GUIDING PRINCIPLES

THRIVING ECOSYSTEMS

As Vancouver expanded, much of the natural environment was cleared. Focused effort has protected, restored or rebuilt more than 480 hectares of natural area within the city boundaries.

Weaving with parks and recreation provides an essential ecological backbone for the city as it grows and densifies. The urban ecosystem supports biodiversity, climate regulation, food production, risk mitigation, and waste and water management. Hundreds of thousands of trees and the city's natural areas already work hard to improve air quality, reduce urban heat, and allow for the movement of wildlife. Environmentally, new routes can expand urban wildlife corridors and increase Vancouver's capacity for resiliency at a citywide scale in the face of shrinking shorelines and an increase of extreme weather events. Urban ecological networks and street trees provide resiliency to climate change through shade, evaporative cooling and stormwater infiltration services.[1]

Robust linkages between large natural areas must be maintained to support a thriving ecosystem. Establishing and maintaining a robust urban forest and network of natural areas is the focus of the Park Board's *Biodiversity Strategy (2016)* and *Urban Forest Strategy (2018)*. The Park Board cares for more than 147,000 street trees, which are a powerful tool for increasing ecological connectivity.

While it is unlikely that a new, large park (like Stanley Park) will be achievable, we can continue to support the city's ecosystems by increasing connectivity between existing large natural areas. This can be achieved by filling gaps in the urban forest by planting trees on public land (streets and parks), encouraging planting on private lands, and continuing to increase "naturally managed" areas in places where it works. Innovation is required in advancing ecological health in the city. For example, there are many competing demands for park space (habitat, sport, events, passive recreation, etc.) and as populations increase, these competing demands are creating pinch points. Many of the available planting spots on streets have been filled, making new planting hard due to poor soils, lack of adequate soil depth and lack of space. The changing climate requires faster rates of replacement, reconsideration of species choice and management techniques.

Increased ecological connectivity between large areas of habitat will support and enhance the environment by sustaining healthy and resilient ecosystems. For example, "almost 80% of bird families include some insects in their diet."[2] Many birds feed their fast-growing young a diet of insects, spiders, and other invertebrates. To support a healthy avian population in the city we need to think of insects too. Ecosystem connectivity supports the interconnected web of life.

"Biodiversity in urban landscapes depends on maintaining a network of connected natural areas anchored by larger patches such as Stanley Park, the Fraser River, and Pacific Spirit Regional Park. We call it the "ecological network," which reflects how it functions as a connected system."

Biodiversity Strategy, 2016

1 *WIREs Clim Change 2012, 3:581–596. doi: 10.1002/wcc.195*

2 *Klasing, Kirk C. 1998. Comparative Avian Nutrition. CAB International, NY.*