

East Goshen Township
Department of Parks and Recreation

2017 Park Usage Report

December 13th, 2017

Report Overview:

When it comes to understanding parks – some long standing questions have always been:

Exactly how many people are using it? What are they doing?

What park facilities get the most usage? How about the least?

This report serves to begin to answer these questions utilizing the SOPARC (System for Observing Play and Recreation in Communities) program. This system was developed by Texas A & M University in the early 2000s and has since become the standard for valid, reliable and applicable park and recreation data collection. Utilizing an iPad, the Parks and Recreation Director and volunteers took park user counts during the months of April through December. Per the SOPARC standard, counts were taken on four separate days within one week’s time for a given month. Within each day, four counts were taken: early morning, late morning, early afternoon and evening before dusk.

Example:

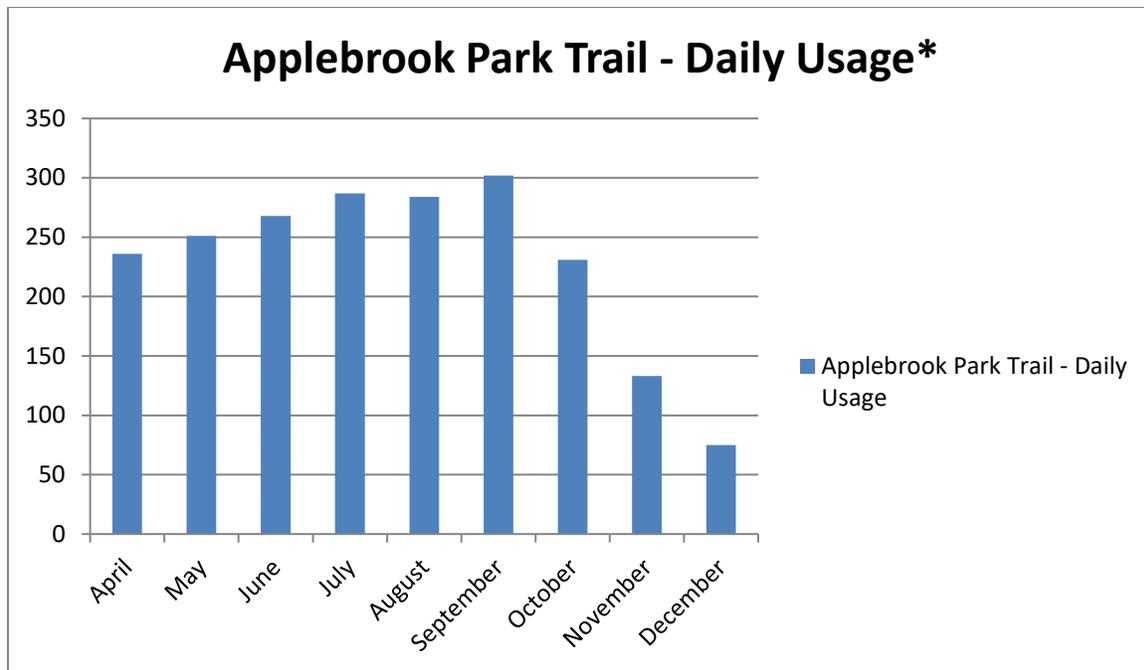
<u>Location:</u>	<u>Monday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Saturday</u>
Applebrook Park	8:30am 11am	8:30am 11am	8:30am 11am	8:30am 11am
<u>Dates:</u>	2pm	2pm	2pm	2pm
Week of April 16th	6:30pm	6:30pm	6:30pm	6:30pm

Exact locations were identified in East Goshen and Applebrook Parks for assessment and utilized for each counting period. In 2017, these locations were:

- Applebrook Park trail (west of the first bridge)
- East Goshen Park trail (at the base of the football field)
- Playground

Intended Outcomes:

- Quantify park use by facility and participant demographics for use in operational and strategic planning.
- Utilize MET equivalent to understand the relationship between park use and associated decrease in health care savings. The first reference listed below contains the equation to convert cumulative MET into anticipated health care savings.
- EG Parks and Recreation is installing a destination playground in 2018. This is a benchmark, so we can draw conclusions about how much usage increases with the new playground investment.



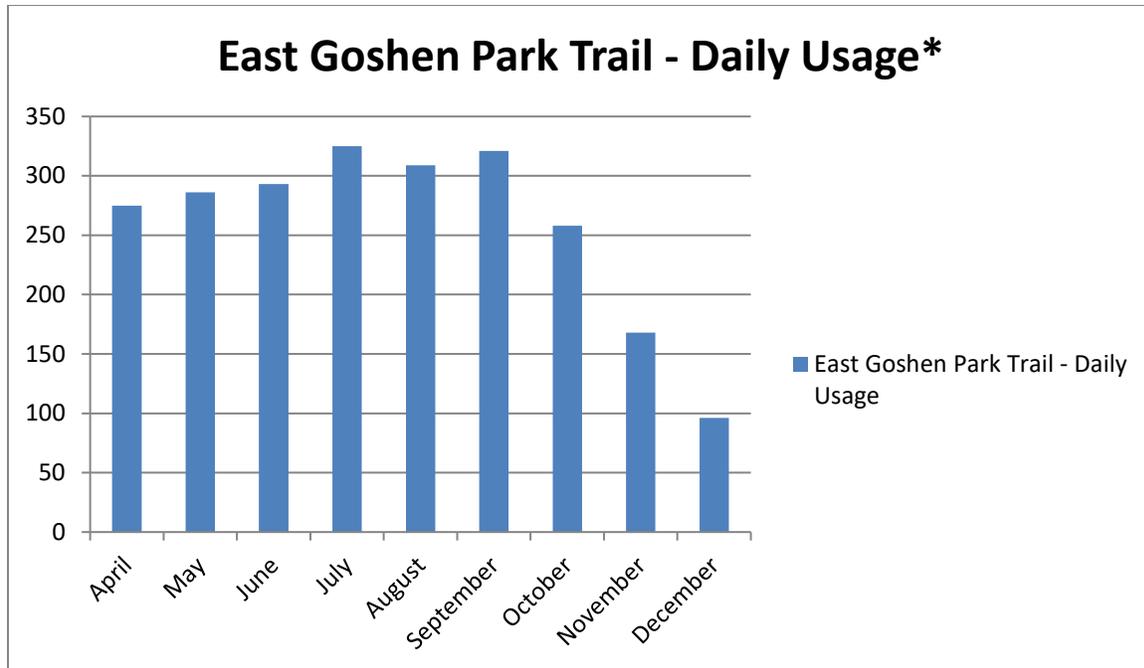
* Daily usage for the year can be estimated at 62,000 participants on the Applebrook trail.

* Male = 46% / Female = 54%

* Sedentary/Sitting at bench (MET equivalent) = 17% (1.5); Walking = 69% (3);
Vigorous/Running = 14% (6)

* (MET Cumulative Value) = Sedentary/Sitting at bench = (15,810); Walking = (129,375);
Vigorous/Running = (52,500) = 197,685 METs among 62,500 park uses.

* Deferred Health Care Savings = 2.3M



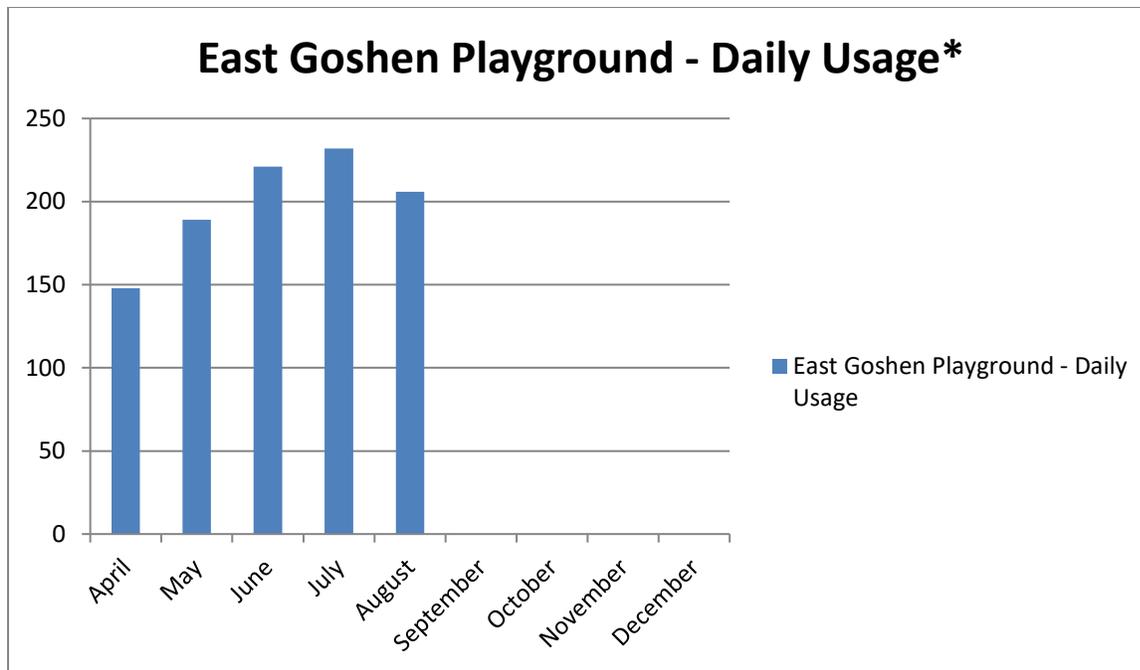
* Daily usage for the year can be estimated at 70,000 participants on the Applebrook trail.

* Male = 48% /Female = 52%

* Sedentary/Sitting at bench = 21%; Walking = 71%; Vigorous/Running = 8%

* (MET Cumulative Value) = Sedentary/Sitting at bench = (22,050); Walking = (149,100); Vigorous/Running = (33,600) = 204,750 METs among 70,000 park uses.

* Deferred Health Care Savings = 2.4M



* Daily usage for the year can be estimated at 50,000 participants at the EGT Park playground.

* Male/Female ratios

* Sedentary = 28%; Walking = 9%; Vigorous/Running = 63%

* (MET Cumulative Value) = Sedentary/Sitting at bench = (21,000); Walking = (13,500); Vigorous/Running = (198,000) = 223,500 METs among 50,000 playground uses.

MET Equivalent Analysis:

Metabolic equivalent (MET) is a widely used method for calculating energy/calorie expenditure in health and wellness settings, where one MET equals a person at rest. All physical activities are assigned a MET value based on how they affect energy/calorie expenditure in comparison to a person at rest (one MET). Walking has a MET value of three (3) and Vigorous/Walking six (6) METs. Park usage totals can then be used through MET values to ascertain various metrics. There has been a lot of research into how to calculate a reduction in health care costs in relation to MET values. Aoyagi and Shephard found for every ten (10) METS of exercise per week, a \$126 reduction in associated health care costs, or 3.7% could be anticipated per person. For the purposes of this report, this study informs MET Equivalent/Health Care Savings listed above. Let's reasonably assume that each participant listed above is actually coming to the park three times per week. This means instead of 62,000 unique individuals coming to Applebrook Park trail; it's actually 20,666 unique individuals. If we then divide Applebrook Park trails MET value among those 20,666

for a total of 9.56 METs per person, per week. If we then use the above study, we can quantify that public health care costs are reduced cumulatively by \$2.3M just for those using Applebrook Trail. When taking this one measure into account, the positive impact of the East Goshen Township park system is clearly evident.

Findings and Conclusions:

Trail usage was heaviest during the early morning hours and evenings, with seniors the majority of early morning users and adults the majority of evening users. Early morning trail users tended to walk in small groups of regulars, while evening trail users tended to be in pairs or alone.

Playground usage was heaviest during the mid-morning and early afternoon count. There was almost no usage during the early morning count.

Future reporting/uses for SOPARC

SOPARC reporting will become more applicable to Township planning as we build a more robust collection of data showing park usage trends. Some future applications include:

Use in capital project grant applications

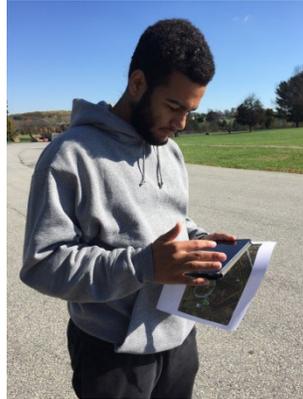
Support for/against future park development projects

Evidence that park projects are increasing park usage/residential quality of life (for example when the new playground and Paoli Pike Trail open)

Potential synthesis with future updates to Township planning documents

Increase Township's ability to quantify and communicate its role in health and wellness to the public, elected officials and other governing bodies

Notes:



The Department of Parks and Recreation would like to thank volunteers Justin Smiley and Emma Mahard for helping with this project!

References:

Aoyagi Y., Shephard RJ *A model to estimate the potential for a physical activity-induced reduction in healthcare costs for the elderly* Journal of Sports Medicine; 2011 Sep 1;41(9):695-708

Jonathan Myers, PhD, Rachelle Doom, MD, Robert King, MS, Holly Fonda, MS, Khin Chan, MD, Peter Kokkinos, PhD, David H. Rehkopf, MPH, ScD *Association Between Cardiorespiratory Fitness and Health Care Costs: The Veterans Exercise Testing Study* Mayo Clinic Proceedings, 2017, September

J. Peter Weiss, MD, MSc; Victor F. Froelicher, MD; Jonathan N. Myers, PhD; & Paul A. Heidenreich, MD *Health-Care Costs and Exercise* Chest Journal; 2004; Vol. 126, Pgs. 608 – 613

Thomas L. McKenzie, Deborah A. Cohen, Amber Sehgal, Stephanie Williamson, and Daniela Golinelli *System for Observing Play and Recreation in Communities (SOPARC): Reliability and Feasibility Measures* J Phys Act Health. 2006 Feb; 3 Suppl 1: S208–S222