

A scenic view of West Vancouver, British Columbia, featuring the Lions Gate Bridge, a city skyline, and snow-capped mountains. The bridge is a prominent green steel suspension bridge crossing the water. In the background, there are large, forested mountains with patches of snow. The foreground shows the blue water of the strait and some evergreen trees on the right side.

# WEST VANCOUVER'S NATURAL ASSETS





## WHAT ARE NATURAL ASSETS?

Our forests, waterways, foreshore and parks make West Vancouver a great place to live. They also provide valuable services for our community. Creeks, for example, collect and carry stormwater, and forests clean the air and keep us cool. Beaches buffer the coast, protecting properties and infrastructure located inland, while beautiful parks give our community its special character.

Nature provides all these services and more, seemingly for free. This can lead people to take them for granted, to undervalue or neglect them. However, if we maintain natural assets with as much care as we do other assets, like pipes, roads and buildings, they can serve us well forever.

The District of West Vancouver is one of the first Canadian municipalities to estimate the value of our natural assets in terms of the services they provide annually and into the future. This is a first step toward integrating natural assets into the District's financial and asset management plans.

**OUR FORESTS, WATERWAYS, FORESHORE AND PARKS PROVIDE SERVICES WORTH AS MUCH AS \$3.2 BILLION.**



# PROTECTING OUR ECOSYSTEMS

While we will never stop appreciating nature for its own sake, we can also start to see our ecosystems as the source of valuable services to our community. Many of the benefits that our ecosystems provide would be very expensive or impossible to replicate. As we develop our community, it's important to disrupt the natural functioning of our ecosystems as little as possible. This doesn't mean that we can never interfere with nature, but we must do it wisely and sensitively.

## HOW MUCH ARE THEY WORTH?

We have estimated the value of our natural assets based on the important, and sometimes irreplaceable, services that nature provides to West Vancouver. The range in estimated values represents the diversity of studies that are used.

forests: \$653 million–\$1.8 billion

waterways: \$88–\$574 million

foreshore: \$549 million

parks: \$16 million

carbon storage: \$228 million





# FORESTS

**ESTIMATED VALUE: \$653 MILLION-\$1.8 BILLION**

## **TREES GIVE US...**

**storm water management:** *trees absorb rainwater and release it slowly, helping our infrastructure deal with heavy rain*

**climate regulation:** *as trees grow, they take carbon dioxide from the atmosphere and lock it in their tissues—a process called carbon sequestration*

**habitat:** *many of our local animals rely on the forest for food and protection*

**recreational opportunities:** *our collection of hiking and biking trails draw both locals and visitors*

**aesthetic & cultural value:** *residents have a deep connection to the surrounding forests and trees, which give our community its unique character and beauty*

West Vancouver's forests consist of two distinct areas. The upper forest is above the highway and extends into the North Shore mountains. Below is the urban forest—the trees that grace our streets, parks and private properties. Climate change, development, recreational use and other impacts of a growing population all threaten this important ecosystem. The District has several plans, policies and initiatives to protect our forests.

## **CLIMATE CHANGE**

Climate change is already affecting our forests. In BC, we can expect hotter, dryer summers that cause trees to weaken and increase the risk of wildfires. As winters get warmer and wetter, new invasive pests are making our forests home and damaging trees and other vegetation. The District is developing a wildfire protection plan, focusing on areas where our community meets the forest. To play our role in mitigating climate change, we have been reducing energy consumption in public facilities and improving the fuel efficiency of fleet vehicles.

## **DEVELOPMENT**

Approximately 10,000 more people are expected to call West Vancouver home by 2041. While our Official Community Plan concentrates most of the population growth in areas that are already developed, a new compact neighbourhood in the Upper Lands provides an opportunity to leave a larger area of forest undisturbed. To protect our urban forest, a bylaw regulates the removal of certain tree species, stream-side trees and larger trees even on private property.

## **RECREATION**

More people than ever before are using the extensive trail systems in our forests. This, coupled with the stress of climate change, means our forest health could suffer. Collaboration with stewardship groups will help protect our forest assets.



# WATERWAYS

## LAKES, RIVERS & CREEKS

ESTIMATED VALUE: \$88-\$574 MILLION

### WATERWAYS GIVE US...

**clean water:** *we get our drinking water mainly from Capilano and Eagle Lakes*

**flood control:** *when heavy rain occurs, water that is not absorbed by our forests collects in creeks, and excess water is channeled into Burrard Inlet and Howe Sound*

**habitat:** *many forms of wildlife, including salmon, bears, deer and amphibians benefit from healthy waterways*

**recreation:** *from major attractions, such as Capilano River and Whyte Lake, to smaller creeks and lakes, residents and visitors enjoy these natural assets*

**aesthetic and cultural value:** *we enjoy the sights and sounds of moving water, and children amuse themselves for hours playing in our local creeks*

Water defines our community. On the eastern edge, Capilano Lake and Capilano River are shared with North Vancouver. Along with smaller lakes and ponds, West Vancouver has 31 major creeks and many streams. Ditches also play a role in this water system. The District is studying the condition of our waterways and devotes considerable resources to managing this asset.

### DEVELOPMENT

When natural ground cover is replaced with hard surfaces such as roads, there is less opportunity for the ground to absorb and disperse rainwater. This can lead to flooding and more pollution in our waterways. The District regulates this runoff by ensuring waterflow is equal to or less than what it was prior to development.

There are rules in place to ensure residents don't create hard surfaces or lawns too close to creek banks. However, it is not uncommon for older buildings to be built right up to the edge of a creek. When possible, we work with property owners to restore affected streambanks to a more natural state.

### CLIMATE CHANGE

Climate change will likely mean even more precipitation in the fall and winter. Heavy rain may overwhelm waterways, leading to flooding. Drier summers mean lower reservoir levels and reduced water flow in rivers and creeks, increasing the risk of wildfires and leaving less water for residents to use. Creek temperatures may rise, posing additional challenges for spawning salmon.

West Vancouverites are learning to adapt to climate change—increasingly opting for landscaping that can handle increased waterflow on site and other green building practices.





# FORESHORE

## BEACHES & ROCKY WATERFRONT

ESTIMATED VALUE: \$549 MILLION

### THE FORESHORE GIVES US...

**flood protection:** *a healthy foreshore resists erosion and protects against flooding from high tides and storm surges*

**erosion protection:** *beaches and rocky shores provide a natural barrier that absorbs the energy of incoming waves, greatly reducing the potential for damage*

**habitat:** *an impressive range of marine and land-based species rely on the foreshore for survival*

**recreation:** *many of our most loved parks incorporate the foreshore, providing opportunities for picnics, swimming, boating, walking and more*

**aesthetic and cultural value:** *the beauty of the foreshore enriches our quality of life and makes the area a perfect location for many cultural festivals*

West Vancouver's beaches, bluffs and rocky coastline contribute to the beauty of our community and our quality of life. Residents and visitors alike enjoy our seafront parks and pathways, such as the Centennial Seawalk. The foreshore is also important for non-human life, especially in the small estuaries where freshwater creeks mix with the sea.

### ENCROACHMENT

Oceanfront homes are in high demand in West Vancouver, but building too close to the ocean can damage the foreshore, leading to increased risk of erosion and flooding. We have developed a plan to protect this area, including improving trails and replacing public seawalls with features like reefs, berms or marshes.

### CLIMATE CHANGE

Over the last few years, West Vancouver has experienced severe winter storms, with high winds and heavy rainfall in short periods of time. In some cases, the storms have been accompanied by seasonal tides that together launched powerful storm surges against our foreshore.

The foreshore also faces a rise in sea level that comes with melting polar icecaps. Like other communities in BC, we are considering various implications of projected sea-level rise. Private property and municipal infrastructure near the shore or in low-lying areas will be most at risk. Beaches and estuaries could also be damaged by storm surges or slow erosion.

The District of West Vancouver, in collaboration with the City and District of North Vancouver, Squamish Nation, North Shore Emergency Management and the Vancouver Fraser Port Authority, has commissioned a study of the risks associated with sea-level rise and how we can adapt to it.



# PARKS

## GREEN AREAS, PLAYING FIELDS & PRIVATE YARDS

ESTIMATED VALUE: \$16 MILLION

### PARKS GIVE US...

**recreation:** residents and visitors use our green spaces to connect with nature; a recent survey shows that 95 per cent of West Vancouver households visited a local park during the past year

**health:** urban green space has benefits for physical and mental health; being close to nature, for example, has proven to improve levels of physical activity and decrease stress

**carbon storage:** green spaces also provide significant carbon sequestration and soil protection

From oceanfront playgrounds to rugged wilderness areas, West Vancouver has a park to suit every age and lifestyle. These natural assets include more than 135 kilometres of trails that link our neighbourhoods.

Playing fields are used for a wide range of individual and team sports, helping keep our residents outdoors and active. Residential yards and gardens offer another source of green space, with opportunities for gardening, bird watching and other activities.

### INCREASED DEMAND

The popularity of our trails comes with challenges, including harm to the environment and parking congestion. Overuse and straying from trails impacts wildlife and sensitive habitats. There is a balancing act between providing people access to nature and protecting our sensitive ecosystem. The District has created a plan to care for these important natural assets that includes protecting our shared outdoor space and animal habitats and appreciating our parks for their natural beauty and heritage significance.

### INVASIVE PLANTS

Introduced plants can spread quickly, harming native ecosystems and damaging parks and infrastructure. Along with local stewardship groups, the District is working to control invasive plants. We have developed a plan that targets 19 species to manage, contain and eradicate.



## NEXT STEPS

Now that we have an initial inventory of West Vancouver's natural assets, there is more work to do:

- develop additional information on the condition of our natural assets
- regularly monitor our natural assets and determine maintenance requirements
- incorporate natural assets into our financial reports
- consider our natural assets when making decisions that could impact them

The District's natural capital inventory was compiled and valued by Solstice Sustainability Works Inc., working closely with District staff

## MORE INFORMATION

To learn more about our natural assets, visit [westvancouver.ca/naturalassets](http://westvancouver.ca/naturalassets).

## WOULD YOU LIKE TO VOLUNTEER?


Join us in helping to keep West Vancouver's natural environment beautiful at one of our Love West Van events. Whether you want to clean up your neighbourhood, the beach or a park, our community benefits when we all work together. Visit [westvancouver.ca/lovewestvan](http://westvancouver.ca/lovewestvan) for a list of events.

## STEWARDSHIP GROUPS

There are many local stewardship groups looking for volunteers to help protect more than 140 parks and natural areas in West Vancouver. To learn more, visit [westvancouver.ca/stewardship](http://westvancouver.ca/stewardship).







*The District of West Vancouver acknowledges that our community is located in the traditional, ancestral and unceded territory of the Squamish, Tsleil-Waututh and Musqueam Nations.*

*westvancouver*

[westvancouver.ca/naturalassets](https://westvancouver.ca/naturalassets)