PARK AND RECREATION SUSTAINABILITY PRACTICES

A SUMMARY OF RESULTS FROM AN NRPA MEMBER SURVEY

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CLIMATE RESILIENT PARKS

Parks are key community stakeholders when it comes to addressing the effects of climate change. From protecting water resources via green infrastructure practices, to reducing urban heat island effect through city wide forest restoration - parks play a critical role in ensuring that our communities successfully adapt and thrive in light of a rapidly changing planet.

TOP 5 WAYS PARKS AND RECREATION IS TAKING ACTION ON CLIMATE CHANGE

77% Offer transportation alternatives that reduce carbon footprint

70% Protect watersheds by adopting natural resource management practices

53% Improve air quality by increasing tree canopy

52% Educate the public on sustainability actions

51% Reduce stormwater runoff and flooding through green infrastructure

Percentages are based on a survey of nearly 400 park and recreation agencies.

www.nrpa.org/Climate-Resiliency
What is sustainability? Sustainability is a broad term most often defined as “meeting the needs of the present without compromising the ability of future generations to meet their needs” (Bruntland Report for the World Commission on Environment and Development 1992). Increasingly, as we compete for space and resources, incorporating sustainability principles into our work is no longer something nice to strive for but something we must strive for the benefit of future generations. Sustainability is one piece of the puzzle as communities seek to be more resilient to climate change.

Park and recreation agencies are on the front line of a multitude of issues within and outside of the communities they serve. From matters of health and wellness to social equity, conservation and sustainability, critical topics such as these are addressed daily by park and recreation agencies across the country. Sustainability weaves itself through all those facets. Increasing foot and bike trail access benefits a population’s health and wellness while cutting down on the need for driving. Increasing tree canopy and green space in otherwise urban landscapes provide underserved communities with direct access to the physical and mental benefits of nature. Taking measures to mitigate the effects of natural disasters through the use of water diversion tactics or shelter accessibility catapults park and recreation agencies from simple areas of play and relaxation to major agents of change in a community. Sustainable actions and activities make all these and countless other instances possible.

With limited resources, it can be a heavy lift for park and recreation agencies to incorporate principles of sustainability into their operations, programs and management. NRPA remains committed to supporting park and recreation agencies in meeting this challenge. As part of its three-year strategic plan, NRPA is encouraging park and recreation agencies to engage 1,000 communities in the implementation of sustainable practices.

The NRPA Research team worked closely with the association’s conservation team to develop a survey to gain an understanding of the sustainability practices currently implemented by park and recreation agencies and of how agencies are contributing to sustainability in their communities. The survey generated responses from 377 park and recreation agencies, resulting in a 12 percent response rate. The key findings from the survey are the basis of this report.

**KEY SURVEY HIGHLIGHTS INCLUDE:**

- Park and recreation agencies’ sustainability activities not only focus on environmental benefits but also on public education and cost savings.
- Even though virtually all park and recreation agencies have implemented many sustainability measures, most agencies do not have a documented sustainability plan.
- Most park and recreation agencies do not closely track the cost savings that sustainable actions may generate.
- Barriers that keep agencies from implementing more sustainability measures include a lack of funding, a lack of dedicated staff and limited expertise on practices.
In their role as stewards of the environment, virtually all park and recreation agencies support activities that improve sustainability in their communities. These activities can span from educating and connecting the public with nature to reducing negative impacts on the environment.

However, park and recreation agencies less frequently have a formally documented plan that outlines a strategy for preserving natural resources and promoting good conservation and sustainability practices. In fact, of the surveyed park and recreation agencies, just 23 percent currently have a documented sustainability plan, although another 11 percent of agencies intend to put into place a formalized sustainability plan within the next year. In some cases, where the agency does not have its own sustainability plan, it follows the strategies and tactics dictated by the city/town, county or state plan (14 percent). But, in many other cases, park and recreation agencies do not have a plan at the agency level or elsewhere that guides the sustainability activities for the agency (44 percent).
Regardless of whether they have a formally documented plan, park and recreation agencies invest in sustainability practices with many goals in mind. Naturally, the most widely cited goal is the environmental benefits that these activities and practices can generate (84 percent of agencies). These may include improving the air and water quality in the community and reducing the agency’s impact on the environment (e.g., using fuel-efficient vehicles, reducing the use of pesticides).

**84 percent of agencies invest in sustainability activities and practices for the environmental benefits.**

Beyond environmental benefits, sustainability activities generate other benefits valued by both the agency and the community. Other widely cited goals of park and recreation agency sustainability activities include:

- **Education**: 69%
- **Cost savings**: 68%
- **Public support**: 54%
- **Meeting the agency’s mission**: 53%
- **Regulatory obligation**: 32%
- **Public recognition**: 20%
Park and recreation agencies implement a wide variety of sustainable practices in their communities. Widely cited sustainability activities implemented by park and recreation agencies include:

- Providing opportunities for healthy activity in nature (81 percent of agencies)
- Protecting and managing wildlife and wildlife habitats (71 percent)
- Natural land management (70 percent)
- Reducing landfill waste (60 percent)
- Following environmentally friendly building practices (56 percent)
- Fostering public engagement and education (52 percent)
- Implementing green infrastructure practices (51 percent)
To meet their sustainability goals, park and recreation agencies implement a wide variety of activities, policies and strategies. Some of these actions involve altering purchasing policies for more environmentally friendly goods and services. Other tactics involve a greater investment in infrastructure, education and strategic vision. All of these activities have a wide range of benefits.

PROMOTING HEALTHY ACTIVITIES IN NATURE

Promoting healthy activities in nature not only benefits the population physically and mentally but also contributes to a healthier environment. Research shows that people who are exposed to nature and have experiences in nature are more likely to act responsibly toward it.

Park and recreation agencies providing opportunities for healthy activities in nature indicated implementing the following:

- **Increasing the accessibility to and the opportunities for walking, biking, public transit**: 95%
- **Conserving and maintaining trail systems**: 92%
- **Establishing and promoting community gardening opportunities**: 62%

People who are exposed to nature and have experiences in nature are more likely to act responsibly toward it.

PROTECTING AND MANAGING WILDLIFE AND WILDLIFE HABITAT

Park and recreation agencies provide valuable habitat for wildlife across the country. Many agencies are committed to protecting and managing wildlife and wildlife habitat through various strategies and activities. Even small urban areas can be restored to provide functional habitats for a variety of wildlife and plants. This is especially important for threatened species.

Park and recreation agencies aiming to protect and manage wildlife and wildlife habitats indicated implementing the following:

- **Controlling and managing invasive species**: 88%
- **Promoting activities that lead to the creation and conservation of habitat**: 79%
- **Managing human-wildlife interaction while fostering human-wildlife coexistence**: 50%
- **Protecting species in need of conservation**: 44%
- **Conducting regular inventories of species, habitats and communities**: 39%
RESPONSIBLE NATURAL LAND MANAGEMENT

A majority of the surveyed park and recreation agencies practice responsible natural land management by conserving and enhancing the integrity of natural lands and natural processes and minimizing the use of harmful treatments.

Park and recreation agencies following these practices indicated implementing the following:

<table>
<thead>
<tr>
<th>93%</th>
<th>76%</th>
<th>76%</th>
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</thead>
<tbody>
<tr>
<td>Planting native and regionally appropriate species</td>
<td>Preserving/Increasing tree canopy</td>
<td>Controlling invasive plants with less toxic means</td>
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<table>
<thead>
<tr>
<th>67%</th>
<th>66%</th>
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<tbody>
<tr>
<td>Following sustainable turf management practices</td>
<td>Following Integrated Pest Management practices</td>
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REDUCING LANDFILL WASTE

Reducing landfill waste has a compounding effect on the environment. The benefits from reducing landfill waste are multifold, including the reduction of energy-intensive transportation of waste to landfills and the elimination of hazardous and toxic chemicals leaching into surrounding soil and groundwater.

Park and recreation agencies aiming to reduce their contributions to landfills indicated implementing the following:

<table>
<thead>
<tr>
<th>96%</th>
<th>68%</th>
<th>66%</th>
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</thead>
<tbody>
<tr>
<td>Recycling/Upcycling</td>
<td>Recycling electronics</td>
<td>Providing special event recycling bins and collection</td>
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<table>
<thead>
<tr>
<th>62%</th>
<th>50%</th>
<th>41%</th>
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</thead>
<tbody>
<tr>
<td>Conducting public education and offering recycling stations</td>
<td>Composting</td>
<td>Reducing the use of plastic bottles</td>
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ENVIRONMENTALLY FRIENDLY BUILDING PRACTICES

Environmentally friendly building practices, including the construction of green and sustainable infrastructure, refer to the use of environmentally responsible and resource-efficient construction processes and materials that minimize the ecological impact of a structure for its entire life.

Park and recreation agencies following these practices indicated implementing the following:

- **94%** Using LED lighting
- **72%** Using Energy Star-rated appliances
- **67%** Using low-flow plumbing fixtures/water stations/water recycling
- **65%** Using environmentally friendly cleaning supplies
- **43%** Using recycled construction materials
- **43%** Sensitively rehabbing and reusing historic buildings

PUBLIC ENGAGEMENT AND EDUCATION ACTIVITIES

A vast majority of surveyed park and recreation agencies foster sustainability through public engagement and education activities focused on sustainable topics, greatly expanding their overall impact by influencing the behavior of the general public.

Park and recreation agencies that seek to increase their impact through engaging the public indicated implementing the following:

- **89%** Offering environmental education opportunities
- **77%** Setting up educational kiosks, displays and bulletin boards in public areas
- **68%** Entering public/private partnerships that promote sustainable practices
- **48%** Adult classes
- **39%** Youth workforce training
GREEN INFRASTRUCTURE

Green infrastructure is a resilient approach to managing stormwater runoff and reducing flooding. Vegetation, soils and other elements can be used to increase the capacity of permeable surfaces to naturally filter water and mitigate the effects caused by impermeable services.

Park and recreation agencies that make green infrastructure part of their sustainability efforts indicated implementing the following:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Practice</th>
</tr>
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<tbody>
<tr>
<td>62%</td>
<td>Constructing rain gardens</td>
</tr>
<tr>
<td>60%</td>
<td>Constructing bioswales</td>
</tr>
<tr>
<td>60%</td>
<td>Conserving existing and increasing permeable surfaces</td>
</tr>
<tr>
<td>56%</td>
<td>Using natural systems to reduce erosion</td>
</tr>
<tr>
<td>56%</td>
<td>Constructing wetlands</td>
</tr>
<tr>
<td>38%</td>
<td>Using rain barrels</td>
</tr>
<tr>
<td>23%</td>
<td>Installing green roofs on agency buildings</td>
</tr>
</tbody>
</table>

CULTURAL RESOURCES

Some park and recreation agencies with cultural resources on their land are actively working to safeguard these resources from vandalism, development and weathering.

Park and recreation agencies charged with managing cultural resources indicated implementing the following:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Practice</th>
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</thead>
<tbody>
<tr>
<td>96%</td>
<td>Protecting cultural resources and historic sites</td>
</tr>
<tr>
<td>70%</td>
<td>Committing resources and/or developing partnerships that enable cultural education and conservation</td>
</tr>
<tr>
<td>47%</td>
<td>Following a management plan for cultural resource protection</td>
</tr>
</tbody>
</table>
GREEN EQUIPMENT AND TRANSPORTATION METHODS

Green equipment and transportation methods reduce emissions released into the air and the quantity of fossil fuels consumed.

Park and recreation agencies that have adopted these methods indicated implementing the following:

- 91% Purchasing fuel-efficient vehicles
- 62% Following anti-idling practices
- 59% Purchasing fuel-efficient machinery

RENEWABLE ENERGY SOURCES

As owners and operators of a significant number of buildings and infrastructure, park and recreation agencies can promote sustainability by increasing their use of renewable energy sources. Naturally, these energy sources reduce the carbon footprint of the agency while educating the public on the availability of cleaner energy sources.

Park and recreation agencies that use renewable energy sources indicated that they purchase or even generate energy derived from:

- 85% Solar
- 32% Geothermal
- 12% Wind
- 8% Biomass

ADAPTING STRATEGIES AND MITIGATION ACTIVITIES FOR CLIMATE CHANGE CONDITIONS

Some park and recreation agencies are adapting strategies and mitigation activities for climate change conditions. In many cases, agencies are changing practices, such as altering plantings and infrastructure, that will help the community mitigate changes resulting from climate change.

Park and recreation agencies indicated implementing the following:

- 76% Implementing adaption strategies for climate change conditions
- 47% Mitigating actions for sea-level rise, extreme weather events, flooding, etc.
- 24% Using carbon sequestration
The saying goes that if you cannot measure it, you cannot manage it. This holds true for park and recreation agencies that operate with limited financial resources. As a result, most park and recreation agencies link investments and activities with desired sustainability outcomes. Seventy-two percent of park and recreation agencies have defined specific measures that gauge the success of their sustainability activities.

An agency’s sustainability outcomes can vary greatly, including counting the agency’s activities, quantifying protected resources and measuring actual improvements to the environment. Among agencies that measure their sustainability practices, top measures include:

### Key Measures of Park and Recreation Agencies’ Sustainability Practices

<table>
<thead>
<tr>
<th>Measure</th>
<th>Percentage of Agencies</th>
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</thead>
<tbody>
<tr>
<td>Quantify increases in connection to communities and miles of trail</td>
<td>60%</td>
</tr>
<tr>
<td>Quantify water usage by facility or park</td>
<td>59%</td>
</tr>
<tr>
<td>Identify and track usage of all electric meters</td>
<td>54%</td>
</tr>
<tr>
<td>Quantify energy usage through an audit or comparative review</td>
<td>48%</td>
</tr>
<tr>
<td>Quantify number of community members reached through education</td>
<td>43%</td>
</tr>
<tr>
<td>Quantify tree cover canopy</td>
<td>42%</td>
</tr>
<tr>
<td>Quantify stormwater runoff detention, infiltration and prevention</td>
<td>42%</td>
</tr>
<tr>
<td>Green certifications of buildings</td>
<td>37%</td>
</tr>
<tr>
<td>Conduct habitat surveys</td>
<td>31%</td>
</tr>
<tr>
<td>Quantify amount of impervious surfaces in parks</td>
<td>30%</td>
</tr>
<tr>
<td>Conduct wildlife inventories</td>
<td>29%</td>
</tr>
<tr>
<td>Conduct waste stream analysis</td>
<td>25%</td>
</tr>
<tr>
<td>Green certifications of landscapes</td>
<td>24%</td>
</tr>
<tr>
<td>Quantify air quality benefits of installed systems</td>
<td>9%</td>
</tr>
</tbody>
</table>
Whereas two in three park and recreation agencies indicate cost savings are a driver for their sustainability activities, most agencies do not measure the financial impact of these investments. Knowing the financial impact of sustainability efforts, along with the environmental benefits and potential health, safety and overall well-being benefits to the community, provide a strong story to key stakeholders and leaders for continued investment in these activities.

Only one in five park and recreation agencies measure the cost savings of their sustainability practices. Another 18 percent of agencies plan to begin measuring their cost savings within the next year. Nearly half of park and recreation agencies do not currently, or have plans in the future, to measure cost savings derived from their sustainability activities.

**PARK AND RECREATION AGENCIES MEASURING SUSTAINABILITY PRACTICES’ COST SAVINGS (PERCENTAGE DISTRIBUTION)**

- Agency currently measures cost savings: 20%
- Agency plans to measure cost savings within the next year: 18%
- Unsure: 14%
- Agency does not currently, or plans to, measure cost savings: 48%
At least among park and recreation agencies currently measuring the cost savings derived from their sustainability activities, the financial benefits tend to be relatively modest. A majority of agencies measuring the financial impact of their sustainability activities experienced cost savings of less than $50,000 in the past year (54 percent). Another quarter of agencies generated annual cost savings of between $50,000 and $199,999, while 19 percent of agencies derived at least $200,000 in cost savings from sustainability activities during the past year.
The implementation and promotion of sustainability practices are a natural role for park and recreation agencies. Nevertheless, most agencies face some barriers that prevent their ability to expand these efforts. These barriers may include a lack of resources, whether it be funding (61 percent) or staff dedicated to sustainability activities (40 percent). Another challenge for agencies is a general lack of expertise tied to either sustainability measures (39 percent) or practices (31 percent). Far less frequently, agencies do not implement sustainability activities because the city/county political leadership, agency leadership and agency staff do not see these as agency priorities.

Park and recreation agencies across the country have a duty to protect the environment through the implementation and promotion of sustainable practices. While many park and recreation agencies have a documented sustainability strategy (or follow their community’s strategy), many more agencies carry out their sustainability measures without official guidance or tracked results. Park and recreation agencies must continue their mission through the use of sustainable practices to ensure lasting benefits to nature, wildlife and the population as a whole. No more than ever, it is important for park and recreation agencies to lead the way in sustainable activities, including reducing landfill waste, implementing the use of renewable energy and fuel-efficient vehicles, and educating the public on the steps they can take to help the world around them.

### Barriers That Prevent Park and Recreation Agencies From Implementing Sustainability Measures

- **Lack of funding**: 61%
- **Lack of dedicated staff**: 40%
- **Limited expertise in developing sustainability measures**: 39%
- **Limited expertise in developing sustainability practices**: 31%
- **Sustainability is not a priority for mayor/town council**: 12%
- **Sustainability is not a priority for agency staff**: 8%
- **Sustainability is not a priority for internal leadership**: 7%
- **Lack of support from community**: 5%
CONCLUSION

These survey results highlight the wide range of sustainability practices park and recreation agencies can and do implement. Some agencies are clearly leaders in their communities for certain sustainable practices, but it is important to acknowledge the very real barriers for some agencies and strive to move past them. This report’s findings should inspire agencies to implement more sustainable practices at their parks and give all agencies a sense of pride to be a part of a large network of park and recreation agencies striving to create sustainable communities through parks. To achieve these goals, park and recreation professionals must employ a whole systems approach, acknowledge that our resources are finite, implement sustainable practices and build community resilience. Incorporating sustainable practices into our field is critical, now more than ever, to ensure our cities and towns are more climate resilient that, in turn, promises a more healthy future for our parks and communities.

To learn more about NRPA’s climate resiliency efforts visit www.nrpa.org/Climate-Resiliency