

Measuring and Communicating the Importance of Parks, Conservation, and Health in Your Community

As parks and recreation (P&R) management professionals, we likely know in our hearts and have strong anecdotal experience around how important parks and recreation are for our communities. However, we may not be as great at measuring, understanding, and communicating the actual value of how our parks, facilities, and conservation areas (*green infrastructure*) are performing and providing these services. Beyond managing programs, parks, and facilities well, we need to be better at evaluating and educating to promote conservation, the value of stewardship, and quality of life to our decision makers and the public.

In the academic and professional consulting realms, P&R researchers and planners are developing different metrics and measurement methods to help communities assess performance and services from parks and conservation areas. New tools are available to help tell the story in your community from different *perspectives*. Adopting language and methods from new research and planning practices can be helpful for communicating to decision makers and the public.

These new tools can add context to storytelling about important site specific issues, using evaluation at a community *systems level* (*ecosystems and/or green infrastructure*) approach (Penbrooke, 2017a). There is a strong recent body of work examining the *restorative effects of nature* on humans, especially in terms of stress reduction, reduced attention deficit disorder, and other forms of psycho-emotional restoration. The TDK Foundation has produced an open source summary research brief that provides an overview of the elements that have been shown in the research to be correlated with access to nature and greenspace, such as those found in parks and other natural areas (Wolf & Housley, 2013; Larson, Jennings, & Cloutier, 2016). For P&R practitioners, commonly front line staff need to deal with the detail of important site-specific issues, but senior-level practitioners may find that they have to think more broadly across portraying the value of the full community system. Often decisions that impact conservation, health, and/or social equity outcomes require complex integration of many variables, including environmental, social, physical, and financial aspects. Adopting a *systems approach* model into discussions and planning efforts helps to provide a big picture for tough decisions and overall community planning, when the answer really is, “it depends”. Newer technology methods for complex geo-spatial and other dataset analyses now allow for stronger quantitative and qualitative assessments than ever before in the history of P&R. Agency leaders may do well to adopt these methods, and learn to use them to portray how their community P&R system is working to serve residents.

Advances in Metrics and Analysis of Levels of Service

There are several strong tools that can provide metrics for local P&R active and conservation planning and management. Some of these tools can measure access to and use of parks along with associated diverse environmental, economic, social, psychological, and physical health benefits. For example, Kaczynski et al. (2016) from the University of South Carolina have developed index of park access (called *ParkIndex*) to allow researchers, planners, and citizens to evaluate the potential for park use for a given area. Results from a Kansas City, MO study showed that the number of parks and the average park quality index within one

Standardized metrics and methods are now available to analyze park access and functionality, including geo-spatial analysis of park availability, proximity, and quality.

mile were positively associated with park use. Park Index may provide standardized metrics for measuring park access that combine elements of both park availability and quality which can be represented spatially on maps to help tell story for research efforts. The national 10-minute Walk Campaign (www.10minutewalk.org) also looks at conveying the importance of distance (proximity) from home to parks. This campaign shows promise from a marketing standpoint, especially for urban communities, but may not be as applicable for suburban or rural parks systems.

For community system-wide parks and recreation planning (such as for overall agency master and strategic planning) that can serve all community types, Layton (2016) found that characteristics of the greenspace environment within close proximity (1/3 mile) of an individual's home may not be entirely reliable predictors of either opinion of overall greenspace adequacy in the community, or the number of park visits. The results suggest that subjective variables, such as greenspace quality, awareness, design, and aesthetics, may play a stronger role than objective variables, such as quantity of greenspace and proximity, in predicting behaviors associated with greenspace. Layton's findings indicate that perceptions of greenspace do not always reliably align with objective measures. Characteristics of the participant, including age and gender, relative personal importance assigned to parks, awareness, and community type lived in may be reliable predictors. This suggests that strategies matching greenspace allocation with specific neighborhood demographics may be more reliable than those based on benchmarking standards for general communities, or self-reported needs. Other recent research has suggested similar findings, especially as related to park usage in low-income urban areas (Cohen et al., 2017). Layton's group has adapted methods for community-wide P&R planning, and tested them on over 100 U.S. communities (www.dcla.net). Layton and his teams use digital *composite-values methods* (CVM) in a geo-spatial level of service (LOS) analysis system called GRASP® to address parks and recreation components, typically as part of larger P&R master planning efforts that have a strong management, marketing, and communications elements.

Digital *component-based* inventory and levels of service analyses can help with system-wide planning for a wide variety of aspects. In a typical community, there may be 85 to 100 different types of components (ballfields, playgrounds, indoor and aquatics facilities, trails, etc.) that are owned and managed by the local P&R agency.

Quantifying and Conveying Health Impacts from Parks and Conservation Areas

Parks are recognized as important environments for promoting active lifestyles and parks can contribute significantly to physical activity and other preventive health factors (Gardsjord, Tveit & Nordh, 2014; Godbey & Mowen, 2010; Penbrooke, 2017b; Sallis et al., 2016). Research conducted in parks demonstrates that particular components within parks produce more activity. In reviewing various studies, researchers have been able to obtain baseline measures on park use and activity in a park before an improvement occurs and compare the measures to data obtained following the improvement (Floyd, Suau, Layton, Maddock, & Bistura-Mezaros, 2015). In general, parks are used more often and users are more active following improvements or renovation. The researchers went beyond measuring activity levels, to actually assigning *active energy expenditures* (AEE), along with estimates of capital costs for various components within the parks, using regionally adjusted estimates from across the U.S. These

Parks are used more often and users are more active following improvements or renovation. Now the changes can be estimated and measured to better tell the "why" for need for parks projects.

estimates can help park planners and managers look at systemwide equity and make estimates of potential increases of activity and return on investments for park improvements. Layton’s GRASP® planning group now is also including the addition of measuring the active energy expenditures (Floyd et al., 2015) using a system called GRASP®Active to assess and predict potential physical activity related to the park components (Layton, 2018). These system-wide geospatial planning tools can help agencies tell a clear story about agency potential reach and gaps in service provision. In addition, more information on a strategic systems thinking toolkit approach to planning for healthy communities through P&R is available from GP RED at <http://www.gpred.org/initiatives/healthy-communities-research-group>. A conceptual model below (Penbrooke, 2017b) depicts how all of the health factors and the various community providers can work together using systems thinking to modify preventive health through P&R.



Addressing Climate Change at a Local Level

In addition to traditional P&R assets and activities management, municipalities across the world are attempting to address other related community-wide challenges. Tough topics such as climate adaptation, resilience planning, and green infrastructure investment can focus on the role of the environment in enhancing quality of life in communities. The existence of climate change is no longer questioned by researchers in P&R and related fields (Campbell, Svendsen, Sonti, & Johnson, 2016), but there is a need to address the topic objectively and with political sensitivity. In this era, parks are increasingly viewed by policymakers and land managers as potential natural buffers to help mitigate the effects of storm water management, sea level rise, and wildfires. Researchers have also been focused on parklands as space for cultivating social resilience through civic engagement, active use, and stewardship activities. They found that urban parkland is a crucial form of nearby nature that provides space for recreation, activities, socialization, and environmental. There are systematic planning tools available to help P&R agencies address all of these aspects and they can help provide context for focused conversations on sensitive topics going forward.

If you are interested in additional research on new methods for measuring and communicating the value of parks and conservation areas, the *National Recreation and Park Association* also has free reports on these topics (Penbrooke, 2017a) available from <https://www.nrpa.org/publications-research/research-papers/relevant-research-for-practice/>. Professional planning firms are including these aspects in systemwide planning efforts. The good news seems to be that a strong focus on demonstrating how conserving natural areas is not only important for the environment, flora, and fauna in our natural world, but essential for human health and community vitality. Leaders in our field have likely often known this, but the newer methods for measuring and communicating your community-specific findings can better help to your show decision makers how P&R assets and programs can provide returns on investment in your community.

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