

THE NATURAL VALUE OF DISCOVERY PARK

THE PUBLIC BENEFITS OF SEATTLE'S LARGEST PARK

On average, Discovery Park provides more than \$1 million worth of ecosystem goods and services every year.

"The seclusion of the site, the magnificent vistas, the stretches of tidal beaches, the stands of native trees, the meadowlands—all combine to make this site one of surpassing beauty and serenity. As a park site its potential is bounded only by the vision and resolution of those into whose hands it is entrusted."

Discovery Park Master Plan, 1972

Seattle is known for its dramatic coastline, mountain vistas, and its thriving public parks. In fact, Seattle has one of the most robust public park systems in the county. And the crown jewel, an open space that embodies the natural beauty of the Pacific Northwest, is none other than Discovery Park.

Whether you realize it or not, Discovery Park provides significant benefits for Seattle residents. Ecosystem benefits include all of the things that nature does for us,

like cleaning the air we breathe, filtering our water, providing habitat for native species, and places to recreate. As Seattle's largest public park, Discovery Park is a critical source of ecosystem benefits, which impact the lives of park visitors, and Seattle as a whole.

Using environmental economics, we can begin to understand how much these benefits are worth. A preliminary review finds that on average, the ecosystems within Discovery Park provide over \$1 million worth of ecosystem benefits each year. Impressively, these numbers only represent a few of the 23 ecosystem benefits that Discovery Park provides (See back).

Discovery Park is also a vibrant part of our regional culture and economy. Studies show that parks improve mental and physical health, foster a sense of community, inspire



art, culture, and design, and create space for spiritual experiences.^{1,2} Moreover, parks support a range of economic activities by bolstering nearby property values, reducing public health costs, encouraging expenditures on outdoor gear and recreation apparel, and generating county revenue through sales and property tax.

Simply put, Discovery Park is an important natural asset for the City of Seattle. The park has provided ecosystem benefits for generations, and continues to support a vibrant culture and robust economy today.



Every year Discovery Park provides more than
\$1 million*
worth of ecosystem goods and services

*on average

ECOSYSTEM BENEFITS

Discovery Park provides over 23 ecosystem benefits. Using published data, we've been able to assign values for six services that provide more than \$1 million in total. With additional research, we will be able to value many more.



AIR REGULATION

As one of the largest green spaces in Seattle, Discovery Park significantly contributes to improved air quality in the region. For example, trees in other urban parks have been shown to absorb particulate matter, ozone, sulfur, and nitrogen.⁴ Discovery Park's ability to remove pollution from the air we breathe is valued at \$55,000 each year.



CARBON STORAGE AND SEQUESTRATION

In addition to absorbing pollutants, the vegetation in Discovery Park also sequesters carbon, reducing the buildup of greenhouse gases in the earth's atmosphere. In fact, Discovery Park sequesters at least \$100,000 worth of carbon each year. In 2013, the City of Seattle set a goal of becoming carbon neutral by 2050, a goal that can be achieved with the help of Discovery Park.



CLIMATE STABILITY

The ecosystems at Discovery Park help regulate the local climate and make the surrounding area more resilient to natural disasters and the effects of climate change. The park's inland wetlands can reduce the risk of flooding, the outer wetlands can buffer storm surges, and the grasslands can help prevent soil erosion.³ These services could help prevent between \$226,000 and \$375,000 worth of damage each year.



WATER QUALITY AND STORAGE

By naturally filtering water as it makes its way through the park and into Puget Sound, Discovery Park provides between \$203,000 and \$469,000 worth of water filtration and stormwater runoff reduction services each year. This filtration removes excess nitrogen, phosphorus, and other pollutants that can negatively impact the Puget Sound and its residents.⁵



BIOLOGICAL CONTROL

Discovery Park is home to a range of native insects that prey on other species. When the native insects at Discovery Park consume non-native or invasive species, they are helping to control pests that can wreak havoc on gardens in Seattle and beyond.⁵ The insects and naturally pest resistant plants in Discovery Park provide nearly \$6,000 worth of biological control each year.



HABITAT

Discovery Park provides a significant amount of habitat within a densely populated urban area. In fact, the park's habitat is used by over 200 species of birds which can be seen throughout the park.³ While difficult to quantify, studies that value human interaction with wildlife indicate that Discovery Park supports at least \$14,000 worth of habitat each year.

EARTH ECONOMICS



Earth Economics works to quantify and value the benefits nature provides. As a global leader in science-based economics, we offer pragmatic, collaborative support for investment and policy decisions that mitigate risk, add value, and increase resilience. We envision a future in which industry, communities, and nature thrive together. eartheconomics.org

¹ The Trust for Public Land. 2011. The Economic Benefits of Seattle's Park and Recreation System. The Trust for Public Land, Washington, D.C.

² Pimentel, D., Wilson, C., McCullum, C., Huang, R., Dwen, P., Flack, J., Tran, Q., Saltman, T., Cliff, B. 1997. Economic and Environmental Benefits of Biodiversity. BioScience.

³ Seattle Parks and Recreation. Retrieved February 26, 2018, from <https://www.seattle.gov/parks/find/parks/discovery-park>

⁴ Nowak, D. J. (2002). The Effects of Urban Trees on Air Quality (Rep.). USDA Forest Service.

⁵ Costanza, Robert et al (2006). The Value of New Jersey's Ecosystem Services and Natural Capital. New Jersey Department of Environmental Protection, Trenton, NJ.