those elements in your presentation of the reports.

You will also need to decide whether you want to use this tool for a single park or multiple parks. We suggest entering information and preparing a report for each of the parks in your system, and then entering the numbers in aggregate to get a report for your entire park system.

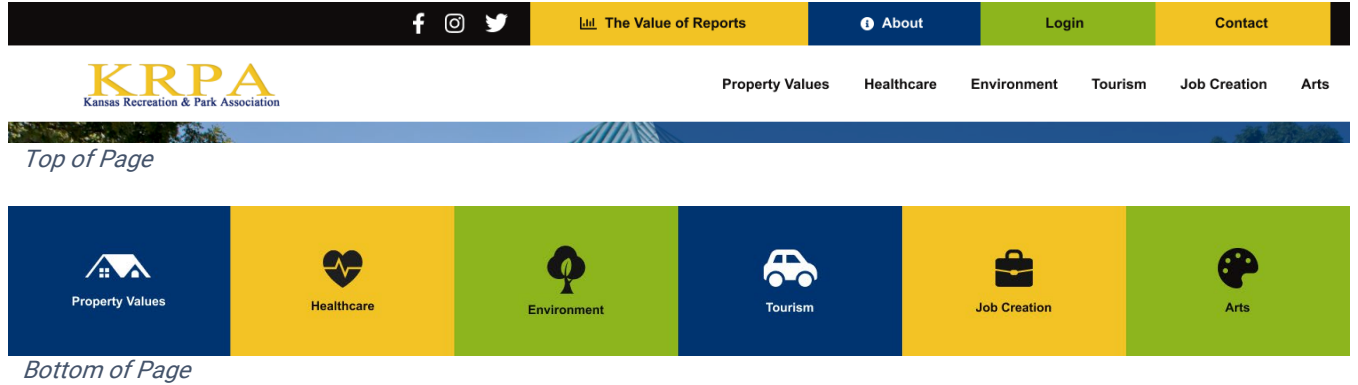
### *Information to Collect*

We have provided an [excel spreadsheet](#) for users to gather information in advance of beginning the calculator. Gathering information in advance will allow entry to move quickly. Please note that this spreadsheet does not have any formulas in it. This is simply for information gathering.

On the spreadsheet, you will see that the last column is Annual Spending on Recreation and/or Events - this will be a calculation from the Tourism calculator after you enter the appropriate data. Utilize this field on the spreadsheet to capture that calculation that you will use later in the calculator. The Excel sheet is attached as a separate document to this guide.

## GENERAL GUIDELINES AND NAVIGATION

Google Chrome is the preferred browser for the best performance of the KRPA Impact Calculator. You can enter each of the areas of impact by selecting the desired field from the top menu bar or the bottom footer bar.



### *Your Profile and Past Reports*

Access your profile or any reports you have generated by clicking your park/agency name in the upper right corner of the page. On the left you will see tabs for "Profile" and "Impact Reports". Under "Profile", you can change your user information, including the name of the Park you want to change on the report. Here you can also update your password. Under "Impact Reports" (on the left navigation list), you will see a list of any reports you have generated and the date they were created. At this time these are unable to be deleted so we suggest saving your pdfs on your own computer with the park name and date that it was created.

**TIP:** When entering information for a different park, be sure to go into your profile and change the "Organization Name" to the park you are entering data for.

### *White areas vs Grey areas*



When using the calculator, you will note there are two different color fields. White fields are those in which you will enter information. Grey fields are those where there is a resulting calculated value based on previous entries. Grey fields cannot be changed by the user.

All calculations are based on evidenced-based reporting/research. However, the tool is intended to be flexible in some areas and allow for more local information/statistics that you have for your programs. We encourage you to utilize your local information where it is available; however, please do this with the caution that you will need to justify the resulting information in your individual reports.

Once you have entered your information, click on the CALCULATE button and you will see the graphic portrayal of your results populate in the area to the side of the calculations.

When you click on the VIEW SUMMARY button, you are taken to a page that provides the entry information and graphic portrayal, without a photo-marked background. It also brings all the impact calculators onto a single page, allowing for quick access.

### ***References/Citations***

On each page, if you scroll down, you will see an information point with a note about the references used on this calculator. Click this section to be taken to the citations for research and studies on which the calculations are based. You can print this information to include in your presentations.

### ***Printing***

Printing from the calculator webpages themselves is not recommended due to the pages being very text-heavy and not formatted to compile the data all to one page. Once you are prepared to print your report, simply click on "View Summary" within the calculator to finalize the process. This will take you to the summary page. Scroll all the way to the bottom to generate your report. This will populate into a pdf for you to print.



### ***Use of Information points***

Throughout the calculator, you will see the use of an information point graphic next to an entry field. By hovering over these, a pop-up box will appear that will give you more information.

**GENERATE YOUR CUSTOM PDF REPORT**

**CLICK HERE**

Additionally, you can find past reports under your profile by clicking your park name in the upper right corner of the webpage at any time.

### ***Presenting Your Report***

Be sure to document any resources you use when gathering your data so that when you present it to your citizens or city/county officials, you have the backup information needed to feel confident in your report. If you vary from the information that had been pre-populated in the calculators, you may wish to include a summary or memo to accompany your final report. Additionally, check with the KRPA offices to see if there are any upcoming trainings you can attend to learn more about the calculator and telling the story behind the numbers.

### ***Clearing Values***

To clear all values, click “View Summary” from any calculator page. Navigate to the bottom of the page and click the “Clear All Values” button. This will clear all values for all calculators.

To clear all values for a single calculator, select the “Clear All Values” button on the individual calculator page.

Clear All Values

### ***Saving Your Work***

When you leave the Calculator, the last entry you made in a field will still be in the field when you return. This way if you are working on something over a few days, you will not have to re- enter the information each time you come back. However, you will not be able to access past information you have entered, except for the final reports generated (see Your Profile and Past Reports above).

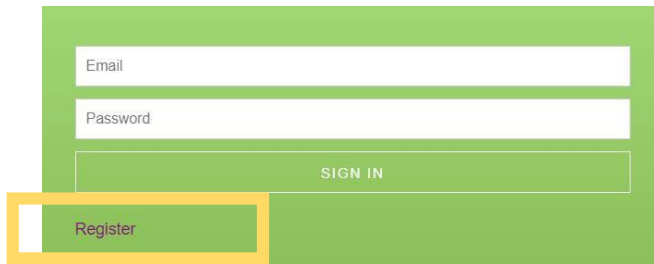


## LOGGING IN

Visit [krpa.org/calculator](http://krpa.org/calculator).

### *First Time User*

The calculator pages are not available unless you are logged in. Scroll to the bottom third of the home page where you will find text boxes that ask for your email and password. Do not enter this information at this time. Under these boxes, click the “Register” link.

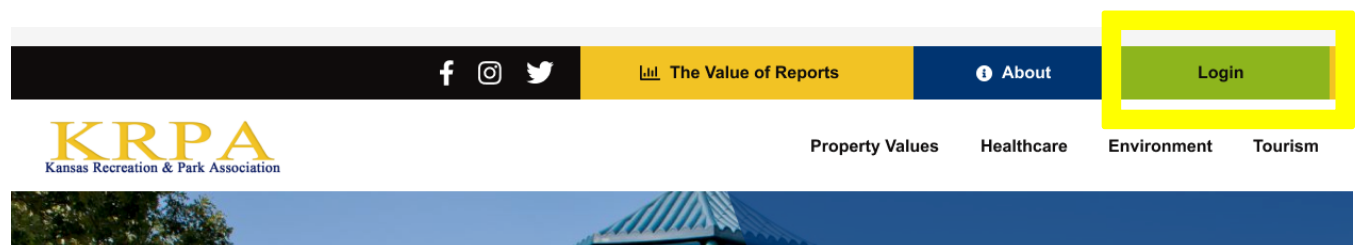


The image shows a login/register form with a green background. It includes two input fields labeled 'Email' and 'Password'. Below these fields is a 'SIGN IN' button. To the left of the 'SIGN IN' button is a 'Register' button, which is highlighted with a yellow border.

You will be taken to a form page asking for more information. If this is your first visit to the site, you will need to register using the email address that you have on file with KRPA. This is most likely your agency email address. (please note: if you provide us with any other email address other than the one we have on file you will receive an email letting you know your access has not been granted).

You will also enter the “Park/Facility/Event/Program Name” or park system that you would like generated on any final reports. Lastly, please indicate the intended uses of this calculator by clicking on the applicable options.

After you have clicked “register”, you will receive an email that tells you whether your account has been approved. This is based on your current KRPA membership status. If you are not an active member you will receive an email stating so. If you are a current member and therefore approved for use, you will be sent an email with a link to set your password and other account information. This email will come from a wordpress email address. Check your “Junk” folder if you are unable to locate the email. If you do not receive this email, let us know by emailing [jamie@krpa.org](mailto:jamie@krpa.org). A password will be generated for you when you click the link included in the email, but feel free to change it to something familiar for you. Click “Reset Password” and log in.



[Top of Page](#)

### *Returning User*

If you are returning to log in with an already approved password, click “Login” at the top right on the calculator page and use your email and password. If this does not immediately take you to the sign in area at the bottom of the page, scroll down. If you forget or need to reset your password, you can always go back to “Register” and scroll down to “Lost your password?” at the bottom of the page.

Additionally, you may want to begin with clear fields if you are entering a new park. Go to the Summary Report page, scroll to the bottom, and click “Clear All Values”. You can also Clear All Values for an individual calculator by selecting “Clear All Values” on the corresponding calculator page.

## PROPERTY VALUES

Distance from parks and trails is known to influence property values. Nationwide research shows that the premium for proximity to these spaces can affect market values up to 2,000 feet by 20 percent or more. Dr. John Crompton's proximity principle estimates:

Proximity to a park improves home values

- 20% for homes adjacent to the park
- 10% of homes 1 block away (500 feet)
- 5% for homes 2 blocks away (2,000 feet)

In addition to the location, the type of park also impacts the home values:

- 10% for active parks
- 33% for active and passive recreation areas within the park
- 70% for passive recreation within the park



## ASSUMPTIONS

The tool calculates the value of the property for the property owner. Therefore, apartments should be counted as one property, condominiums that are individually owned should be counted per unit. Business, churches, and schools are not included in this assessment. The research is applicable for residential property. If you are a county agency, you should use the appropriate millage rate for your park (it may include both county and city millage rates), so the property value can be expressed as value to the property owner where the property is located.

When assuming a proximity percentage for a park that is not yet established, consider other parks in your system that would have similar amenities, size, demographics of surrounding neighborhood, etc.

## INPUTS

### *Number of Houses within 500 feet of the park*

Determine the number of houses within 500 feet of the park. The appropriate Proximity Effect percentage will be auto filled at 3.3%. You can find this information by using Google Maps. Locate your park on Google Maps and then zoom in enough to see a few blocks of houses around the park. Right-click to use the measurement tool and expand to 500 feet to count the houses within that area. You may also contact your planning department or property appraiser's office to find out if they have this information.

### *Average Sales Price of House in the Zip Code of the park*

To find this information, we suggest you contact a local board of Realtors or your growth management or planning department to get the average sales price. You can also use a property sale website such as Zillow.com or Realtor.com to determine the average sales price in a particular zip code, but keep in mind that these prices are not always the most realistic as they are not based on the actual sale price. A park may be on the edge

of a zip code so keep that in mind. Be ready to justify your sources with anyone to which you may be presenting.

### *Millage Rate*

If you do not know your millage rate for the city or county your park is in, you can look this up on your county property appraiser's website. Use the search feature to find the exact address of a home nearby and be sure to include all millage rates that apply (city, county, school, etc.). That being said, also evaluate which millage rates you include in your calculation as some of them may not be relevant to the taxes that affect parks and recreation. Whatever you use, explain this process in your presentation, if needed.

### **CALCULATE**

The output in this calculator will give you the increased value of the nearby homes based on the proximity effect. It will also give you the incremental tax value to your community.

## HEALTHCARE SAVINGS

Studies of healthcare economics and policy have established that increased access to public outdoor spaces and more biking and walking infrastructure encourages people to exercise, which as a result, reduces overall health care expenditures.



## ASSUMPTIONS

For the most accurate reflection of impact in this area, users may want to consider collecting the data asked for over a period of time and applying that to this area. If you have not collected this information, you may choose to estimate. If you choose to estimate, you will want to state this in your presentation of the material.

Unique users means that the person who visits your park three times per week is only counted once. This is not each visit.

## INPUTS

### *# of Unique Users Under 65 Annually*

Record your estimated numbers or if you have a way of tracking use, enter that number in this field. The Healthcare Savings field is pre-populated with \$1,437 (figure updated 2024) which is based on previous work in health care economics (which includes a National Medical Expenditure Survey that has been widely cited) and represents the annual medical cost savings of adults under 65 years old.

### *# of Unique Users Over 65 Annually*

Record your estimated numbers or if you have a way of tracking use, enter that number in this field. The Healthcare Savings field is pre-populated with \$2,874 (figure updated 2024) which is based on previous work in health care economics (which includes a National Medical Expenditure Survey that has been widely cited) and represents the annual medical cost savings of adults over 65 years old.

## CALCULATE

When you select CALCULATE, the result that appears in the calculation circle is the Estimated Annual Healthcare Savings for Users Under 65 added to the Annual Health Care Savings for Users Over 65.

## ENVIRONMENT

Parks have been proven to positively impact the environment and reduce the cost of environmental impacts for communities related to stormwater management, pollution mitigation, energy consumption, and other issues. This calculator utilizes currently published data to quantify the positive environmental impacts in terms of the appropriate unit measurement (gallons of stormwater mitigated, carbon sequestered by trees, the ecosystem value of trails and pollinators) and the monetary value of these impacts.



## STORMWATER

For stormwater, the tree calculation considers a broad set of impacts based on the number of trees in a park while the acreage calculation considers only stormwater mitigation impacts based on the number of acres of park land.

Key Metrics/Statistics pulled from studies reviewed show:

- The annual value of an urban tree is \$20.17 (figure updated 2024), according to the FEMA Green Infrastructure report, and includes the annual net savings from energy, stormwater management, air quality and reduced CO<sub>2</sub>.
- Annual stormwater mitigation and the resulting monetary savings
  - 19,081 cubic feet of runoff avoided per acre of parkland
  - \$.03 - \$.05/cubic foot (figure updated 2024) of water avoided

There are two ways to calculate impact in this area: calculate using the number of trees in the park, or by the total acres in the park. Change this option by clicking the dropdown menu in the first box.



## STORMWATER INPUTS

### *Number of Trees in Park*

This value is one that many agencies will not have readily available. Several recommended sources for you are your city/county arborist and any tree inventories that have recently been done in your community (iTree is a valuable resource to review to determine trees in designated areas). Alternatively, you can potentially do an aerial estimation, or conduct a spot count where you take a small percentage of the total acreage and count trees. After you count trees in a spot area, then apply that to the total park acreage. Utilize a number that you are comfortable justifying in your presentation. If you do not have this number or

are not comfortable estimating this, we suggest calculating based on total acres in the park.

#### *Total Acres in Park*

This value should be readily available to you. Consider subtracting out the impervious areas since they do not help with drainage.

The Gallons/Cost is pre-populated with a percentage according to the Cleveland Metroparks study and the Mecklenburg County, NC study. The study states that the cost to manage stormwater is between \$0.03 - \$0.05 per cubic foot of stormwater. If you know the cost per cubic foot of stormwater in your community, use the open-ended box to insert the cost. If you do not know the cost in your community, use the default of \$0.05 per cubic foot of stormwater as derived from the studies mentioned above.

### STORMWATER CALCULATIONS

If using the Number (#) of Trees in Park, when you select CALCULATE, the results that appear in the calculation circle is the Annual Net Savings from pollution mitigation, energy consumption, and other issues that are reduced (saved) as a result of the trees being present in the park.

If using the Total Acres in Park, when you select CALCULATE, the result that appears in the calculation circle is the Annual Savings in Stormwater Management cost for that number of acres.

### BACK-END STORMWATER CALCULATIONS

When using the Total Acres in Park to arrive at the Annual Savings in Stormwater Management costs, there is a complicated formula that occurs in the programming of the tool. Here is the calculation which is based on the Cleveland Metroparks, and the Mecklenburg County, NC studies. These studies assign a cost for stormwater management per cubic feet, but to measure volume, we need to convert cubic feet to gallons of water.

#### *Conversion Used To Get Total Gallons,*

1 acre of land mitigates 19,081 cubic feet of water  
annually 1 cubic foot of water = 7.48052 gallons

Formula: Total acres of parkland X 19081

Formula: divide the volume by cubic feet per gallon

Total gallons of stormwater your park is mitigating annually divided by  
7.481 Assign the cost savings - Total cubic feet x (.03-.05)

## STORMWATER CALCULATION OUTPUTS

If using the Number (#) of Trees in Park, when you select CALCULATE, the results that appear in the calculation circle is the Annual Net Savings from pollution mitigation, energy consumption, and other issues that are reduced (saved) as a result of the trees being present in the park.

If using the Total Acres in Park, when you select CALCULATE, the result that appears in the calculation circle is the Annual Savings in Stormwater Management cost for that number of acres.

## CARBON SEQUESTRATION INPUTS

### *Total Acres in Park (Mature Forest)*

This value should be readily available to you if you manage forest lands. Consider subtracting out any impervious areas (i.e. parking lots or buildings within the forest acreage).

The value of carbon sequestration is pre-populated (-0.84 metric tons CO<sub>2</sub>/acre/year, figure updated 2024) with the average metric ton CO<sub>2</sub>/acre/year sequestered by one acre of U.S. Forest, as designated by the United States Environmental Protection Agency division of energy and the Environment in the *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020 (EPA 2022)*. Additional information regarding this calculation can be found by accessing the following reference: <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

The U.S. EPA provides data on the net change in forest carbon stocks and forest area. The pre-populated annual CO<sub>2</sub> sequestered amount is an estimate for “average” U.S. forests from 2019 to 2020; i.e. the annual net change in carbon stock for the U.S. forests as a whole between 2019 and 2020. Significant geographical variations underlie the national estimates, and the values calculated in this calculation are not representative of an individual region, state, or species composition.

## BACK-END CARBON SEQUESTRATION CALCULATION

The calculation multiplies the total acres input by the U.S. EPA conversion factor for carbon sequestered in one year by 1 acre of average U.S. Forest.

Total Acres input multiplied by ( -0.23 metric ton C/acre/year\* × (44 units CO<sub>2</sub>/12 units C) = -0.84 metric ton CO<sub>2</sub>/acre/year sequestered annually by one acre of average U.S. forest) -0.84.

## CARBON SEQUESTRATION CALCULATION OUTPUT



After inputting the Total Acres in Park, when you select CALCULATE, the result that appears in the calculation circle is the Annual Estimated Carbon Sequestered for that number of acres.

### ECONOMIC VALUE OF TRAIL-BASED SYSTEMS INPUTS

*Total Acres of Trails/Miles of Trails (Primitive and Semi-Primitive non-motorized trails)*  
User inputs either total acres or total miles of non-motorized trails. This value should be readily available to you if you manage primitive/semi-primitive non-motorized trails. If this value is not easily available, one can measure the length value of the trail and convert length to miles using the following formula:

Length in feet \* width of trail = sq. ft. of trail

Convert sq. ft. of trail to acres by multiplying the total sq. ft. of the trail by 2.2957

1 acre is equal to 43,650 sq. ft.

User then selects category of trail location/land cover category for the recreation/tourism benefit associated with the trail. According to FEMA, the following definitions should be used to determine land cover category:

*Forest is defined as: Areas dominated by trees (evergreen and/or deciduous) generally greater than 5 meters tall that – on average – comprise greater than 20% of the total vegetation cover within the area or unit of analysis (e.g., pixel, polygon, parcel).*

*Wetland is defined as: Areas dominated (20 percent or more) by perennial herbaceous vegetation, vegetation that grows and forms a continuous cover on or at the surface of the water, shrubland vegetation, or forest; AND the soil or substrate is at least periodically saturated with or covered with water; AND these waters are tidally influenced and have a salinity less than 0.5 parts per thousand.*

*Urban green open space is defined as: Green open space areas are those in which vegetated pervious surfaces account for at least 80% of total cover (impervious surfaces account for less than 20% of total cover) and include a mixture of some constructed materials. Green open space is considered “urban” if it meets the criteria specified in the U.S. Census Bureau’s “2010 Census Urban and Rural Classification and Urban Area Criteria,” which includes both Urbanized Areas (population of 50,000 or more) and Urban Clusters (population between 2,500 and 50,000). Examples of urban green open space include urban parks and recreational sites, neighborhood green spaces, pocket parks, green corridors, and lawns.*

*Rural green open space is defined as: Areas where vegetation accounts for at least 80% of total cover (impervious surfaces account for less than 20% of total cover) and have a mixture of some constructed materials located in a rural setting. A rural setting is any area outside 2010 Census Urbanized Areas (population of 50,000 or more) or Urban Clusters (population between 2,500 and 50,000) definitions. Examples include rural parks and open space, open fields, and rangelands.*

**BACK-END ECONOMIC VALUE OF TRAIL-BASED SYSTEMS CALCULATION**

After selecting the land cover category, the calculator will either convert miles to acres or use the supplied acres number and multiply that number by the FEMA value for the specific land cover noted (Value (2021/USD/acre/year). The chart below details the FEMA value for Recreation/Tourism ecosystem services. ( figures updated 2024)

Trail Category	Acre/Year
Forest	\$94
Urban Green Open Space	\$1,642
Rural Green Open Space	\$601
Wetland	\$1,624

**ECONOMIC VALUE OF TRAILS-BASED SYSTEM CALCULATION OUTPUT**

After inputting the Total Acres/Miles of Non-Motorized trails, when you select CALCULATE, the result that appears in the calculation circle is the Annual Estimated Economic recreation/Tourism Value for trails included in the acres/miles number input.

**ECONOMIC VALUE OF POLLINATION INPUTS**

*Acres of Wildflowers*

User inputs total acres of wildflower plots. The benefit of pollination from grasslands and prairies is essential to sustaining many cropland yields, and the conversion of grasslands and prairies to agriculture is a hindrance to pollination levels locally as wild pollinators are lost. Pollinators thrive on the wildflowers provided by these natural areas. In a comprehensive study, Pimentel et al. (1997) estimated the value of pollination in the U.S. and the economic contribution of pollination services to the world’s agriculture using the value of the increased yield and quality achieved through pollination by honeybees alone.

**BACK-END ECONOMIC VALUE OF POLLINATION CALCULATION**

Calculation uses total acres input by user and multiplies that number by \$350/acre/year ( figure updated 2024). This is the estimation for the ecosystem value of pollination in rural open space land cover areas for 2021, as noted by FEMA.

References:

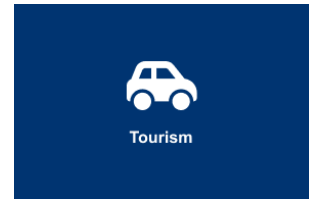
[https://www.fema.gov/sites/default/files/documents/fema\\_ecosystem-service-value-updates\\_2022.pdf](https://www.fema.gov/sites/default/files/documents/fema_ecosystem-service-value-updates_2022.pdf)

Pimentel, David et al. 1997. "Economic and Environmental Benefits of Biodiversity." *BioScience* 47(11): 747–57.

## TOURISM

Parks and recreation tourism events play a significant role in generating economic value for communities. By promoting purpose-driven events that showcase the benefits of hosting events, communities can raise awareness and gain buy-in from stakeholders, leading to more successful events and continued economic growth.

*\*This calculator is not intended to determine impact of events that do not generate non-local visitation.*



## ASSUMPTIONS

The total visitors include each time a person visits the park.

## INPUTS

### *Total Visitors to the Park for Events*

In this field, record visitors attending your park for programmed events. This is intended to capture individuals participating in a planned special event at a park. For the purposes of the calculator, this is not intended to include pavilion rentals for birthday parties, etc., where there is no revenue beyond the rental fee. Do NOT account for local or non-local at this point. If you do not have this number, we encourage you to do some spot counting to obtain this number or windshield surveys.

### *Total Number of Event Days*

In this field, enter the total number of days of an event.

### *% of Non-local Visitors*

The default calculation percentage of 75% is derived from the Kansas State Parks Economic Contributions to Regional and State Economies 2021 report which notes that approximately 75% of spending associated with State Parks was within 40 miles of the state park, while the remaining 25% took place elsewhere in Kansas (pg. 31).

User is able to customize the percentage of non-local visitors based on their local market.

### *Non-local Visitors (recreation)*

This is the result of the total visitors to the park for recreation multiplied by the % of non-local visitors.

The Average Daily Expenditure ( figures updated 2024) is based on data collected by Sports Facilities Companies, using CVENT,GSA, and local sources, for regions within Kansas. The following chart notes the collected information that was used to develop the default for each region.

<b>Region</b>	<b>City</b>	<b>ADR</b>	<b>M&amp;IE Total</b>	<b>ADE</b>	<b>Daily Rate</b>	<b>Source</b>	<b>County</b>
Northwest	Great Bend	\$73.80	\$25.00	\$61.91	\$14.93	CVB Contact	Barton County
	Hayes	\$99.05	\$59.00	\$121.07	\$35.22	CVB Contact	Ellis County
Kansas City Area	Overland Park	\$123.00	\$64.00	\$136.52	\$38.21	GSA	Johnson County
North Central	Salina	\$77.00	\$46.00	\$94.32	\$27.46	CVENT	Saline County
Northeast	Topeka	\$99.00	\$46.00	\$101.66	\$27.46	CVENT	Shawnee
	Manhattan	\$105.00	\$59.00	\$123.06	\$35.22	CVB Contact	Riley
South West	Garden City / Finney	\$98.00	\$59.00	\$120.72	\$35.22	GSA	Finney County
South Central	Wichita, KS	\$103.00	\$64.00	\$129.85	\$38.21	GSA	Sedgwick County
South East	Emporia	\$89.00	\$59.00	\$117.72	\$35.22	Chamber/CVB Contact	Lyon County
	Ft. Scott	\$109.00	\$59.00	\$124.39	\$35.22	Chamber/CVB Contact	Bourbon County
Default Rate	(unspecified location)	\$96.00	\$59.00	\$120.06	\$35.22	GSA	Statewide

For the purposes of this calculator, the following chart noted the default rates for each region:

<b>Region</b>	<b>ADE</b>	<b>Daily Rate</b>
Northwest	\$91.49	\$25.08
North Central	\$94.32	\$27.46
Northeast	\$112.36	\$31.34
Southwest	\$120.72	\$35.22
South Central	\$129.85	\$38.21
South East	\$121.06	\$35.22
Standard Rate	\$120.06	\$35.22
Kansas City	\$136.52	\$38.21

**M&IE (Meals and Incidentals) Total** – the full daily amount received for a single calendar day of travel when that day is neither the first nor last day of travel.

**Average Daily Rate** – The Average Daily Rate (ADR) in tourism is a metric that calculates the average revenue earned per rented room in a hotel or accommodation facility over a specific period

**Average Daily Expenditure** – the average daily expenditure for non-local visitors to the market, including but not limited to: average daily rates for hotels, average daily meal costs, and percent of spending in market by category

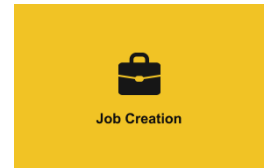
We suggest you check with your local CVB or sports commission to see if there is a dollar amount they normally use per visitor.

**CALCULATE**

When you select CALCULATE, the result that appears in the calculation circle is the Average Expenditure by Total Visitors to the Park for Events. The represents the Annual Spending Generated Through Recreation and/or Events specifically associated with events.

## JOBS

Parks have been proven to be drivers of significant economic activity, having a positive impact on the economy through supporting jobs in local communities. The calculator strives to utilize currently published data to quantify the total jobs supported in the community. This is not meant to determine the number of Full Time Employees that a department should employ.



## ASSUMPTIONS AND INPUTS

Economic Activity is defined as the total personnel spending and capital spending by local park agencies. Personnel spending includes the cost of salaries, wages, and benefits. Capital spending includes the cost of acquiring, upgrading, and maintaining park assets. This should be specific to the park you are evaluating. If you do not break up your budget by park, consider the percentage of your operating and capital budgets that this park utilizes.

The calculation utilizes the NRPA 2022 Economic Impact Report, the Kansas State Park study from 2021, and is supported by the Department of Labor Statistics data for job classification 27-000 (Arts, Design, Entertainment, Sports, and Media Occupations) which estimates that total jobs supported through annual spending on recreation and/or events at parks. For every \$148,696 ( figures updated 2024) in annual spending (economic activity) on recreation and/or events, one job is supported.

<https://www.nrpa.org/contentassets/f568e0ca499743a08148e3593c860fc5/2022economicimpactreport.pdf>

## BACK-END JOBS CALCULATION

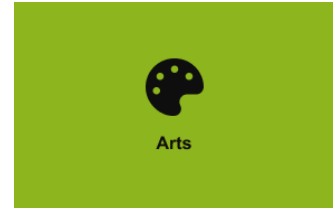
The calculation combines the annual operating budget and the capital budget then divides the amount by the NRPA KS \$148,696 (amount of economic activity need to support 1 parks & recreation job in Kansas) to determine the total jobs supported.

## CALCULATE

When you select CALCULATE, the result that appears in the calculation circle is the Total Economic Activity calculation added to the Total Annual Direct Spending on Recreation and/or Events.

## ARTS

Arts and cultural programming offer immense value to communities. Revenue generated through arts events and programming support local economies, create jobs, and support businesses.



### ASSUMPTIONS AND INPUTS

This calculation provides two separate outcomes. First is the total jobs supported by arts programming and events. Second is the economic impact of spending by cultural arts audiences.

### INPUTS

User inputs total expenses spent on Art (including amount of installation, event, artist in residence, etc.) Next, user inputs total attendance at art specific event(s).

User finally selects population size of community (categories include less than 5,000 up to 1,000,000 or more).

### BACK-END JOBS CALCULATION

For jobs supported by arts, the calculator uses the Americans for the Arts Economic Impact Table 1 ( figures updated 2024) by population category and divides by the FTE jobs per \$100,000 spent by Nonprofit Arts and Cultural Organizations. See chart below.

**Table 1: Economic Impact Per \$100,000 in Spending by Nonprofit Arts and Cultural Organizations**

Population Category	Full-Time Equivalent Jobs	Resident Household Income	Local Government Revenue	State Government Revenue
Fewer than 50,000	3.36	\$65,367	\$2,840	\$5,075
50,000 to 99,999	3.42	\$71,736	\$3,484	\$5,082
100,000 to 249,999	3.91	\$74,649	\$3,871	\$4,622
250,000 to 499,999	3.72	\$80,932	\$3,769	\$5,512
500,000 to 999,999	3.75	\$82,080	\$4,465	\$5,523
1,000,000 or More	3.30	\$83,727	\$4,068	\$4,953
Average of all AEP5 Study Regions	3.59	\$74,855	\$3,636	\$5,095
Standard Deviation	0.80	\$12,858	\$1,284	\$1,765
95% Confidence Interval	0.10	\$1,669	\$167	\$229

For the second calculation, the calculator utilizes the resident/non-resident percentage of total attendees, noted by the Americans for the Arts table 2 ( figures updated 2024), and multiplies each by the average per person expenditure. See chart below.

**Table 2: Residency and Per Person, Per Event Expenditure Averages for Cultural Audiences**

Population Category	RESIDENT		NON-RESIDENT	
	Percentage of Total Attendees	Average Per Person Expenditure	Percentage of Total Attendees	Average Per Person Expenditure
Fewer than 50,000	65.5%	\$20.38	34.5%	\$47.79
50,000 to 99,999	67.2%	\$22.44	32.8%	\$43.79
100,000 to 249,999	66.8%	\$22.19	33.2%	\$39.55
250,000 to 499,999	66.8%	\$22.55	33.2%	\$41.46
500,000 to 999,999	68.5%	\$23.12	31.5%	\$43.55
1,000,000 or More	67.8%	\$26.57	32.2%	\$51.41
Average of all AEP5 Study Regions	66.8%	\$22.39	33.2%	\$44.02

**CALCULATE**

When you select CALCULATE, the result that appears in the calculation circle are the Total Jobs Supported by Arts calculation and the Economic Impact of Spending by Arts Audiences.