

# Introduction

The term “sustainability” can refer to many kinds of sustainability, which are often interrelated. Besides the environment, two other “pillars” of sustainability are social and economic. While this plan focuses on environmental sustainability, the three are connected. That is, when one is improved, one or both of the others may also be improved. As an example, when Metro Parks Tacoma (MPT or “the District”) reduces its carbon footprint to help slow climate change worldwide, the agency will save money on utilities and fuels, and reduce Tacoma-area air pollution that affects nearby communities, thus improving quality of life in Tacoma.

One way to define sustainability is “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” The MPT Stewardship and Sustainability Policy states that the District’s sustainable practices shall “reduce initial and ongoing adverse impacts to the environment, protect or increase the ecological function of landscapes and natural areas, and provide comfort, health and safety of park facility visitors and staff.” In addition, the policy also calls upon MPT to be a leader among peers and set an example for our community.

The MPT Environmental Sustainability Plan identifies key areas for improvement and outlines specific strategies. The plan primarily focuses on internal MPT operations and links sustainable actions to fiscal savings. The goal is to facilitate meaningful change. Although MPT leaders and staff members are the primary audience, similar agencies and the public may benefit from it as well. The plan was written with input from the City of Tacoma’s and Pierce County’s Sustainability Managers.

## **Sustainability at Metro Parks Tacoma**

The development of the Stewardship and Sustainability Policy in 2006 demonstrated the agency’s commitment to increasing sustainability. Until now, however, MPT has lacked resources and staffing to provide a sustained and coordinated effort. Over the last ten years, Metro Parks has maintained a strong commitment to sustainability and the maintenance of a green agenda. Unfortunately, the execution of the work involved to advance new issues and initiatives has fallen on ad-hoc committees and as add-ons to individual work plans, which has proven largely unsustainable and uncoordinated.

In 2008, an outside consulting firm, Sustainable Business Consulting, conducted an audit and prepared recommendations for Metro Parks. The firm proposed five goals, did a carbon footprint analysis for 2007, and made operational recommendations. The goals were aggressive “stretch goals,” meant to guide shorter term goals and the development of annual work plans. They included a 50 percent reduction in water use from 2008 levels by 2020, zero waste to landfill, and an 80 percent reduction in carbon footprint from 1990 levels by 2050. However, with no one responsible for facilitating this work, this effort was mostly forgotten.

Even so, MPT made progress towards sustainability. A 2011 district-wide energy audit, with the help of Johnson Controls, yielded significant advancements. In all, 24 facilities were affected by projects beginning in 2012, including;

- New heating, ventilation and air conditioning (HVAC) systems for MPT headquarters and The Center at Norpoint
- Several new electric vehicle charging stations
- Solar hot water systems for Kandle and Stewart Heights pools, and
- Lighting upgrades throughout the District.

This new plan was also inspired in part by the new CAPRA 2014 Environmental Standards, section 7.9, which calls for a policy that addresses energy conservation, product purchasing, water conservation and quality protection, and sustainable design and construction.

The success of this plan hinges on leadership, staff support and a staff member dedicated to its implementation. All quantifiable targets must be regularly tracked and the progress reported to relevant staff in order to monitor change and adjust goals, as necessary. Additionally, the plan calls for capital investments, appropriately allocated, in 2017 and 2018.

## **Executive Summary**

This plan was devised by a contracted, part-time Sustainability Coordinator under the direction of the Natural Resources Division Manager and with the assistance of a steering committee comprised of representatives from all MPT departments. Research included site tours, staff interviews and surveys and the interpretation of vast amounts of historical data. As a result, for the first time in MPT's history, utility usage can now be tracked and be compared to historical performance on a park-by-park, facility-by-facility basis.

### ***Timeline and implementation***

This plan calls for implementation between January 2016 and December 2018. Because of budget constraints, few capital improvements are recommended for the 2016 calendar year. Instead the first year will focus on measuring and recording currently unavailable data, plus changing employee behaviors. Specific capital-spending recommendations must be vetted for inclusion into the 2017-2018 budget. That process starts in late spring 2016.

### ***Sustainable practice categories and targets***

This plan is divided into sections that reflect Metro Parks Tacoma's organization and operations and how they influence MPT's overall environmental impact. In order to track progress and evaluate performance, targets have been identified in each of the four sustainable practice categories: engagement and education; parks and outdoor areas; facilities and buildings; and transportation and fuels. Where possible, the plan establishes baselines drawn either from an average of 2010-2014 data or from 2015 alone, if no prior data is available. Unless otherwise noted, the deadline for all targets is December 2018.

Early in the process, the sustainability steering committee grappled with one basic question: *"How can Metro Parks Tacoma reduce its environmental footprint when the agency is growing to meet our citizens' needs and desires?"* While MPT may not be able to reduce the overall consumption of utilities with the addition of new community centers, pools and parks, the District can set targets to ensure sustainability on a square-foot or per-acre basis. Therefore, applicable targets are calculated per area to account for and normalize growth within the district.

#### ***Sustainable Practice Category #1: Engagement and education***

##### **Employee engagement**

- Ensure that sustainability is a part of all new-hire training and that every current employee gets at least one annual training on the subject.
- Increase the number of employees who say they are very familiar with the term sustainability from 74 percent to at least 90 percent by summer of 2018.
- Increase the number of staff members who are familiar with MPT sustainability efforts. Increase the percentage of employees who said they were somewhat or very familiar with the Stewardship and Sustainability Policy from 61 percent to at least 90 percent who are familiar with this plan by summer 2018.
- Increase the percentage of employees who say they take sustainability into consideration during their daily work from 88 percent to 95 percent by summer 2018.

- Increase employees' understanding of MPT's environmental commitment. Currently, 70 percent say the commitment is clear. At the same time, 50 percent clearly understand the employee role in reaching sustainability goals. The goal is to reach at least 90 percent clear understanding of both the agency's commitment and employee goals by summer 2018.
- Reduce money spent on printer and copier paper and increase the percent of office products purchased with recycled content. Eliminate 75 percent of the desktop printers.

### Outreach

- Provide monthly public updates and thorough annual reports about MPT sustainability efforts.
- Showcase internal MPT measures on a sustainability webpage that links our targets to what the public can do to be more sustainable.
- Be considered the most sustainable governmental organization in Pierce County by providing more environmentally oriented programs to educate and motivate the public.
- Make sure all applicable events are certified for Green Excellence by the City of Tacoma's Green events program<sup>1</sup>. Create MPT guidelines for smaller events. Improve sustainability education and opportunities for those who rent MPT facilities and parks.

### *Sustainability Practice Category #2: Parks and outdoor areas*

- Reduce overall water consumption per acre by 3 percent per year for 9 percent savings by December 2018.
- Position Metro Parks Tacoma as a leader in low-impact development in Tacoma through the use of green infrastructure at our facilities.
- Limit irrigation and application of chemicals to the minimum possible while meeting maintenance and aesthetic standards.
- Increase the number of pesticide-free parks from four in 2015 to eight in 2018.
- Restore 30 acres of natural habitat, to protect wildlife and biodiversity, by the end of 2018.
- Increase recycling opportunities for park visitors where appropriate. Continue to pilot recycling projects outdoors to determine whether recycling is a feasible option with limited contamination. Also, continue to measure the impact of using solar- powered, compacting garbage bins to reduce trips, and determine if their use is warranted in more parks.
- Continue to add at least 30 trees annually to the District's urban forest inventory.

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<sup>1</sup> Green Excellence is the highest level of certification offered through the City of Tacoma's Green Events program. Participating events employ various tactics to embrace sustainability. They include recycling, reducing waste, using recycled products, donating excess food and providing bicycle racks.

### *Sustainability Practice Category #3: Facilities and buildings*

- Reduce electricity consumption by 3 percent by December 2018 to 17.66 kilowatt hours (kWh) per square foot.
- Reduce natural gas consumption by 5 percent by December 2018 to .646 therms per square foot.
- Reduce the amount of waste sent to the landfill by cutting back on disposable items, such as paper, and recycling whenever possible. In 2016, establish a baseline and targets for waste reduction.
- Ensure that recycling is always an option near every opportunity to throw away waste at MPT buildings and attractions, for both MPT visitors and employees.
- Ensure that all new construction projects make sustainability a priority. All new buildings will be built to Leadership in Energy & Environmental Design (LEED) Silver standard or its equivalent. (LEED has four levels of certification; certification, Silver, Gold and Platinum.)
- Gather national benchmark information for every MPT building or facility by entering all utility information into the Environmental Protection Agency's Portfolio Manager<sup>2</sup> tool by the end of 2016.
- Ensure all new buildings incorporate the MetaSys<sup>3</sup> building management system, and consider expanding into existing buildings.

### *Sustainability Practice Category #4: Transportation and fuels*

- Increase percentage of hybrid and electric vehicles in the fleet from 11 percent in 2015. Also boost the average fuel efficiency of fleet, from 19.2 mpg, also in 2015.
- Reduce the number of miles reimbursed to employees while increasing the number of trips in pool vehicles. Reduce unnecessary driving whenever possible.
- Reduce carbon footprint from employee commuting by encouraging employees to take alternative methods of transportation to work.
- Decrease the percentage of MPT staff members who commute alone from 79 percent to 75 percent. Increase the percentage that regularly or often choose an alternative option from 50 percent to 60 percent.
- Increase the number of trips recorded into the Pierce Trips commute-trip reduction program from 2,286 to 2,500. Increase the number of employees who record trips from 42 to 60.

## **Carbon footprint**

Meeting these sustainability targets will cumulatively work together to reduce greenhouse gas emissions through efficient use of natural gas, fuels, and electricity. However, because of new construction and renovation during this time period, the district's overall carbon footprint will likely not be reduced.

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<sup>2</sup> An online tool used to benchmark building performance by measuring and tracking greenhouse gas emissions, plus energy and water use.

<sup>3</sup> MetaSys is a web-based, temperature-control system that permits remote monitoring of specific facility locations..

## Financial implications of this plan

If targets are met, the District will not only control its emissions, but also save approximately \$375,000 on resources over the three-year term of this plan above the 2010-2014 annual baseline expenditures for water, natural gas and electricity (see table below). Additional savings may result from reduced fuel consumption, waste disposal and a reduction of reimbursement for employees who drive their personal vehicles for business purposes.

	Estimated average* cost per year	Year 1	Year 2	Year 3	Cumulative savings over 3 years
<b>Water Cost Savings (reduce by 3% per year, total of 9%)</b>	\$1,712,000	\$51,360	\$102,720	\$154,080	\$308,160
<b>Electricity Cost Savings (reduce by 1% a year, total of 3%)</b>	\$583,000	\$5,830	\$11,660	\$17,490	\$34,980
<b>Natural Gas Cost Savings (reduce by ~1.667% a year, total of 5%)</b>	\$326,000	\$5,433	\$10,866	\$16,299	\$32,598
<b>TOTAL</b>					\$375,738

\*Average cost for water and electricity are from 2010-2014. The cost for natural gas was only available for 2014.